ECAT Pre General Science Online Test

Sr	Questions	Answers Choice
1	A change in position of a body from its initial position to its final position is known as	A. relative motion B. displacement C. distance D. acceleration
2	The magnitude of the displacement is a line from initial position to final position which is	A. straight B. curved C. either be curved or straight D. none of them
3	The displacement coincides with the path of the motion when a body moves is a	A. curved line B. straight line C. may be curved or straight D. none of them
4	The direction of velocity is along the direction of	A. distance B. displacement C. acceleration D. all of them
5	Velocity is a	A. scalar quantity B. vector quantity C. constant quantity D. none of them
6	Dimensions of velocity are	A. [L] B. [T] C. [LT⁻¹] D. [LT⁻²]
7	If d is the displacement of the body in time t, then its average velocity will be	A. V_{av}= d x t B. V_{av = t/d} C. V_{av = d/t} D. V_{av = d/t}
8	When we consider the average velocity of a body, then the body is moving in	A. straight line B. curved path C. may be in a straight or curved path D. none of them
9	If a ball comes back to its starting point after bouncing off the wall several times, then its	A. total displacement is zero B. average velocity is zero C. none of them D. both of them
10	The velocity of a body at any instant of its motion is known as	A. average velocity B. instantaneous velocity C. uniform velocity D. none of them
11	The instantaneous velocity is define as the limiting value of Δd/Δt on the time intervalΔt approaches to	A. zero B. maximum C. minimum D. infinity
12	If the instantaneous velocity of a body does not change. the body is said to be moving with	A. average velocity B. uniform velocity C. instantaneous velocity D. variable velocity
13	Velocity of a body changes if	A. direction of the body changes B. speed of the body changes C. neither speed nor direction changes D. either speed or direction changes
14	The direction of the acceleration is the same as that of	A. speed B. velocity C. both of them D. none of them
15	Acceleration of a body at any particular instant during its motion is known as	A. average acceleration B. uniform acceleration C. instantaneous acceleration D. all of them

16	Acceleration of a body is positive, if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
17	Acceleration of a body is negative if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
18	If the values of instantaneous and average velocities are equal, the body is said to be moving with	A. uniform acceleration B. uniform speed C. variable velocity D. uniform velocity
19	A body moving with uniform velocity has	A. positive acceleration B. negative acceleration C. infinite acceleration D. zero acceleration
20	The decrease in velocity per unit time is called	A. deceleration B. acceleration C. uniform acceleration D. variable acceleration
21	Bodies failing freely under gravity provide good example of motion under	A. non-uniform acceleration B. uniform acceleration C. variable acceleration D. increasing acceleration
22	Graphs which are used to illustrate the variation of velocity of an object with time are called	A. distance time graphs B. speed time graphs C. velocity time graphs D. acceleration time graphs
23	When body moves with increasing acceleration, its velocity time graph is a	A. straight line B. horizontal straight line C. vertical straight line D. curve
24	The slopes of the tangent at any point on the curve gives the value of the	A. average velocity at that point B. instantaneous velocity at that point C. average acceleration at that point D. instantaneous acceleration at that point
25	The area under line velocity-time graph is numerically equal to the	A. speed of the body B. acceleration of the body C. distance covered by the body D. none of them
26	A body starting from rest covers a distance of 0.45 Km and acquires a velocity of 300 Kmh^{-1}. its acceleration will be	A. 7.71 m s⁻² B. 0.5m s⁻² C. 0.15m s⁻² D. 0.092m s⁻²
27	The three equation of motions are useful only for	A. linear motion with increasing acceleration B. line motion with uniform acceleration C. linear motion with zero acceleration D. linear motion with varying acceleration
28	When a body is moving with uniform positive acceleration, the velocity- time graph is a straight line. Its slope is	A. zero B. negative C. positive D. non-existing
29	If the slope of the velocity-time graph increases at constant rate with time, then the body is said to have	A. uniform deceleration B. uniform negative acceleration C. average acceleration D. uniform positive acceleration
30	If the velocity of the body decreases non-uniformly then the slope of the velocity-time graph will have	A. different values B. same values C. zero valves D. constant valves
31	Newton published laws of motion in his famous book "principia" in	A. 1867 B. 1667 C. 1676 D. 1687
32	Newton's laws are adequate for speeds that are	A. low compared with the speed of light B. equal to the speed of light C. greater than the speed of light D. all of them
33	An inertial frame of reference is that frame of reference in which	A. a = 0 B. a > 0 C. a < 0

		D. all of them
34	A non-inertial frame of reference is that frame of reference in which	A. a = 0 B. a > 0 or a < 0 C. v = 0 D. none of them
35	Acceleration produced in a body by a force varies	A. inversely as the applied force B. directly as the applied force C. directly as the mass of the body D. none of them
36	Acceleration produced in a body by the force varies	A. inversely as the applied force B. directly as the applied force C. directly as the mass of the body D. none of them
37	A mass of 5kg moves with an acceleration of 10m s^{-2}force applied is	A. 10N B. 50N C. 2N D. 20N
38	The discuss used by athlete has a mass of 1 kg, its weight in newton is	A. 9.8 N B. 80 N C. 98 N D. 100 N
39	A 5 kg mass is falling freely, the force acting on, it will be	A. 19.6 N B. 9.8 N C. 5 N D. Zero
40	The mass of the object is a quantities measure of its	A. speed B. velocity C. acceleration D. inertia
41	Inertial frame of references are those frame of references which are moving with	A. increasing velocity B. decreasing velocity C. constant velocity D. all of them
42	The effect of applying a force on a moving body is to change	A. its direction of motion only B. its speed of motion only C. both the direction and speed of motion D. its inertia only
43	Inertia mass and gravitational mass are	A. opposite B. identical C. identical when there is no friction D. all of them
44	For a fixed force, larger is the mass of a body the	A. greater is its acceleration B. smaller is its acceleration C. smaller is its weight D. zero is its acceleration
45	When a force is applied on a body, several effects are possible Which of the following effect could not occur?	A. the body rotates B. the body speeds up C. the mass of the body decreases D. the body changes its direction
46	What must be changing when a body is accelerating uniformly?	A. the force acting on a body B. the velocity of the body C. the mass of the body D. the speed of the body
47	Laws of motion are not valid in a system which is	A. inertial B. non-interial C. at rest D. moving with uniform velocity
48	The second law gives the relationship between	A. mass and velocity B. force and acceleration C. velocity and acceleration D. mass and weight
49	In equation F=ma, then mass 'm' is	A. rest mass B. variable mass C. inertial mass D. gravitational mass
50	When a person jumps off the ground, the reaction force of the ground is	A. greater than the weight of the person B. smaller than the weight of the person C. equal to the weight of the person D. zero
		A. a non-inertial frame

51	Earth is considered to be	B. an inertial frame C. an accelerated frame D. none of the above
52	If the objects of different masses move with the same velocity, then it is more difficult to stop the	A. lighter of the two B. massive of the two C. any one of them D. both of them
53	The linear momentum of the body is defined as	A. p=ma B. p=1/2ma C. p=mv D. p=1/2mv
54	Linear momentum is a	A. fixed quantity B. constant quantity C. scalar quantity D. vector quantity
55	The direction of the linear momentum is the direction of	A. speed B. velocity C. weight D. none of them
56	The SI units of momentum is	A. kg m s⁻² B. kg ms C. kg m s² D. N-s
57	Rate of change of momentum is called	A. Impulse B. Force C. Torque D. Momentum
58	The quantity F x t is called as	A. momentum B. velocity C. acceleration D. impulse
59	In the expression F x t, the force F is	A. total force B. instantaneous force C. average force D. all of them
60	The expression F x t is called impulse if the time 't' is	A. zero B. very large C. very small D. infinite
61	According to the law of conservation of linear momentum, the total linear momentum of an isolated system	A. increases B. decreases with time C. remains constant D. none of them
62	The entity which measures the quantity of motion in a body is called	A. force B. energy C. momentum D. power
63	The product of force and time is called	A. acceleration B. linear momentum C. angular momentum D. impulse
64	Which quantity has the same units as impulse	A. force B. work C. linear momentum D. acceleration
65	The analysis of fluid motion becomes simplified by using	A. law of conservation B. law of conservation of energy C. both of them D. none of them
66	The law of conservation of mass gives us the	A. equation of continuity B. Bernoulli's theorem C. both of them D. none of them
67	The law of conservation of energy gives us	A. equation of continuity B. Bernoulli's theorem C. both of them D. none of them
68	The effect of friction between different layers of a flowing fluid is described in terms of	A. motion of fluid B. nature of fluid C. colour of fluid D. viscosity of fluid

69	How much force is required to slide one layer of the liquid over the other layer is measured by	A. friction B. density C. viscosity D. resistivity
70	Substances that do not flow easily have	A. large coefficient of viscosity B. small coefficient of viscosity C. either of them D. none of them
71	Substances that flow easily have	A. large coefficient of viscosity B. small coefficient of viscosity C. either of them D. none of them
72	Liquids and gasses have	A. zero viscosity B. non-zero viscosity C. very large viscosity D. very small viscosity
73	An object moving through a fluid experiences a retarding force called a	A. frictional force B. terminal force C. opposing force D. drag force
74	When the speed of a body in a fluid increases then the drag force	A. decreases B. becomes zero C. increases D. non of them
75	According to slok's law, drag force depends on	A. Radius of the spherical body B. Terminal velocity of body C. Coefficient of viscosity D. All of above
76	The maximum drag force on a falling sphere is 9.8 N, it weight is	A. 1 N B. 9.8 N C. 4.9 N D. Cannot be calculated
77	At low speeds, the drag force is	A. proportional to speed B. inversely proportional to speed C. not simply proportional to speed D. none of them
78	When a water droplet falling freely through air, the drag force on water droplet increases with th	A. decrease in speed B. increase in speed C. pressure D. none of them
79	When a water droplet falls through air, the net force on it is	A. Net force = drag force - weight B. Net force = weight - drag force C. Net force = drag force + weight D. Net force = weight + drag force
80	When weight of an object falling freely becomes equal to the drag force, then the body will move with	A. increasing speed B. decreasing speed C. constant speed D. none of them
81	During the free fall motion of an object, when its weight becomes equal to the drag force, then it will move with	A. maximum speed B. zero speed C. maximum speed D. none of them
82	The body will move with terminal velocity when it acquires	A. minimum speed B. zero speed C. maximum speed D. none of them
83	At the starting point of the free fall motion of an object, its acceleration will be	A. maximum B. minimum C. zero D. none of them
84	The terminal velocity of water droplet of radius 1 x 10^{-4}m and desity 1000 kg m^{-3}descending through air of viscosity 19 x 10^{-6}kg. m^{-1} s^{-1} is	A. 2.5 ms⁻¹ B. 3.2 ms⁻¹ C. 4.3 ms⁻¹ D. 1.1 ms⁻¹
85	A water hose with an internal diameter of 20 mm at the outlet discharges 30 kg of water in 60 s. What is water speed at the outlet if density of water is 1000 kg/m^3during its steady flow	A. 1.3 m/s B. 1.6 m/s C. 1.9 m/s D. 2.2 m/s
86	The direction of the streamlines is the same as the direction of the	A. force B. torque C. velocity D. weight

87	When the different streamlines cannot cross each other, then this condition is known as	A. continuity condition B. turbulent flow condition C. steady flow condition D. none of them
88	When each particle of the fluid moves along a smoth path, this path is known as	A. straight path B. smooth path C. haphazard path D. steamline
89	During the steady flow, different streamlines	A. cannot across each other B. can across each other C. either of them D. neither of them
90	If every particle of the flow that passes a particular point, moves along the same path as followed by particles which passed the point earlier, then this flow is said to be	A. turbulent B. streamline C. abrupt D. none of them
91	When a fluid is in motion, its flow can be considered as	A. turbulent B. streamline C. either or them D. neither of them
92	According to the equation of continuity, when water falls from the tap, it's speed increases and its cross-sectional area	A. decreases B. increases C. becomes zero D. none of them
93	The product of cross-sectional area of the pipe and the fluid speed at any pint along the pipe is	A. very high B. very low C. constant D. zero
94	The product of cross-sectional area of the pipe and the fluid speed at any point along the pipe is called	A. constant rate B. volume rate C. flow rate D. steady rate
95	If the flow is incompressible and the flow is steady then the mass of the fluid through the pipe	A. increases B. decreases C. becomes zero D. is conserved
96	The fluid is incompressible, if itsdensity is	A. zero B. constant C. very high D. very small
97	When there is no internal frictional forces between the adjacent layers of fluid, then the fluid is called	A. incompressible B. compressible C. viscous D. non viscous
98	The irregular and unsteady flow of the fluid is called	A. turbulent flow B. steady flow C. either of them D. both of them
99	Above a certain velocity of a fluid is called	A. turbulent flow B. steady flow C. either of them D. both of them
100	The equation of continuity is	A. A₁A_{2 = V}₁V₂ B. A_{1/}_V_{1 =}A_{2/}V₂ C. _V_{1/}A₁₌V_{2/}A₂ D. A₁_V_{1 =}A₂V₂
101	A tube tapers from 20 cm diameter to 2 cm, the velocity at first cross-section is 50 ms^{-1}then velocity at second cross-section is	A. 5000 cms⁻¹ B. 500 cms⁻¹ C. 50 cms⁻¹ D. 0.5 cm/s
102	The smooth or steady streamline flow is known as	A. laminar flow B. turbulent flow C. both of them D. none of them
103	The un-steady streamline flow is called	A. laminar flow B. turbulent flow C. both of them D. none of them

104	Rate of flow can be expressed in	A. litre/sec B. litre-sec C. sec/litre D. sec/litre-m
105	The mass of fluid passing through any cross-section per unit time is called	A. electric flux B. magnetic flux C. mass flux D. none of them
106	The pressure will change in the pipe, as the fluid moves through that pipe of varying	A. cross-section B. height C. none of them D. both of them
107	Bernoulli's equation is the fundamental equation in fluid dynamics, which relates pressure to fluid	A. speed B. height C. none of them D. both of them
108	In deriving the Bernoulli's equation, we assume that the fluid is	A. incompressible B. no viscous C. flows in a steady manner D. all of them
109	The velocity gained by the fluid in falling through the distance ($h_{1 - h2}$) under the action of gravity is equal to the speed of the action of gravity is equal to the speed of the	A. orifices B. efflux C. fluid D. none of them
110	According to the Bernoulli's equation, where the speed of the fluid is high, the pressure will be	A. low B. zero C. high D. all of them
111	Where the streamlines are very close to each other, the pressure will be	A. low B. zero C. high D. all of them
112	Where the streamlines are very far apart from each other, the pressure will be	A. low B. zero C. high D. all of them
113	If one of the pipes has a much smaller diameter than the other and are placed horizontally then form both sides of Bernoulli's equation, we can drop the term	A. P B. 1/2 fv² C. pgh D. none of them
114	A device used to measure the speed of liquid flow is known as	A. barometer B. speedometer C. sphygmomanometer D. venture-meter
115	Blood is an	A. Compressible fluid B. incompressible fluid C. hard D. none of them
116	The density of blood is nearly equal to that of	A. mercury B. sodium C. water D. honey
117	A high concentration of red blood cells increases its viscosity from	A. 3 - 5 times that of mercury B. 5 - 8 times that of mercury C. 3 - 5 times that of water D. 5 - 8 times that of water
118	Blood vessels can be stretch like rubber, therefore they are	A. rigid B. hard C. very thick D. not rigid
119	Under normal circumstances, the volume of blood is sufficient to keep the vessels	A. flatted for all times B. inflated for all times C. inflated for small times D. none of them
120	The internal pressure of the blood is	A. less than the external atmospheric pressure B. greater than the external atmospheric pressure C. equal to the external atmosphericpressure D. none of them
121	When a body moves to and fro motion, this type of motion is called	A. translatory motion B. circular motion C. oscillatory motion

		C. oscillatory motion D. all of them
122	When an oscillatory motion repeats itself, then this type of motion is called	A. vibratory motion B. constant motion C. fixed motion D. periodic motion
123	Example of vibratory motion is	A. mass suspended from a spring B. a bob of simple pendulum C. mass attached to a spring placed D. all of them
124	When a body is pulled away from its rest or equilibrium position and then released, the body oscillates due to	A. applied force B. momentum C. restoring force D. none of them
125	The restoring force always directed towards the	A. extreme position B. mean position C. both of them D. none of them
126	The force which opposes the applied force producing the displacement in the spring is called	A. restoring force B. periodic force C. centripetal force D. resistive force
127	The vibratory or oscillatory motion of a body is	A. translatory motion B. back and forth motion about its mean position C. free all motion D. circular motion
128	The vibratory motion of a body whose magnitude of acceleration is directly proportional to the magnitude of its displacement and is always directed towards the equilibrium position is called	A. rotatory motion B. motion under gravity C. angular motion D. simple harmonic motion
129	One complete round trip of the body about its mean position is called	A. displacement B. vibration C. a complete motion D. an acceleration
130	The time required to complete on vibration is called	A. frequency B. total time C. time period D. velocity
131	The number of vibrating body at any instant from its equilibrium position is called	A. displacement B. frequency C. amplitude D. time period
132	The maximum displacement of a body on either side of its equilibrium position is called	A. frequency B. amplitude C. displacement D. time period
133	For a body executing S. H. M, its	A. momentum remains constant B. potential energy remains constant C. kinetic energy remains constant D. total energy remains constant
134	When a body is performing S.H.M., its acceleration is	A. inversely proportional to the displacement B. directly proportional to the applied force C. directly proportional to the amplitude D. directly proportional to the displacement but in opposite direction
135	Which of the following is an example of a S.H.M?	A. motion of a projectile B. motion of a train along a circular path C. motion of swing D. electrons revolving sound the nucleus
136	Which of the following does not exhibit S.H.M?	A. a plucked violin string B. a mass attached to a spring C. a train shunting between two terminals D. a simple pendulum
137	If the displacement of a body executing S.H.M is plotted against time, then the curve is known as	A. frequency of S.H.M B. period of S.H.M C. wave form D. none of them
138	The wave form of S.H.M will be	A. square wave B. sine wave C. rectified wave D. saw-tooth wave
		A. maximum

139	An object undergoes S.H.M has maximum speed when its displacement from the mean position is	A. maximum B. zero C. half of the maximum value D. one third of the maximum value
140	An object undergoes S.H.M has maximum acceleration when its displacement form the means position	A. maximum B. zero C. half of the maximum value D. one third of the maximum value
141	Si units of time period is	A. second B. hertz C. revolution D. vibration/sec
142	SI unit of frequency is	A. second B. hertz C. revolution D. vibrations/sec
143	The expression of Hook's law is	A. F=ma B. F=kx C. F= -kx D. -kx=ma
144	If F=0.04 N and X=4 cm then K=	A. 1 Nm⁻¹ B. 2 Nm⁻¹ C. 3 Nm⁻¹ D. 4 Nm⁻¹
145	The expression for restoring force is	A. F=ma B. F=kx C. F= -kx D. Kx=ma
146	Angular frequency 'w' is basically a characteristics of	A. linear motion B. circular motion C. both of them D. none of them
147	When half of the cycle of a body executing S.H.M is completed, then the phase of the vibration will be	A. 45° B. 90° C. 135° D. 180°
148	The instantaneous velocity of a body moving along a circle is directed	A. along the radius B. along the tangent C. away from the circle D. none of them
149	The characteristic of a body executing S.H.M is that its acceleration is	A. inversely proportional to displacement B. directly proportional to displacement C. independent of displacement D. equal to zero
150	The phase determines the	A. displacement B. amplitude C. frequency D. state of motion of vibrating body
151	Acceleration of the mass at any instant is given by	A. a=k/m x B. a= - m/k x C. a = - k/m x D. a=m/k x
152	A simple pendulum consists of a	A. small light bob B. small heavy bob C. big light bob D. big heavy bob
153	The bob of a simple pendulum is suspended by	A. string B. heavy inextensible string C. light extensible string D. light inextensible string
154	The weight 'mg' of the bob is resolved into	A. one component B. two components C. three components D. four components
155	If the length of second pendulum becomes four times then its time period will become	A. Four time B. Two times C. Six times D. Eight times

156	Time period of a simple pendulum depends upon the	A. length of the pendulum B. acceleration due to gravity C. none of them D. both of them
157	Time period of simple pendulum is independent of	A. length B. mass C. acceleration due to gravity D. none of them
158	If the length of a simple pendulum is 0.25 m its time period would be	A. 1.0 s B. 2.0 s C. 3.0 s D. 4.0 s
159	If the time period a simple pendulum is 2 s, its frequency would be	A. 2 Hz B. 1.5 Hz C. 1.0 Hz D. 0.5 Hz
160	When a mass 'm' is pulled slowly, the spring stretches by an amount x_0,then the average force would be	A. F= Kx₀ B. F=1/2Kx₀ C. F=2Kx₀ D. F=4Kx₀
161	When a mass 'm' is pulled slowly, the spring stretches by an amount x_o, then the work done will be	A. W=Kx_o B. W=1/2Kx_o C. W=1/2Kx²_o D. W=4Kx_o
162	When a mass 'm' is pulled slowly through a distance 'x_o' , the elastic potential energy of the spring would be	A. P.E=Kx²_o B. P.E= 1/2kx_o C. P.E=1/2Kx²_o D. P.E=Kx²_o
163	When the bob of simple pendulum is at extreme position, its K.E. will be	A. maximum B. minimum C. zero D. all of them
164	When the bob of simple pendulum is at mean position, its K.E will be	A. maximum B. minimum C. zero D. all of them
165	The total energy of spring mass system is	A. zero B. changing with time C. constant D. none of them
166	Energy is dissipated and consequently the energy mass system do not oscillate indefinitely because of	A. very small energy B. very large energy C. frictional forces D. acceleration due to gravity
167	If we increase the length of a simple pendulum four times, its time period will become	A. 2 times B. 3 times C. 4 times D. 6 times
168	If the mass of the simple pendulum becomes double, its time period	A. increase B. decreases C. remains constant D. none of them
169	A second's pendulum is a pendulum whose time period is	A. 1 second B. 2 seconds C. 3 seconds D. 4 seconds
170	The time period of pendulums of different lengths would be	A. same B. different C. both of them D. none of them
171	If a simple pendulum is shifted from karachi to K-2 cliff, its time period	A. remains the same B. decreases C. increases D. none of them
172	A body is executing free vibrations when it oscilates	A. with the interference of an external force B. without the interference of an external force C. with the interference of an internal force D. none of them
173	The frequency of free vibrations is known as	A. free frequency B. forced frequency C. natural frequency

		D. un-natural frequency
174	The natural frequency of a pendulum which is vibrating freely, depends upon its	A. mass B. length C. material D. all of them
175	If a freely oscillating system is subjected to an external force, then	A. free vibrations will take place B. the body will move with its natural frequency C. forced vibrations will take place D. none of them
176	There is a regular arrangement of molecules in a	A. amorphous solids B. polymeric solids C. crystalline solids D. none of them
177	The solids which has structure in-between order and disorder are called	A. amorphous solids B. polymeric solids C. crystalline solids D. all of them
178	The neighbours of every molecule in crystalline solids are arranged in	A. an irregular manner B. a regular manner C. any manner D. none of them
179	The vast majority of solids are in the form of	A. amorphous structure B. polymeric structure C. crystalline structure D. all of them
180	The molecules or ions in a crystalline solids are	A. static B. not static C. randomly moving D. all of them
181	The amplitude of oscillation of each atom in a metallic crystal rises with the	A. rise in temperature B. decrease in temperature C. even temperature remains constant D. all of them
182	In metallic crystals which of the following thing remains constant	A. amplitude of oscillations B. temperature of solid C. average atomic positions D. all of them
183	The cohesive forces between atoms, molecules or ions in crystalline solids maintain the strict	A. short range order B. long range order C. both of them D. none of them
184	Every crystalline solid has	A. definite melting point B. different melting points C. may or may not be definite D. none of them
185	Amorphous solids are also more like	A. crystalline solids B. gases C. liquids D. any one of them
186	Amorphous solids are also called as	A. crystalline solids B. polymeric solids C. glassy solids D. any one of them
187	Glass is an example of	A. crystalline solid B. amorphous solid C. polymeric solid D. none of them
188	On heating, glass gradually softens into a paste like before it becomes a very viscous liquid at almost	A. 600°C B. 7600°C C. 800°C D. 900°C
189	Synthetic materials fall into the category of	A. crystalline solids B. amorphous C. polymeric solids D. all of them
190	Polymeric solids have	A. low specific gravity B. high specific gravity C. either of them

		D. none of them
191	The smallest three dimensional basic structure in a crystalline solid is called	A. lattice point B. crystal lattice C. cubic crystal D. unit cell
192	The crystalline structure of NaCl is	A. rectangular B. hexagonal C. tetrahedral D. cubical
193	The ability of the body to return to its original shape is called	A. deformation B. stretching C. compressing D. elasticity
194	The results of mechanical tests are usually expressed in terms of	A. stress B. strain C. stress and strain D. neither strees nor strain
195	The force applied on unit area to produce any change in the shape, volume or length of a body is known as	A. strain B. elasticity C. stretching D. stress
196	The SI unit of stress is	A. N/m² B. Nmc C. dynes/m D. N
197	When a stress changes length, it is called the	A. compressional stress B. tensile stress C. shear stress D. any one of them
198	When a stress changes the shape, it is called the	A. compressional stress B. tensile stress C. shear stress D. any one of them
199	The measure of the deformation in a solid when stress is applied to its is called	A. elastic constant B. young's modulus C. strain D. elasticity
200	The SI unit of strain is	A. N B. Dynes C. Pascal D. Dimensionless
201	Experiments revealed that the ratio of the stress to the strain is a constant value for	A. different material B. all materials C. a given material D. all of them
202	The modulus of elasticity can be written as	A. stress x strain B. strain/stress C. 1/2 x stress x strain D. stress/strain
203	The units of modulus of elasticity are	A. Nm⁻² B. Nm C. ms⁻¹ D. Pascal
204	The ratio of linear stress/linear strain is called as	A. Yong's modulus B. Bulk modulus C. Shear modulus D. Modulus
205	The ratio of shearing stress/shearing strain is called as	A. Modulus B. Pascal modulus C. Hooker's modulus D. Shear modulus
206	In case of the three dimensional deformation, when volume is involved, the ratio of applied stress to volumetric strain is called	A. Young's modulus B. Bulk modulus C. Shear modulus D. all of them
207	When the shear stress and shear stain are involved, then their ratio is called	A. Young's modulus B. Bulk modulus C. Shear modulus D. all of them
		A. 5

208	The number of different crystals systems based on the geometrical arrangement of their atoms and the resultant geometrical structure are	B. 7 C. 9 D. 14
209	In the stress-strain graph, stress is increased linearly with strain until a point is reached, this point is known as	A. plastic limit B. plastic deformation C. proportional limit D. elastic behaviour
210	The greatest stress that a material can endure without losing the proportionality between stress and strain is called	A. plastic line B. breaking point C. proportional limit D. none of them
211	Under the elastic region, the deformation produced in the material, the deformation produced in the material will be	A. permanent B. temporary C. either of them D. none of them
212	If the stress increased beyond the elastic limit of the material. the deformation produced in the material will be	A. permanent B. temporary C. either of them D. none of them
213	when the deformation produced in the material become permanent, this type of behaviour is called	A. proportionality B. elasticity C. plasticity D. none of them
214	The maximum stress that a material can withstand, is known as	A. plastic point B. elastic limit C. yield point D. ultimate tensile strength
215	Substances which break just after the elastic limit is reached, are known as	A. brittle substances B. ductile substances C. plastic substances D. elastic substances
216	The substances which break just after the elastic limit is reached, are known as	A. brittle substances B. ductile substances C. plastic substances D. elastic substances
217	Glass and high carbon steel are the examples of	A. brittle substances B. ductile substances C. plastic substances D. elastic substances
218	Lead, copper and wrought iron are examples of	A. brittle substances B. ductile substances C. plastic substances D. elastic substances
219	Which of the following theory completely explain the three types of materials	A. Bohr model of electron distribution B. Rutherford atomic model C. Pauli's exclusion principle D. energy band theory
220	Electrons of an isolated atom are bound to the nucleus, and	A. can only have distinct energy level B. can only have same energy level C. may or may not have distinct energy levels D. none of these
221	When a large number of atoms are brought close to one another to form a solid, each energy level of an isolated atom splits into sub-levels, called	A. energy bands B. energy shells C. states D. all of them
222	The electrons in the outermost shell of an atom are called	A. core electrons B. valence electrons C. high energy electrons D. none of them
223	The valence band of an atom in a solid	A. is always empty B. may or may not be empty C. can never be empty D. none of them
224	The band above the valence band is called	A. high energy band B. conduction band C. empty band D. none of them
225	The electrons occupying the conduction band are known as	A. conduction electrons B. free electrons C. both of them D. none of them

226	The conduction band in a solid	A. may be empty B. cannot be empty C. should be filed D. all of them
227	The bands below the valence band are	A. completely filled and play active part in conduction process B. completely filled and plays no part in conduction process C. completely filled and play active part in conduction process D. not completely filled and play no part in conduction process
228	The materials in which valence electrons are bound very tightly to their atoms and are not free, are known as	A. conductors B. insulators C. semi-conductors D. all of them
229	The materials in which there are plenty of free electrons for electrical conduction are known as	A. conductors B. insulators C. semi-conductors D. all of them
230	A semi-conductor in its extremely pure form is known as	A. extrinsic semi-conductor B. intrinsic semi-conductor C. either of them D. none of them
231	The behaviour of gases is well accounted by the kinetic theory based on	A. microscopic approach B. macroscopic approach C. both of them D. none of them
232	Which of the following is not an assumption of kinetic energy	A. a finite volume of gas consists of very large number of molecules B. the gas molecules are in random motion C. collision between the gas molecules are inelastic D. the size of the gas molecules is much smaller than the separation between molecules
233	If N is the total number of molecules and V is the volume of the container, then the expression for the pressure of gas is	A. P=P/V<1/2mv²> B. P=2N/V<1/2mv²> C. P=2/3N/V<1/2mv²> D. P=2/3N/V<mv²>
234	The pressure of gas everywhere inside the vessel will be the same provided the gas is of	A. Non-uniform density B. uniform density C. high density D. low density
235	While deriving the equation for pressure of a gas we consider the	A. rotational motion of molecules B. vibrational motion of molecules C. linear motion of molecules D. all of them
236	The pressure exerted by the gas is	A. directly proportional to the P.E B. inversely proportional to the P.E C. inversely proportional to the K.E D. directly proportional to the K.E
237	The ideal gas law is	A. P = nRT B. V = nRT C. PV =RT D. PV =nRT
238	The Boltzman constant has the value	A. 1.38 x 10⁻²³JK⁻¹ B. 1.28 x 10⁻²³JK⁻¹ C. 1.38 x 10⁻²⁶JK⁻¹ D. 1.28 x 10⁻²⁶JK⁻¹
239	The absolute temperature for an ideal gas is	A. directly proportional to the rotational K.E of gas molecules B. directly proportional to the vibrational K.E of gas molecules C. directly proportional to the average translational K.E.of gas molecules D. directly proportional to the P.E. of gas molecules
240	The volume of given mass of a gas will be doubled at atmosphere pressure if the temperature of the gas is changed from 150°C to	A. 300°C B. 573°C C. 600°C D. 743°C

241	Internal energy is the sum of all the forms of	A. K.E B. P.E C. both of them D. none of them
242	In the study of thermodynamics, which gas is considered as the working substance	A. real gas B. ideal gas C. any gas may be ideal or real D. none of them
243	The internal energy of an ideal gas system is generally the	A. translational K.E of molecules B. vibrational K.E of molecules C. rotational K.E of molecules D. all of them
244	When two objects are rubbed together, their internal energy	A. remains same B. decreases C. remains the same then decreases D. increases
245	In thermodynamics, internal energy is the function of	A. temperature B. pressure C. state D. none of them
246	The internal energy of a system does not depend upon the	A. initial state of the system B. final state of the system C. path D. none of them
247	The work done by the system on its environment is considered as	A. positive B. negative C. zero D. any one of them
248	The work done on the system by the environment is considered as	A. positive B. negative C. zero D. any one of them
249	If an amount of heat enters the system it could	A. decrease the internal energy B. not change the internal energy C. increase the internal energy D. none of them
250	We can express the work in term of	A. directly measurable variables B. indirectly measurable variables C. either of them D. both of them
251	A diatomic gas molecule has	A. translational energy B. rotaional energy C. vibrational energy D. all of them
252	The bicycle pump provides a good example of	A. first law of thermodynamics B. second law of thermodynamics C. third law of thermodynamics D. none of them
253	If 42 J heat is transferred to the system and the work done by the system is 32 J then what will be the change in internal energy	A. 0 J B. 2 J C. 5 J D. 10 J
254	The process which is carried out at constant temperature is known as	A. adiabatic process B. isothermal process C. isochoric process D. none of them
255	In which process the condition for the application of Boyle's law on the gas is fulfilled	A. isochoric process B. adiabatic process C. isothermal process D. none of them
256	In case of an ideal gas, the P.E associated with its molecule is	A. maximum B. zero C. minimum D. not fixed
257	The curve representing an isothermal process is called	A. adiabat B. isotherm C. fixed temperature D. none of them
258	A process in which no heat enters or leaves the system is called	A. isochoric process B. isothermal process C. adiabatic process D. none of them

259	In an adiabatic process the work is done at the expense of the	A. energy supplied to the system B. energy gained from the surroundings C. internal energy D. none of them
260	In an adiabatic expansion, the temperature of the gas	A. increases B. becomes zero C. decreases D. decreases rapidly
261	Adiabatic change occurs when the gas	A. expands B. compressed C. expands or compressed D. expands or compressed rapidly
262	Which of the following is not an example of adiabatic process	A. the rapid escape of air from a burst type B. the rapid expansion and compression of air through which a sound wave is passing C. cloud formation in the atmosphere D. none of them
263	The curve representing an adiabatic process is called	A. isotherm B. adiabat C. adiable D. none of them
264	One kilogram of different substances contain	A. same number of molecules B. different number of molecules C. may be same or different D. none of them
265	One mole of any substance contain	A. same number of molecules B. different number of molecules C. may be same or different D. none of them
266	The heat required to raise the temperature of one mole of the substance through 1 K is called	A. heat capacity B. specific heat capacity C. molar specific heat D. all of them
267	The heat required to raise the temperature of one mole of the gas through 1 K at constant volume is called	A. heat capacity B. specific heat capacity C. molar specific heat D. molar specific heat at constant volume
268	Heat required to raise the temperature of one mole of a gas through 1 K at constant pressure is called	A. heat capacity B. specific heat capacity C. specific heat at constant volume D. specific heat at constant pressure
269	A process which can be retraced in exactly reverse order, without producing any change in the surroundings is called	A. reversible process B. irreversible process C. any one of them D. none of them
270	In the reverse process, the working substance passes through the same stages as in the direct process and	A. thermal effects at each stage are exactly reversed B. mechanical effects at each stage are exactly reversed C. thermal and mechanical effects at each stage remain the same D. thermal and mechanical effects at each stage are exactly reversed
271	A succession of events which bring the system back to its initial condition is called	A. reversible process B. irreversible process C. a cycle D. none of them
272	A reversible cycle is the one in which	A. some of the changes are reversible B. all of the changes are reversible C. all of the changes are irreversible D. none of them
273	If a process cannot be retraced in the backward direction by reversing the controlling factors, it is	A. a reversible process B. an irreversible process C. any one of them D. both of them
274	The example of reversible process is	A. an explosion B. changes occur suddenly C. slow compression of a gas D. all of them
275	The example of irreversible process is	A. slowly liquification B. slowly evaporation C. an explosion D. all of them

276	A heat engine is that which converts	A. mechanical energy into thermal energy B. thermal energy into mechanical energy C. K.E into potential energy D. heat energy into light energy
277	The earliest heat engine was	A. petrol engine B. diesel engine C. electric engine D. steam engine
278	In a heat engine, heat is supplied by the	A. cold reservoir B. sink C. hot reservoir D. none of them
279	First law of thermodynamics tells us that heat energy can be converted into equivalent amount of work, but it is silent about	A. how heat is absorbed B. how heat extracted C. how this conversion takes place D. none of them
280	The second law of thermodynamics is concerned with the circumstances in which	A. heat can be converted into work B. direction of flow of heat C. none of them D. both of them
281	The percentage of available heat energy converted into work by a petrol engine is roughly	A. 35 % B. 40 % C. 35 to 40 % D. 25 %
282	The percentage of available heat energy converted into work by a diesel engine is roughly	A. 35 %` B. 40 % C. 35 - 40 % D. 25 %
283	It is impossible to devise a processes which may convert heat, extracted from a single reservoir, entirely into work without leaving any change in the working system. This is the statement of	A. Clausius statement of second law B. Kelvin'sstatement of second law C. Clausius statement of first law D. Kelvin's statement of first law
284	According to the second law, which is must to produce work	A. a source contains a large amount of heat energy B. two sources at the same temperature C. two sources at the different temperatures D. a source contains a small amount of energy
285	For the working of a heat engine, there must be	A. a source of heat at high temperature B. a sink at low temperature C. both of them D. none of them
286	We cannot utilize the heat contents of oceans and atmosphere because	A. there is no reservoir at the same temperature B. there is no reservoir at the temperature lower than any one of two C. there is no reservoir at the temperature higher than any one of two D. none of them
287	Sadi carnot described an ideal heat engine in	A. 1820 B. 1840 C. 1860 D. 1880
288	Carnot heat engine only used	A. isothermal processes B. adiabatic processes C. both of them D. none of them
289	The average of A.C. current and voltage over a complete cycle is	A. Maximum B. zero C. Neither zero nor maximum D. None of these
290	During each cycle, alternating voltage reaches a peak value	A. One time B. Two times C. Four times D. A number of times depending on the frequency
291	The basic circuit elements of A.C circuit are	A. Resistor B. Inductor C. Capacitor D. All the three
292	In an A.C circuit with resistor only, the current and voltage have a phase angle of	A. 90° B. 0° C. 180°

		D. none of these
293	Which one of the following is correct?	A. V_o= 1.414 V_{rms} B. I_{ams}= 1.414 I_o C. VO = 10.70 Vrms D. Both a and b
294	At higher frequency of the alternating current, the capacitive reactance X_C	A. Increases B. Decreases C. Remains the same D. Increases only when the voltage increases
295	An A.C varies as a function of	A. Current B. Voltage C. Time D. Charge
296	Alternating current can induce voltage because it has a	A. High peak value B. Varying magnetic field C. Stronger field than direct curren D. Constant magnetic field
297	The device which allows only the flow of an A.C. through a circuit is	A. Capacitor B. Inductor C. D.C. motor D. Battery
298	The r.m.s. value of alternating current is equal to its maximum value at angle of	A. 60° B. 45° C. 30° D. 90°
299	A resonance curve for RLC series circuit is a plot of frequency versus	A. Voltage B. Current C. Impedance D. Reactance
300	In RLC series circuit, resonance occurs when	A. X_{L > Xc} B. X_{L < Xc} C. X_{L = Xc} D. None of these
301	The power factor of resonant series circuit is	A. 1 B. 0 C. -1 D. 0.5
302	At resonance, the phase angle for RLC series resonance circuit equals	A. 0° B. 90° C. 180° D. 270°
303	When either L or C is increased, the resonant frequency of the RLC series circuit	A. Increases B. Decreases C. Remains the same D. Becomes zero
304	At resonance, the impedance of RLC series circuit is	A. Maximum B. Zero C. Minimum D. Determinate
305	To design a resonant circuit of frequency 100 KHz with an inductor of inductance 5 mH, we need a capacitor of capacitance	A. 5.07 pF B. 50 pF C. 0.507 pF D. 507 pF
306	An A.C. voltmeter read 250 volts. The frequency of alternating is 50 Hz, the peak value of voltage is	A. 3525.0 volts B. 35.35 volts C. 353.5 volts D. 3.535 volts
307	The impedance of RLC series resonance circuit at resonant frequency is	A. Greater than R B. Equal to R C. Less than R D. None of these
308	At resonance frequency the impedance of parallel resonance circuit is	A. Maximum B. Minimum C. Zero D. None of the above

		D. None of the above
309	An A.C. voltage is applied across the inductor. When the frequency of the voltage is increased, the current	A. Decreases B. Increases C. Does not change D. Momentarily goes to zero
310	In series RC circuit when $R=X_C$, then the phase angle is	A. 0° B. 90° C. 70° D. 45°
311	SI unit of impedance is	A. hertz B. henry C. ampere D. ohms
312	The total reactance of a series RLC circuit at resonance is	A. zero B. Equal to the resistance C. Infinity D. Capacitive
313	The phase angle of a series RLC circuit at resonance is	A. 180° B. 90° C. 0° D. None of the these
314	If the value of C in a series RLC circuit is increased, the resonant frequency	A. Is not affected B. Increase C. Remains the same D. Decreases
315	In frequency modulation (FM), the carrier waves amplitude	A. Remains constant B. Increase C. Decreases D. None of these
316	Which one of the following waves belongs to electromagnetic spectrum	A. Radio and TV waves B. Radar waves C. Micro waves D. All of them
317	Chock consumes externally small	A. Charge B. Current C. Power D. Potential
318	Which one of the following Electro-magnetic wave have the highest frequency and shortest wave-length	A. X-rays B. Ultraviolet rays C. y-rays D. Cosmic rays
319	Electromagnetic waves transmit energy equal to	A. 1/2 mv² B. m_oc² C. hf/c D. hf
320	Transmitting antenna emits	A. Magnetic waves B. Electric waves C. Electromagnetic waves D. Sound waves
321	In free space, the speed of electromagnetic waves is	A. 3 x 10⁸ms⁻¹ B. 3 x 10⁶ms⁻¹ C. 4 x 10⁷ms⁻¹ D. 3 x 10⁹ms⁻¹
322	When electrons in the transmitting antenna vibrate 94000 time per second, they produce radiowaves having frequency	A. 9.4 kHz B. 940 kHz C. 94 kHz D. None of these
323	A changing magnetic flux creates around itself	A. An electromotive force B. An electric field (changing electric flux) C. Magnetic field D. None of the above
324	Average value of A.C voltage during one cycle is	A. 1 B. Zero C. Maximum D. Variable
		A. 2nd group

325	A p-n junction is formed when a crystal of silicon is growth in such a way that its one half is doped with trivalent impurity and the other half with a impurity from	A. 2nd group B. fourth group C. fifth group D. sixth group
326	The value of the potential difference across the depletion region for the case of germanium is	A. 0.3 V B. 0.5 V C. 0.7 V D. 0.9 V
327	When the p-n junction is forward biased its resistance is of the order of	A. few mega ohms B. few kilo ohms C. few ohms D. few milli ohms
328	When the pn-junction is forward biased. the current flows through it is of the order of	A. mili-amperes B. amperes C. nano-amperes D. micro-amperes
329	When the pn-junction is in reversed biased, current flows through the junction due to the	A. majority carriers B. minority carriers C. either of them D. none of them
330	When the pn-junction is connected reversed biased, its resistance is of the order of	A. few ohms B. few kilo-ohms C. few mega-ohms D. few mili-ohms
331	A diode characteristic curve is a plot between	A. current and time B. voltage and time C. voltage and current D. forward voltage and reversed voltage
332	Conversion of alternating current into direct current is called	A. amplification B. rectification C. conduction D. polarization
333	The output voltage of half wave rectification is in the form of	A. a smooth curve B. a smooth wave C. pulses D. all of the above
334	During the positive half-cycle in the half-wave rectification,the diode	A. does not conduct B. conducts C. either of these D. neither of these
335	During the negative half-cycle of the half-wave rectification, the diode	A. does not conduct B. conducts C. either of these D. none of these
336	In half wave rectification	A. both halves of the input voltage is used B. only one half of the input voltage is used C. either of these D. none of these
337	The bridge circuit of full wave rectification uses	A. one diode B. two diode C. three diode D. four diode
338	The circuit which is used to smooth the output voltage of the full-wave rectification is known as	A. transformer B. rectifier C. filter D. none of these
339	In which of the following components, pn-junction is used	A. light emitting diode B. photo diode C. photo voltaic cell D. all of these
340	In which of the following diodes when an electron combines with a hole during the forward biasing, photon of visible light is emitted.	A. photo diode B. light emitting diode C. photo voltaic cell D. all of them
341	Which of the following diode is used for the detection of light	A. photo diode B. light emitting diode C. photo voltaic cell D. all of them
342	If the two charges in Coulomb's law have double distance between them, then electric force	A. Becomes two-fold B. Becomes four-fold C. Remains the same D. None of these

343	The SI unit of permitivity is	A. Nm²C² B. N⁻¹m⁻²C² C. NmC² D. Nm²C⁻¹
344	The value of electrical constant of proportionality k is	A. 9 x 10⁹Nm²C⁻² B. 9 x 10⁻⁹Nm²C⁻² C. 9 x 10¹⁰Nm²C² D. 9.85 x 10⁻¹²N⁻¹C⁻²
345	The concept of field theory was put forward by	A. Franklin B. Kepler C. Oersted D. Michael Faraday
346	Coulomb's force between two point charges depends upon	A. Magnitude of charges B. Distance between them C. Medium in which they are located D. All of the above
347	The electric field intensity at a point due to a point charge	A. Falls off inversely as the distance B. Falls off inversely as the square of distance C. Remains unchanged with distance D. Increase directly as square of distance
348	The statement "the electric force of repulsion or attraction between two point charges is directly proportional to the product of the charges and inversely proportional to square of the distance between them" refer to	A. Coulomb's law B. Gauss's law C. Biot-Sarwat law D. Ampere's law
349	The ratio of the gravitational force $F_g$to the electrostatic force $F_e$between two electrons at the same distance apart is approximately	A. 9.8 B. 24 x 10¹⁹ C. 24 x 10⁴² D. 24 x 10⁻⁴⁴
350	The minimum charge on any object can not be less than	A. 1.6 x 10⁻¹⁹C B. 3.2 x 10⁻¹⁹C C. 1.0 C D. 4.8 x 10⁻¹⁹C
351	Coulomb force, when any material medium is placed between two charges	A. Increases B. Decreases C. Remain unchanged D. None of these
352	If electric and gravitational force on an electron in a uniform electric field will be	A. E=mg/q B. E=q/mg C. E=,g/q D. E=qg/m
353	Which one of the following has larger value of relative permitivity $E_r$at room temperature?	A. Vaccum B. Air C. Glass D. Water
354	The electric field will be uniform	A. Near a positive point charge B. Near a negative point charge C. Between two oppositely charged parallel metal plates D. None of above
355	One coulomb of charge is created by	A. 10 electrons B. 1.6 x 10⁻¹⁹electrons C. 6.25 x 10¹⁸electrons D. 6.25 x 10²¹electrons
356	A charge of 0.1 c accelerated through a potential difference of 1000V acquires kinetic energy	A. 200 J B. 100 J C. 1000 J D. 400 J
357	An electric charge at rest is	A. Only an electric field B. Only a magnetic field C. Both electric and magnetic fields D. None of the above
358	The SI unit of electric field intensity is	A. CN⁻¹ B. NC⁻¹or Vm⁻¹ C. JC⁻¹ D. AV⁻¹
359	The dot product of electric field intensity E and vector area A is called	A. Electric potential B. Electric flux C. Electric field

		C. Electric field D. Magnetic field
360	Electric flux is defined by the relation	A. E.A. B. E x A C. E/A D. none of these
361	The SI unit of electric flux is	A. Weber B. Nm²C⁻¹ C. NmC⁻¹ D. Nm⁻²C
362	The electric flux is linked with a surface will be maximum when	A. The surface is held parallel to the electric field B. The surface is held perpendicular to the electric field C. The surface makes an angle of 45° with the electric field D. All of the above
363	The electric flux from a closed surface	A. Is independent of the shape of the surface B. Depends on the charge enclosed by the surface C. Both a and b D. None of the above
364	A closed surface contains two equal and opposite charges. The net electric flux from the surface will be	A. Negative B. Positive C. Infinite D. Zero
365	Which one of the following is the unit of electric field intensity	A. JC⁻¹ B. Vm⁻¹ C. Cm⁻¹ D. CJ⁻¹
366	The electric lines of force are	A. Imaginary B. Physically existing everywhere C. Physically existing near the charge D. All of the above
367	The earth's potential is taken as	A. Negative B. Positive C. Zero D. Infinite
368	When an electron is accelerated through a P.D. of an one volt, it will acquire energy equal to	A. One joule B. One erg C. One electron volt D. None of these
369	One electron volt is equal to	A. 1.6 x 1019eV B. 6.25 x 1018 eV C. 1.6 x 1018 eV D. 6.25 x 1019eV
370	One joule is equal to	A. 1.6 x 10¹⁹eV B. 6.25 x 10¹⁸eV C. 1.6 x 18¹⁸eV D. 6.25 x 10¹⁹eV
371	If an electron of charge 'e' is accelerated through a potential difference V., it will acquire energy	A. Ve B. V/e C. e/V D. 2Ve
372	Electron volt is the unit of	A. Potential difference B. Energy C. Resistance D. Capacitance
373	The relation between the charge Q of a parallel plate capacitor and the P.D between its plates is	A. Q=V/C B. Q=C/V C. Q=1/2CV D. Q=CV
374	Electron volt is the unit of.	A. Potential difference B. Energy C. Resistance D. Capacitance
375	The SI unit of capacitance is	A. Farad B. Henry C. Ohm D. Volt
376	Surface density of charge is defined as	A. Charge per unit volume B. Charge per unit length C. Charge per unit area

		D. Charge per unit mass
377	The capacitance of a parallel plate capacitor depends upon	A. Area of the plates B. Separation between the plates C. Medium between the plates D. All of the above
378	In case of a parallel plate capacitor if the plate separation is doubled and plate area is halved, the capacitance becomes	A. Four-fold B. One-half C. One-fourth D. Zero
379	The energy stored in a charge capacitor	A. 1/2CV² B. 1/2C²V C. 1/2C/V² D. None of these
380	The electric intensity outside the two oppositely charged parallel metal plates is	A. Maximum B. Minimum C. Zero D. Infinite
381	The electric intensity at infinite distance from the point charge will be	A. Infinite B. Positive C. Zero D. Negative
382	Capacitance of two or more capacitors	A. Increases in series combination B. Increases in parallel combination C. Remains unchanged D. None of the above
383	In RC series circuit the time during which the capacitor acquires 0.63 times the equilibrium charge is called	A. Time constant B. Decay constant C. None of these D. All of above
384	The current through a metallic conductor is due to the motion of	A. protons B. neutrons C. electrons D. free electrons
385	Free electrons are	A. tightly bound B. fixed C. loosely bound D. tightly fixed
386	The charge per unit time through any cross-section of a conductor is called	A. capacitance B. electric power C. current D. potential difference
387	One coulomb per second is equal to	A. One volt B. One ampere C. One hom D. One henry
388	The SI unit of current is	A. watt B. coulomb C. volt D. ampere
389	Which of the following represents an electric current?	A. C⁻¹ B. CS⁻¹ C. J.S⁻¹ D. dynes⁻¹
390	The relation between charge 'Q' and current 'I' is given by	A. Q = I/t B. Q = It C. Q = I²t D. Q = I²/t
391	The charge carriers in electrolyte are positive and negative	A. protons B. electrons C. ions D. none of these
392	The charge carriers in gases are	A. electrons B. ions C. protons D. ions and electrons
393	The conventional current in a circuit is defined as " current which passes from a point at higher potential to a point at lower potential as if it represent a movement of	A. negative charges B. positive charges C. protons D. electrons
		A. pressure B. volume

394	The speed of randomly moving electrons depends upon	B. volume C. temperature D. mass
395	The potential difference across the conductors should be maintained constant by connecting the ends of wire to the terminal of a device called a source of	A. power B. current C. resistance D. temperature
396	If a 40 watt light bulb burns for 2 hours. how much heat is generated	A. 288 x 10³J B. 288 x 10⁸J C. 288 x 10⁵J D. 288 x 10⁶J
397	Solar cell converts sunlight directly into	A. potential energy B. thermal energy C. mechanical energy D. electrical energy
398	Electric generators which convert mechanical energy into	A. solar energy B. thermal energy C. kinetic energy D. electrical energy
399	Heating effect caused by an electric circuit is written	A. H = I²Rt B. H = I²R C. H = IR²t D. H = IR²
400	The sources of magnetic field are	A. isolated magnetic poles B. charges at rest C. charges in motion D. none of these
401	The field around a moving charge is called	A. magnetic field B. conservative field C. non-conservative field D. none of these
402	The most suitable material for permanent magnet is	A. cobalt B. iron C. steel D. alaminium
403	The direction of lines of force depends upon the direction of	A. voltage B. current C. charges D. none of these
404	In a straight current carrying conductor, the direction of magnetic field can be found by	A. right hand rule B. left hand rule C. head to tall rule D. none of these
405	A current carrying conductor is placed at right angle to the magnetic field. The magnetic force experienced by the conductor is	A. minimum B. maximum C. zero D. none of these
406	'K' is the proportionality constant of force experienced by conductor. What is the value of 'K' in SI units?	A. 0 B. 1 C. 0.5 D. -1
407	The force acting on a charge moving in a magnetic field	A. is perpendicular to the both magnetic field and direction of motion B. is proportional to the magnetic of charges C. vanishes when the motion is directly opposite to the direction of field D. all of the above
408	Gauss(G) is smaller unit of magnetic induction which is related to tesla(T) as	A. IT = 10⁻⁴G B. IT = 10⁵G C. IT = 10³G D. IT = 10⁴G
409	The force acting as one meter length of the conductor placed at right angle to the magnetic field, when one A current is passing through it, defines the	A. magnetic flux B. magnetic induction C. magnetic field D. self inductance
410	The SI unit of magnetic induction is tesla which is equal to	A. Newton/ampere-meter or N/A-m B. Newton/ampere²-meter or N/A²-m C. Newton/ampere²-meter² or N/A²-m² D. Newton/ampere²-meter²or N/A²-m²

411	A meter wire carraying a current of 2A is at right angle to the uniform magnetic field of 0.5 Weber/m^2The force on the wire is	A. 5N B. 4N C. 1.5N D. 6N
412	A relationship between Gauses of magnetic induction and Tesla(T) is given by	A. G 10⁻³T B. G = 10⁻²T C. G = 10⁻⁴T D. G = 10⁻¹T
413	The SI unit of magnetic induction is	A. Gauses B. Tesla C. Weber D. Weber²
414	The force exerted on a conductor of length L, carrying current I when placed in a magnetic field B is given by	A. F=IB/L B. F= L x B/I C. F = IL x B D. F = IL . B
415	If current through conductor is 1 A and length of conductor is 1m placed at right angle to the magnetic field, then the strength of magnetic field is	A. F = B² B. F = 0 C. F = B D. F = B/2
416	The SI unit of magnetic flux is	A. NmA⁻² B. NmA⁻¹ C. NAm⁻¹ D. Nm²A⁻¹
417	Magnetic flux and flux density are related by	A. Flux density = flux x area B. Flux density = flux / area C. Flux density = flux - area D. None of these
418	Weber is a unit of	A. magnetic flux B. magnetic filed intensity C. magnetic induction D. magnetic flux density
419	The unit of magnetic flux is	A. Weber-m² B. Weber-m³ C. Henry D. Weber
420	The total number of lines of magnetic induction pasing through a surface perpendicular to the magnetic field is called	A. magnetic flux B. magnetic flux density C. magnetic induction D. magnetic field intensity
421	The SI unit of magnetic flux is.	A. weber B. Nm⁻¹A⁻¹ C. tesla D. gauss
422	The straight current carrying conductor experiences maximum force in a uniform magnetic field when it is placed	A. parallel to the field B. Perpendicular to the field C. At an angle of 45 to the field D. None of the above
423	The SI unit of flux density is	A. Newton/Amp-meter B. Newton-m/Ampere C. Newton-m/Amp² D. Newton-Amp/meter
424	The unit of flux density is also given by	A. Weber/m²or Wb . m⁻² B. Weber/mor Wb . m C. Weber/mor Wb . m⁻¹ D. Weber or Wb
425	The SI unit of flux density is.	A. Tesla B. Weber C. Gaun D. Weber/meter
426	Tesla is the unit of	A. Magnetic induction or flux density B. Magnetic flux C. Self inductance D. None of these
427	The SI unit of magnetic permeability is	A. WB A⁻¹m⁻¹ B. WB mA⁻¹ C. WB Am⁻¹ D. None of these
428	The magnetic field in the middle of a solenoid due to current is	A. weak B. strong and uniform C. none-uniform

		C. none-uniform D. zero
429	Which one of the following relations is correct?	A. 1 Wb-m²= Nm⁻¹A⁻¹ B. 1 tesla = 104 gausses C. 1 Wb-m²= 1 tesla D. All of the above
430	The magnetic field outside the solenoid due to current is	A. strong B. zero C. weak D. uniform
431	The strength of magnetic field around the current conductor is	A. Smaller near the conductor B. Greater near the conductor C. Greater at the large distance from the conductor D. Constant near and away from the conductor
432	When current passes through a solenoid coil, it behaves like a	A. loop B. circle C. bar magnet D. none of these
433	The force experienced by a single charge carrier moving with velocity 'v' i magnetic field of strength 'B' is given by	A. F =q(v/B) B. F=q²(v x B) C. F=q(v x B) D. F= vx B
434	The force experienced by an electron projected in a magnetic field B with a velocity V is given by	A. F=e(V x B) B. F= -e(V x B) C. F= e(B x V) D. Both a and c
435	41 The force experience, when proton projected in a magnetic field with velocity 'v' is	A. +e(v x B) B. -C(V x B) C. +e²(v x B) D. -e(v²x B)
436	The force experienced by charged particle is maximum, if it moves	A. parallel to magnetic field B. perpendicular to magnetic field C. opposite to the magnetic field D. none of these
437	Lorentz force is defined as	A. q(E + V x B) B. q(E x B + V) C. q(E x V + B) D. q(E x B)
438	If volume of wire is 'AL' and there are 'n' numbers of charge carriers per unit volume, then the total number of charge carriers are	A. n/AL B. Al/n C. nAL D. nA/L
439	In the expression of force experienced by electron, the direction of both v and B are	A. parallel B. zero C. perpendicular D. none of them
440	When an electron enters in a magnetic field right angle to its motion, the magnitude of its velocity will be	A. changed B. zero C. unchanged D. none of these
441	Centripetal force for electron is given by	A. mv²/ r B. mv / r² C. mv²/ r D. mr²/ v
442	The e/m of an electron moving in a circular path in a magnetic field is equal to	A. V/Br B. V/B²r² C. V²/Br² D. V²/Br
443	Charge to mass ratio (e/m) of an electron is given by the relation	A. e/m = 2V/Br² B. e/m = 2V/B²r C. e/m = 2V/B²r² D. e/m = V/2B²r²
444	When charged particle is projected perpendicular to a uniform magnetic field its trajectory is	A. circular B. elliptical C. cycloid D. straight line
445	A charged particle moving at right angle to the magnetic field will experience	A. minimum force B. maximum force C. zero D. moderate force

446	The magnetic force exerted on an electron moving with velocity 'v' at right angle to the magnetic field is given by	A. F=eVB B. F=e²V/B C. F=e/VB D. F=B²/ev
447	A magnetic force on an electron travelling with $10^8 ms^{-1}$ parallel to a field of strength 1 Wb m^{-2} is	A. Zero B. 10⁵m C. 10⁻¹⁰N D. 10⁸N
448	(CRO) Cathode ray oscilloscope is a device used for high speed	A. velocity B. graph plotting C. time-velocity D. none of these
449	CRO deflects the beam of	A. proton B. a-particle C. electron D. neutron
450	The CRO deflects the beam of electrons, when they passes through uniform	A. electric field B. gravitational field C. magnetic flax D. magnetic field
451	Flurescent screen is a screen where visible spot	A. vanishes B. is made C. becomes small and large D. none of these
452	A beam of electrons is provided by an	A. electron gun B. Suppray C. Injection D. None of these
453	Electron gun consist of	A. three anodes B. heating cathode C. three anodes D. three anodes , heating cathode, grid
454	The concept of direction and position are purely	A. absolute B. relative C. absolute or relative D. none of these
455	Absolute motion cannot be detected	A. in its own frame of references B. in a different frame of references C. both in its frame and different frame of references D. none of these
456	An intertial frame of reference is a frame of reference which is	A. at rest B. moving with uniform velocity C. either at rest or moving with uniform velocity D. none of these
457	Which of the following is not an example of intertial frame	A. a body placed on the surface of earth B. a body placed in a car moving with uniform velocity C. a body placed in a car moving with same acceleration D. none of these
458	An inertial frame is that frame in which	A. a>0 B. a=0 C. a<0 D. none of these
459	A non-inertial frame of reference is one, in which	A. law of inertial is valid B. all laws of physics are the same in all frames C. a>0 or a<0 D. a=0
460	The special theory of relativity treats problems invoving	A. inertial frame of references B. accelerating frame of references C. both of these D. none of these
461	The general theory of relativity treats problems involving	A. inertial frame of references B. accelerating frame of references C. both of these D. none of these
462	The special theory of relativity is based on the	A. one postulate B. two postulates C. three postulates D. four postulates
463	According to the special theory of relativity, time is	A. absolute quantity B. not absolute quantity C. constant quantity

		C. constant quantity D. none of these
464	The speed of a pendulum is measured to be 3.0 s in the inertial reference frame of the pendulum. What is its period measured by an observer moving at a speed of 0.95 c with respect to the pendulum	A. 2.9 s B. 3.0 s C. 6.6 s D. 9.6 s
465	The length contraction happens only	A. Opposite to the direction of motion B. along the direction of motion C. perpendicular to the direction of motion D. In any direction
466	According to Einstein, with the great increase in the speed of the body the relativistic length of the body	A. Remains constant B. Decreases C. Increases D. Reduces to zero
467	If you are moving at relativistic speed between two points that are a fixed distance apart, then the distance between the two points appers	A. larger B. shorter C. equal D. none of these
468	A bar 1.0 m in length and located along x-axix moves with a speed of 0.75 c with respect to a stationary observer. The length of the bar as measured by the stationary observer is	A. 1.66 m B. 1.0 m C. 0.66 m D. 2.66 m
469	According to Einstein, with the great increase in the speed of the body, the relativistic mass of the body	A. Remains constant B. Decreases C. Increases to infinity D. Reduced to zero
470	Which one of the following physical quantities changes with relativistic speed	A. Length B. Mass C. Time D. All of the above
471	If a material object moves with the speed of light 'C' its mass becomes	A. Equal to its rest mass B. Four times of its rest mass C. Double of its rest mass D. Infinite
472	If a body reaches a speed equal to the speed of light, then its mass will became	A. zero B. very small C. infinity D. none of these
473	The Einstein's changes in length, mass and time are not observed in common life because	A. We dont observer then seriously B. The masses are too large C. Their speed is too small than the speed of right D. All of the above
474	The mass 'm' of a body moving at 0.8 c (whose rest mass is mo) becomes	A. 2 mo B. 1.67 mo C. 0.67 mo D. 2.67 mo
475	The mass of an object will be doubled at speed	A. 1.6 x 10⁸ms⁻¹ B. 2.6 X 10⁸ms⁻¹ C. 2.6 x 10⁷ms⁻¹ D. 2.6 x 10⁹ms⁻¹
476	According to the special theory of relativity	A. mass and energy are same entities B. mass and energy are same entities but interconverible C. mass and energy are different entities but interconverible D. mass and energy are different entities but non-interconveritble
477	The location and speed anywhere on earth can now be determined using relativistic effects by NAVISTAR to an accuracy of	A. 2 cm/s B. 20 cm/s C. 200 cm/s D. 2000 cm/s
478	Newton's law of motion do not hold in	A. an accelerated frame of reference B. an unaccelerated frame of reference C. both of these D. none of these
479	According to the special theory of relativity, a moving clock	A. runs faster B. runs slower C. neither runs faster nor slower D. all of these
480	At the temperature, a body emits radiation which is principally	A. of long wavelengths in the visible region B. of long wavelengths in the invisible infrared region C. of short wavelength in invisible ultraviolet region D. none of these

		D. none of these
481	A high temperature, the proportion of shorter wavelengths radiation, emitted by the body	A. decreases B. first increases then decreases C. increases D. any one of them
482	When a platinum wire is heated, it appears dull red at about	A. 500°C B. 900°C C. 1100°C D. 1300°C
483	When a platinum wire is heated, it appears orange red at	A. 500°C B. 900°C C. 1100°C D. 1300°C
484	When a platinum wire is heated, it appears yellow at	A. 1600°C B. 900°C C. 1100°C D. 1300°C
485	When platinum wire is heated, it appears cherry red at	A. 1600°C B. 900°C C. 1100°C D. 1300°C
486	When a platinum wire is heated, it appears white at	A. 1600°C B. 900°C C. 1100°C D. 1300°C
487	A black body is	A. an ideal absorber B. an ideal radiator C. both of them D. none of them
488	The inside cavity of the black body is	A. painted white B. painted silver C. blackened with soot D. painted red
489	The Stephen-Boltzmann law for the black body radiation is given by	A. E = T² B. E = -T² C. E = T⁴ D. E = -T⁴
490	The value of the Stephen's constant for black body radiations is given by	A. 5.6 x 10⁸Wm⁻²K⁻⁴ B. 5.67 x 10⁻⁸Wm⁻²K⁻⁴ C. 2.9 x 10⁻³mK D. 2.9 x 10³mK
491	Max plank founded a mathematical model resulting in an equation that describes the shape of observed black body radiation curves exactly, in	A. 1890 B. 1895 C. 1900 D. 1905
492	According to the Max plank, energy is redialed or absorbed in	A. discrete packets B. continuous waves C. either of them D. none of these
493	The energy of a photon is represented by	A. h/c² B. h/T C. hc² D. hf/c²
494	The energy of photon 'E' is proported to	A. The magnetic field H B. The electric field E C. Both the electric and magnetic field H and E D. Frequency
495	S.I. unit of planks constant is	A. J-s⁻¹ B. J.s C. J.s⁻² D. J.s²

		D. 6.6²⁴
496	A photon is considered to have	A. Momentum B. Energy C. Wavelength D. All of the above
497	The value of the plank's constant 'h' is given by	A. 1.6 x 10⁻¹⁹J B. 1.67 x 10⁻²⁷Kg C. 6.63 x 10³⁴Js D. 6.63 x 10⁻³⁴Js
498	In photoelectric effect the energy of ejected electrons depend on	A. The frequency B. The intensity C. Both frequency and intensity D. None of these
499	Max plank received the Nobel Prize in physics for his discovery of energy quanta in	A. 1900 B. 1906 C. 1912 D. 1918
500	From the theory of relativity, momentum p of the photon is related to energy as	A. p = hfc B. p = hf/c C. p = f(hc,f) D. p = cf/h
501	The photon of radio-waves has energy of about	A. 1 Me V B. 1 Ke v C. 10⁻¹⁰e v D. 10¹⁰e v
502	The energy of a photon in a beam of infrared radiation of wavelength 1240 nm is	A. 100 ev B. 10⁶e v C. 10³e v D. 1.0 e v
503	The analysis of the distribution of wavelengths of the radiation emitted from a hot body set the foundation of new mechanics, known as	A. classical mechanics B. Newtonian mechanics C. quantum mechanics D. statistical mechanics
504	The whole shape of the black body spectrum for all wavelengths was explained by the formula proposed by	A. Max plank B. Newton C. Einstein D. J.J. Thomson
505	Electromagnetic radiation or photons interact with matter in	A. two distinct ways B. three distinct ways C. four distinct ways D. five distinct ways
506	The emission of electrons from a metal surface when exposed to light of suitable frequency is called the	A. pair production B. Compton effect C. photoelectric effect D. relativity
507	When monochromatic light is allowed to fall on cathode, it begins to emit electrons, these electrons are called	A. thermoionic electrons B. free electrons C. photoelectrons D. slow electrons
508	The photoelectric effect, the maximum energy of photoelectrons depends on the	A. particular metal surface B. frequency of incident light C. both of them D. none of them
509	There is certain frequency below which no electrons are emitted from the metal surface, this frequency is known as	A. maximum frequency B. minimum frequency C. threshold frequency D. all of these
510	The value of threshold frequency for different metals is	A. different B. same C. may be different or may be same D. none of these
511	As the light shines on the metal surface, the electrons are ejected	A. slowly B. instantaneously C. either of these D. none of these
512	According to the electromagnetic wave theory of light, increasing the intensity of incident light should increase the	A. number of photoelectrons B. size of the photoelectrons C. charge on photoelectrons D. K.E of photoelectrons
		A. 1915 B. 1906

513	Proton was discovered by Rutherford in	C. 1910 D. 1920
514	Neutron was discovered in	A. 1915 B. 1920 C. 1925 D. 1932
515	Neutron was discovered by	A. Curie B. Roentgen C. Chadwick D. Rutherford
516	In 1932 Chadwick discovered	A. proton B. neutron C. photon D. electron
517	Charge on neutron is	A. 1.6 x 10⁻¹⁹C B. zero C. -1.6 x 10⁻¹⁹C D. 1.2 x 10⁻¹⁹C
518	A particle having the mass of electron and charge of a proton is called a	A. photon B. position C. antiproton D. antineutrino
519	Nucleus consists of	A. proton and neutron B. protons and electron C. electron and neutron D. protons only
520	Mass of neutron is	A. 1.67 x 10⁻³¹kg B. 1.67 x 10⁻²⁷kg C. 9.1 x 10⁻³¹kg D. 1.67 x 10⁻19kg
521	Mass of proton is	A. 1.67 x 10⁻²⁷kg B. 1.67 x 10⁻³¹kg C. 1.66 x 10⁻³⁴kg D. 1.67 x 10⁻¹⁷kg
522	1 amu is equal to	A. 1.66 x 10⁻²⁴kg B. 1.66 x 10⁻¹⁹kg C. 1.66 x 10⁻³⁴kg D. 1.66 x 10⁻²⁷kg
523	The chemical behaviour of an atom is determined by	A. binding energy B. atomic number C. mass number D. number of isotopes
524	According to Rutherford atomic model, the positive charge in an atom	A. is concentrated at its centre B. is in the form of positive electron at same distance from its centre C. is spread uniformly through its volume D. none of these
525	For an atom having atomic number 'Z' and atomic weight 'A', the number of neutrons in the nucleous is	A. A - Z B. A C. Z D. A + Z
526	The nucleous of uranium -235 differs from a nucleous of a uranium -238 in that the later contains	A. 3 more neutrons B. 3 more electrons C. 3 more protons D. 3 more ions
527	The total charge of any nucleus is given as	A. Ze² B. Z²e C. Z/e D. Ze
528	The number of protons inside a nucleus is called	A. mass number B. atomic weight C. atomic number D. none of these
529	The number of all the protons and neutrons in a nucleus is known as	A. atomic number B. mass number C. charge number D. none of these
530	For an atom having atomic number Z and atomic weight A, the charge on the nucleus is	A. A - Z B. A + Z C. Z D. A

531	For an atom having atomic number Z and atomic weight A, the number of electron in an atoms	A. A - Z B. A + Z C. Z D. A
532	The number if neutrons in the nucleus of $_{92}U^{235}$are	A. Infinite B. 92 C. 235 D. 143
533	Mass of proton is of order of	A. 10⁻³¹gm B. 10⁻²⁷kg C. 10⁻²⁴gm D. 10⁺²⁷kg
534	Charge on proton is	A. 1.59 x 10⁻⁹C B. 1.59 x 10⁻⁷C C. -1.59 x 10⁻¹⁹C D. 1.59 x 10⁻¹⁹C
535	Structure of the nucleus was explained by	A. J.J Thomson B. Bohr C. Millikan D. Rutherford
536	The diameter of an atom is of the order	A. 10⁻¹²⁵m B. 10⁻¹¹m C. 10⁻¹⁰m D. 10⁻⁹m
537	Neutrons are	A. positive charge B. negatively charged C. massless D. neutral
538	Electrons are	A. positive charged B. negatively charged C. massless D. neutral
539	Nuclei that have the same charge number but different mass number are called	A. isotones B. isomers C. isotopes D. isobars
540	The number of isotopes of hydrogen are	A. 2 B. 1 C. 3 D. 4
541	How many isotopes of helium are present?	A. 1 B. 2 C. 3 D. 4
542	Hydrogen atom with only one proton in its nucleus, and one electron in its orbit is called	A. deuteron B. deterium C. protium D. tritium
543	Hydrogen atom with only one proton and one neutron in its nucleus, and one electron, is called	A. deuterium B. protium C. tritium D. none of these
544	The chemical properties of all the isotopes of an elements are	A. same B. different C. slightly different D. none of these
545	The chemical properties of an element depends upon the number of	A. electron B. position C. photons D. neutrons
546	A mass spectrograph sort out	A. molecules B. atoms C. elements D. isotopes
547	The most abundant isotope of neon is	A. neon-20 B. neon-21 C. neon-22 D. neon-23
548	Neon gas have three isotopes whose atomic numbers are	A. 20, 24 , 23 B. 20, 21 , 22 C. 20, 19 , 21

		D. none of these
549	The mass of the nucleus is always less than the total man of the protons and neutron that make up the nucleus. The difference of the two masses is called	A. nuclear fission B. nuclear fusion C. man defect D. radioactivity
550	1 amu is equal to.	A. 1.66 x 10⁻²⁴kg B. 1.66 x 10⁻¹⁹kg C. 1.66 x 10⁻²⁴kg D. 1.66 x 10⁻²⁷kg
551	If 'V' is the relativistic speed and 'C' is the speed of light then according to Einstien the factor V/C must always be	A. Equal to 1 B. Less than 1 C. Greater than 1 D. Infinity
552	The energy acquired by a mass of 1g moving with the speed of light is	A. 3 x 10⁸J B. 9 x 10¹³J C. 3 x 10¹³J D. 9 x 10¹⁶J
553	The missing mass which is converted to energy in the formation of nucleus, is called	A. packing fraction B. mass defect C. binding energy D. none of these
554	The energy is found from Einstein's mass energy relation is called	A. binding energy of electron B. binding energy of proton C. binding energy of neutron D. binding energy of nucleus
555	The amount of energy equivalent to 1 a.m.u is	A. 9.315 Mev B. 93.15 Mev C. 931.5 Mev D. 2.22 Mev
556	Binding energy per nucleus is	A. greater for heavy nucleus B. least for heavy nucleus C. greatest for light nuclei D. decreases for medium weight niclei
557	Radioactivity	A. is exhibited more by semiconductors in general B. in exhibited more by the element when they are coupled C. with other radioactive elements by a covalent bond D. is an atomic property of radioactive elements
558	Radioactivity was discovered by	A. Rutherford B. Henri Becqureal C. Maxwell D. James Chadwick
559	Maric Curie and Pieree Curie discovered two new radioactive elements, which are called	A. polonium uranium B. uranium and radium C. polonium and radium D. none of these
560	Beta particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons
561	Alfa particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons
562	Gamma rays consist of steam of	A. electron B. proton C. photons D. all of these
563	Alfa , beta and gamma rays are emitted from a radio-active substance	A. spontaneously B. when it is heated C. when it is exposed to light D. When it interacts with the other particle
564	Curie is a unit of	A. reluctance B. resistivity C. binding energy D. radioactivity
565	Radioactivity is	A. self disruptive activity B. spontaneous activity C. exhibited by all elements under proper conditions D. both 'a' and 'b'

566	When a nucleus emits an alpha particle, it atomic mass decreased by	A. 2 B. 1 C. 4 D. 3
567	When a nucleus emits an alpha particles, its charge number decreases by	A. 3 B. 2 C. 6 D. 5
568	An alpha particle has a charge of	A. +2e B. -2e C. -e D. +3e
569	A snooker ball moving with velocity V collides head on with another snooker ball of same mass at rest. If the collision is elastic, the velocity of second snooker ball is	A. Zero B. Infinity C. V D. 2 V
570	Suppose the water flows out from a pipe at 3kg $s^{-1}$and its velocity changes from 5m $s^{-1}$to zero on striking the wall, then the force exerted by water on wall will be	A. 5 N B. 10 N C. 15 N D. 20 N
571	When a shell explodes in mid-air, its fragments fly off in	A. only one direction B. in two direction C. different directions D. a particular direction
572	When a shall explodes a mid-air, the total momentum of its fragments is	A. less than the momentum of shell B. equal to the momentum of shell C. greater than the momentum of shell D. none of them
573	Flight of rocket in the space is an example of	A. Newton's first law B. Newton's third law C. Newton's second law D. all of them
574	A typical rocket consumes about	A. 100 kg s⁻¹of fuel B. 1000 kg s⁻¹of fuel C. 10000 kg s⁻¹of fuel D. 100000 kg s⁻¹of fuel
575	A typical rocket ejects the burnt gases at speeds over	A. 400 ms⁻¹ B. 40000m s⁻¹ C. 40000 ms⁻¹ D. 60000 ms⁻¹
576	A typical rocket consists of fuel	A. more than 60% of launch mass B. less than 60% of launch mass C. less than 80% of launch mass D. more than 80% of launch mass
577	A rocket carries its own fuel in the form of	A. liquid only B. liquid or solid C. liquid and solid D. liquid or solid and oxygen
578	If m is the mass of the gases ejected per second with velocity v relative to the rocket of mass M, then the acceleration of rocket is	A. a = M/mv B. a = mM/v C. a = mv/M D. a = v/mm
579	The motion of a body in a straight line is the motion in	A. one dimension B. two dimension C. three dimension D. four dimension
580	The motion in a plane is the motion in	A. one dimension B. two dimension C. three dimension D. four dimension
581	The motion of a projectile is	A. one dimension B. two dimension C. three dimension D. all of them
582	An object thrown in arbitrary direction in space with an initial velocity and moving freely under gravity will follow	A. a circular path B. a straight line C. a hyperbola D. a parabola
583	The artillery shells travel along parabolic paths under the influence of	A. magnetic field B. electric field C. electromagnetic field D. gravitational field

584	Distance covered by a freely falling body in 2 sec will be	A. 4.9 m B. 19.6 m C. 29.2 m D. 44.1 m
585	An object thrown upward with an initial velocity at certain angle with the horizontal and moving freely under the action of gravity is called	A. a rocket B. an aeroplane C. a projectile D. a ballon
586	Which of the following is not a projectile	A. a bullet fired from a gun B. a space ship C. a football in air D. an artillery shell
587	The path described by a projectile is called its	A. orbit B. trajectory C. range D. distance
588	The path (or trajectory) described by a projectile is	A. a parabola B. a hyperbola C. a circle D. a straight line
589	The projectile motion is composed of	A. horizontal motion only B. vertical motion only C. horizontal and vertical motion D. none of them
590	During the projectile motion, the horizontal component of velocity	A. changes with time B. remains constant C. becomes zero D. decreases with time
591	The vertical component of velocity of a projectile during its motion is minimum	A. at the time of projection B. at the highest point C. just before hitting the plane of projection D. all of them
592	The horizontal component of a projectile moving with initial velocity of 500 ms^{-1}at an angle 60° to x-axis is	A. 500 ms⁻¹ B. 1000 ms⁻¹ C. 250 ms⁻¹ D. Zero
593	A particle of mass 0.5 g moving along x-axis is located of x_1= 15 m at t_1= 5s and x_2= 33 m at t_2= 13s its average velocity is	A. 6 m s⁻¹ B. 2.45 m s⁻¹ C. 2.25 m s⁻¹ D. 4.45 m s⁻¹
594	The horizontal range of projectile, at a certain place, depends upon	A. the mass of the projectile B. velocity of projection C. angle of projection D. angle as well as velocity of projection
595	The projectile attains maximum horizontal range when it is projected at an angle of	A. 30° B. 45° C. 60° D. 75°
596	The vertical and horizontal range will be equal id angle of projection is	A. 76° B. 45° C. 60° D. 120°
597	The velocity of a projectile is maximum	A. at the point of projection B. just before striking the ground C. at none of them D. at both of them
598	For maximum linear distance of travel, a projectile must be fired at an angle of	A. 0° B. 45° C. 90° D. 60°
		A. half of the time to reach maximum height

599	The time of flight of a projectile motion equal to	A. half of the time to reach maximum height B. twice the time to reach maximum height C. one fourth of time to reach maximum height D. time to reach maximum height
600	In a normal healthy person the value of systolic pressure is	A. 75 torr B. 80 torr C. 120 torr D. all of them
601	In a normal healthy person the value of diastolic pressure is	A. 75 - 80 torr B. 100 torr C. 120 torr D. none of them
602	One torr is equal to	A. 13.33 N/m² B. 760 N/m² C. 760 mm Hg D. 133.3 N/m²
603	Blood pressure is measured by the instrument	A. stethoscope B. sphygmomanometer C. barometer D. none of them
604	The blood pressure of a person	A. decrease with age B. increase with age C. has no effect with age D. none of them
605	According to the Bernoulli's theorem the pressure velocity are	A. equal to each other B. proportional to each other C. inversely proportional to each other D. none of them
606	The instrument which detects the instant at which external pressure becomes equal to the systolic pressure is	A. stethoscope B. thermometer C. manometer D. barometer
607	Fluid A is more viscous than fluid B. While flowing through a pipe of the same dimensions and material which fluid takes longer to travel at 25°C?	A. fluid B B. fluid A C. both take the same time D. not possible to determine from given information
608	The value of viscosity of a fluid is dependent on (at constant temperature)	A. the fluid itself B. the fluid and its container C. anything in contact with the fluid D. all of the above
609	Bernoulli's equation is applicable for	A. turbulent flow B. streamline flow C. both (a) and (b) D. all kinds of flows
610	Viscosity is defined as	A. the friction between fluid and its container's walls B. the internal friction between two layers of fluid C. the resistance to flow a fluid experiences D. the extent to which outside factors effect the fluid's flow
611	Which of the following options states the names of fluids in the order of increasing viscosity?	A. mercury, motor oil, methanol B. methanol, mercury, motor oil C. motor oil, mercury, methanol D. methanol, motor oil, mercury
612	What are the SI base units of the coefficient of viscosity	A. Kg m s⁻² B. kgm² s⁻² C. Kg m s⁻¹ D. kg m⁻¹s⁻¹
613	Which of the following has the greatest coefficient of viscosity?	A. water B. gasoline C. honey D. tar
614	Which of the following options correctly states the equation of continuity for an ideal fluid?	A. A₁A₂= V₁V₂ B. A₁/A₂= V₂/V₁ C. A₁/A₂= V₁/V₂ D. none of the above
615	The value for systolic blood pressure for a normal healthy person is	A. 140 torr B. 80 torr C. 90 torr D. 120 torr
		A. it is non-viscous

616	Which of the following is a characteristic of an ideal fluid?	B. it is incompressible C. it's motion is steady D. all of the above
617	The flow of an ideal fluid is	A. streamline flow B. incompressible flow C. non-viscous D. all of the above
618	Fluids have three types of energies. The Bernoulli's equation combines those energies.which of the following is one of the three enrgies possessed by a fluid?	A. potential energy B. pressure energy C. strain energy D. (a) and (b) only
619	Blood pressure is measured in torr. Which of the following units could belong to torr?	A. N m⁻¹ B. N m⁻² C. N m D. N⁻¹m⁻²
620	What is another name for laminar flow?	A. streamline B. unsteady flow C. turbulent flow D. both (a) and (b)
621	The equation of continuity $A_1V_1 = A_2V_2$is for the flow of	A. an ideal fluid B. an incompressible fluid C. a non visconcous fluid D. all of the above
622	A fluid at a certain point has 50 J of potential energy per unit volume, 75 J of kinetic energy per unit volume,and 35 J of pressure energy per unit volume. the total energy of the fluid is	A. 125 J B. 90 J C. 160 J D. 85 J
623	Matter is made up of very tiny particles called	A. Atoms B. Molecules C. Ions D. None of these
624	The SI unit of viscosity is	A. kg m⁻¹s⁻¹ B. kg ms⁻¹ C. kg m⁻¹s⁻² D. kg m⁻¹s
625	The velocity of falling raindrop attains limited value because of	A. Up trust of air B. Viscous force exerted by air C. Surface tension effect D. Air currents atmosphere
626	With increase of temperature, the viscosity of liquid and gases	A. Increases for both B. Decreases for both C. Increases for liquids and decreases for gases D. Decreases for liquids and increases for gases
627	Bernoulli's equation is based upon law of conservation	A. Mass B. Momentum C. Energy D. None of these
628	Bernoulli's equation is important in the field of	A. Electrical circuit B. Magnetism C. Photoelectric effect D. Flow of fluids
629	The application of Bernoulli's equation is	A. Torricelli's theorem B. Venture relation C. Binomial theorem D. Both a and b
630	A carnot cycle consists of	A. One step B. two step C. three steps D. four steps
631	The liquid which conduct current is known as	A. heating effect B. chemical energy C. electrolyte D. ohm's law
632	Albert Einstein got the Nobel prize in physics for his explanation of photoelectric effect in	A. 1916 B. 1919 C. 1921 D. 1923
633	If a nucleus emits an alpha particle, its mass number decreases by 4 while charge number decreased by	A. -4 B. 4 C. 2 D. 1

634	How many number of anodes used in electron gun	A. one B. two C. three D. six
635	The voltage increases linearly with	A. time B. velocity C. acceleration D. torque
636	The CRO is used for displaying the waveform of a given	A. current B. voltage C. both of them D. none of them
637	When the waveform of one voltage is increasing and that of second is decreasing and vice versa, then phase difference between these voltage is	A. 90<span style="color: rgb(84, 84, 84); font-family: arial, sans-serif; font-size: small;">° B. 75° C. 0° D. 180°
638	The gavanometer constant of a moving coil galvanometer is given by	A. K=BAN/C B. K=BN/CA C. K=NAC/B D. K=C/BAN
639	F = I(L x B) is a	A. vector B. scalar C. unit vector D. none of these
640	Which of the following diode is used to derive the current in external circuit when light is incident in the circuit	A. photo diode B. light emitting diode C. photo voltaic cell D. none of these
641	Which of the following diodes can operate in the reverse biased condition	A. photo diode B. light emitting diode C. photo voltaic cell D. none of these
642	In a transistor, if the central region is p-type then this type of transistor is known as	A. p-n-p transistor B. n-p-n transistor C. either of these D. none of these
643	A physical system under going forced vibrations is known as	A. Simple harmonic oscillator B. Compound harmonic oscillator C. Physical harmonic oscillator D. driven harmonic oscillator
644	The vibrations of factory floor caused by the running of heavy machinery is an example of	A. free vibration B. natural vibrations C. forced vibrations D. all of them
645	Associated with the motion of a driven harmonic oscillator, there is a very striking phenomenon, know as	A. waves B. beat C. interference D. resonance
646	If the external driving force is periodic with a period compareable to the natural period of the oscillator, then we get	A. diffraction B. beat C. interference D. resonance
647	In a resonance situation the amplitude of the motion may become extra ordinarily large, if	A. the driving force is large B. the driving force is zero C. the driving force may be feeble D. all of them
648	At 'resonance' the transfer of energy from deriving source to the oscillator is	A. maximum B. minimum C. zero D. none of them
649	Resonance occurs when one of the natural frequencies of vibration of the forced or driven harmonic oscillator	A. greater than the frequency of applied force B. equal to the frequency of applied force C. less than the frequency of applied force D. all of them
650	Which one of the following is an example of resonance	A. swing B. tuning a radio C. microwave oven D. all of them

651	A swing has	A. one natural frequency B. two natural frequencies C. three natural frequencies D. four natural frequencies
652	The waves produced in a microwave oven have frequency	A. 2450 Hz B. 2450 K Hz C. 2450 M Hz D. 2450 G Hz
653	The waves produced in a microwave oven have wavelength.	A. 12 mm B. 12 cm C. 12 m D. 12 mm
654	Such oscillations in which the amplitude decreases steadily with time, are called	A. resonance B. force oscillations C. large oscillations D. damped oscillations
655	While describing the motion of a simple pendulum, the frictional effects are	A. taken into account B. completely ignored C. partially ignored D. none of them
656	As the bob of the pendulum moves to and fro which of the force is experienced by the bob	A. its weight B. tension in the string C. viscous drag force by air D. all of them
657	The process in which energy is dissipated from the oscillating system is known as	A. resonance B. interference C. diffraction D. damping
658	Shock absorber of the car is an example of	A. resonance B. forced oscillations C. interference D. damped oscillations
659	In the resonance condition, the amplitude of the oscillator becomes	A. very large B. very small C. zero D. any one of them
660	The resonance will be sharp, if the amplitude decreases rapidly at a frequency	A. equal to the resonant frequency B. slight different from the resonant frequency C. greatly different from the resonant frequency D. any one of them
661	The damping depends upon the	A. amplitude B. sharpness C. both of them D. none of them
662	Smaller the damping, greater will be the	A. frequency B. wavelength C. amplitude D. none of them
663	Smaller the damping, the resonance will be	A. more flat B. more sharp C. both of them D. none of them
664	A heavily damped system has a fairly	A. sharp resonance curve B. flat resonance curve C. both of them D. none of them
665	A weakly damped system has fairly	A. sharp resonance curve B. flat resonance curve C. both of them D. none of them
666	Waves transport energy	A. without transport energy B. with matter C. both of them D. none of them
667	Wave disturbances may also come in a concentrated bundle, like shock wave from an aeroplane flying at	A. subsonic speed B. sonic speed C. super sonic speed D. any one of them
668	The waves which propagate by the collision of material particles are known	A. e.m. waves B. mechanical waves

	as	C. light waves D. microwaves
669	The waves which propagate out in space due to oscillation of electric and magnetic fields are known as	A. e.m. waves B. mechanical waves C. sound waves D. water waves
670	The example of mechanical wave is	A. waves in ropes B. waves on water surface C. waves in air D. all of them
671	In case of mechanical waves, we study the motion of	A. a single particle B. collection of particle C. any one of them D. none of them
672	A wave, which transfer energy by moving away from the source of disturbance is called a	A. progressive wave B. travelling wave C. both of them D. none of them
673	Example of progressive wave is	A. transverse waves B. longitudinal waves C. both of them D. none of them
674	The waves in which the particles of the medium are displaced in a direction perpendicular to the direction of propagation of waves are known as	A. longitudinal waves B. transverse waves C. non-mechanical waves D. none of them
675	The waves in which the particles of the medium have displacement along the direction of propagation of waves are called	A. longitudinal waves B. transverse waves C. non-mechanical waves D. none of them
676	Which type of wave can be set up in solids	A. longitudinal waves B. transverse waves C. both of them D. none of them
677	When small number of atoms from some other suitable element is added to the semi-conductor material, then this process is known as	A. impurification B. adding C. doping D. extrinsivity
678	In the doping process, the ratio of the doping atoms to the semi conductor atom is	A. 1 to 10 B. 1 to 10³ C. 1 to 10⁶ D. 1 to 10⁹
679	The doped semi-conductor materials are known as	A. intrinsic semi-conductor B. extrinsic semi-conductor C. either of them D. none of them
680	Semi-conductor elements have atoms with	A. 2 valence electrons B. 3 valence electrons C. 4 valence electrons D. 5 valence electrons
681	The bonding between the semi-conductor materials is	A. covalent B. ionic C. either of them D. none of them
682	Arsenic, antimony and phosphorus are the elements from	A. third group B. fourth group C. fifth group D. none of them
683	When a silicon crystal is doped with a pentavalent element, such an extrinsic semi-conductor is called	A. p-type semi-conductor B. n-type semi-conductor C. either of them D. none of them
684	When a silicon crystal is doped with a pentavalent element, then the atom of the pentavalent element is known as	A. acceptor B. donor C. either of them D. none of them
685	Whenever a covalent bond is broken in an intrinsic semi-conductor	A. hole is created B. an electron is created C. an electron-hole pair is generated D. all of them
		A. positive charge B. negative charge

686	In a semi-conductor material, current flows due to	D. negative charge C. both of them D. none of them
687	In a semi-conductor material, the total current is	A. only the +ve current B. only the electronic current C. sum of +ve and electronic current D. all of them
688	There are some whose resistivity becomes zero below a certain temperature, called	A. absolute zero B. 0°C C. critical temperature D. lower fixed point
689	The first super conductor was discovered in	A. 1811 B. 1890 C. 1901 D. 1911
690	The critical temperature of mercury is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
691	The critical temperature of aluminium is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
692	The critical temperature of tin is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
693	Any superconductor with critical temperature above 77 K, is referred as	A. low temperature superconductor B. high temperature superconductor C. very low temperature superconductor D. none of them
694	Recently a complex crystalline structure known as Yetrium Barium Copper Oxide have been reported to become superconductor at	A. 125 K B. 25 K C. 263 K D. 163 K
695	The magnetism produced by electrons within an atom can arise from	A. electrons orbiting the nucleus B. electrons posses a spin C. both motions D. none of these motions
696	An atom in which there is a resultant magnetic field, behaves like a tiny magnet and is called as	A. magnetic B. magnetic dipole C. magnetic monopole D. none of them
697	The charged nucleus of an atom itself spins its magnetic field	A. equal to the field produced by orbital electrons B. greater than the field produced by orbital electrons C. much weaker than the field produced by orbital electrons D. none of these
698	The substances in which, atom are so oriented that their fields support each other and the atoms behave like tiny magnets, are called	A. diamagnetic substances B. ferromagnetic substances C. paramagnetic substances D. all of them
699	The substance in which atoms are so oriented that the field produced by spin and orbital motion of the electrons might add up to zero,are called	A. diamagnetic substances B. ferromagnetic substances C. paramagnetic substances D. all of them
700	The substance in which atoms cooperate with each other in such a way so as to exhibit a strong magnetic effect, are called	A. diamagnetic substances B. ferromagnetic substances C. paramagnetic substances D. all of them
701	Recent studies of ferromagnetism have shown that there exists in ferromagnetic substances small regions called	A. tiny regions B. domains C. vectors D. none of them
702	The domains are of macroscopic size of the order of	A. centimeters B. meters C. millimeters D. nanomneters
703	The size of the domain is such that they can contain	A. 10²to 10⁴atoms B. 10⁴ to 10⁸atoms C. 10⁸to 10¹²atoms D. 10¹²to 10¹⁶atoms

		D. 10 ⁻¹² to 10 ⁻¹⁰ atoms
704	Within each domain, the magnetic field of all the spinning electrons are	A. parallel B. antiparallel C. perpendicular D. all of them
705	In a soft iron, domains are	A. easily oriented along external field and do not return to original random positions B. easily oriented along external field and readily returns to originally random position C. do no oriented along external field and also do not returns to originally random position D. none of them
706	Which of the following can become a good permanent magnet	A. iron B. steel C. both of them D. none of them
707	Which of the following can become a good temporarily magnet	A. iron B. steel C. both of them D. none of them
708	During the whole carnot cycle	A. Thermal equilibrium is maintained B. mechanical equilibrium is maintained C. both the thermal and mechanical equilibriumis maintained D. both the thermal and mechanical equilibrium is not maintained
709	When the temperature of source and sink of a heat engine become equal entropy change will be	A. Zero B. Max C. Min D. -ve
710	The highest efficiency of a heat engine whose low temperature is 17°C and the high temperature is 200°C is	A. 70% B. 100% C. 35% D. 38%
711	Efficiency of carnot engine is independent of the	A. temperature of sink B. temperature of source C. nature of the working substances D. none of them
712	The efficiency of carnot engine cannot be 100% or one unless cold reservoir is at	A. 100 K B. 273 K C. 0 K D. -273 K
713	Generally a temperature scale is established by	A. one fixed point B. two fixed point C. three fixed point D. four fixed point
714	Generally a temperature scale is established by using certain physical properties of a material which varies	A. nonlinearly with temperature B. linearly with temperature C. either of them D. none of them
715	The basis to define a temperature scale that is independent of material properties is provided by	A. carbon cycle B. nitrogen cycle C. Carnot cycle D. irreversible cycle
716	The absolute temperature of the tripple point of water is	A. 100°C B. 4°C C. 373 K D. 273.16 K
717	The unit of thermodynamical scale is	A. centigrade B. fahrenheit C. kelvin D. none of them
718	The state in which ice, water and vapour coexists in equilibrium is called	A. zero degree celsius B. zero degree fahrenheit C. absolute zero D. 373 K
719	Since the absolute scale is independent of the property of the working substance, hence, can be applied at	A. very high temperature B. very low temperature C. any one of them D. none of them

720	A typical four stroke petrol engine undergoes how many successive processes in each cycle	A. one B. two C. three D. four
721	On the compression stroke of the petrol engine, the inlet value is closed and the mixture is compressed	A. adiabatically B. isothermally C. isochorcally D. isobarically
722	On the power stroke, a spark fires the mixtures causing a rapid increase in pressure and temperature and the burning mixture expands	A. adiabatically B. isothermally C. isochorically D. isobarically
723	On the exaust stroke, the outlet values opens. The residual gases are expelled and piston moves	A. outwards B. inwards C. in either way D. none of these
724	The efficiency of petrol engine is usually not more than 25% to 30% because of	A. friction B. heat losses C. both of them D. none of them
725	No spark plug is needed in	A. petrol engine B. diesel engine C. both of them D. none of them
726	The efficiency of diesel engine is	A. 25% B. 25 - 30% C. 35% D. 35 - 40%
727	The concept of entropy was introduced into the study of thermodynamics in	A. 1856 B. 1865 C. 1656 D. 1685
728	Which of the following is a state variable	A. entropy B. pressure C. volume D. all of them
729	Which quantity is important in stating the entropy of the system	A. initial entropy B. final entropy C. change in entropy D. none of them
730	When heat is added into the system then change in entropy is	A. negative B. positive C. zero D. any one of them
731	When heat is removed from the system	A. negative B. positive C. zero D. any one of them
732	In all natural processes where heat flows from one system to another, there is always a net	A. decrease in entropy B. increase in entropy C. decrease or increase in entropy D. none of them
733	If a system undergoes a natural process it will go in the direction that causes the entropy of the system plus the environment to increase, this is another statement of	A. second law thermodynamics B. first law of thermodynamics C. third law of thermodynamics D. none of them
734	An irreversible heat flow from a hot to cold substances of a system, causes the disorder to	A. decrease B. remains the same C. increase D. any one of them
735	The disorder in the system increases due to the	A. removal of heat B. addition of heat C. removal or addition of heat D. none of them
736	A process is a reversible process, if the entropy of the system	A. increases B. decreases C. remains constant D. none of them
737	In a transistor, if the central region is n-type, then this type of transistor is known as	A. n-p-n transistor B. p-n-p transistor C. either of these

		D. none of these
738	In a transistor, the central region is called	A. collector B. emitter C. base D. none of them
739	Which of the following has a great concentration of impurity	A. base B. emitter C. collector D. none of these
740	For the normal operation of the transistor, its	A. emitter-base and collector base junctions are forward biased B. emitter-base junction is reversed biased and collector base junction is forward biased C. emitter-base junction is forward biased and collector-base junction is reverse biased D. any one of these
741	For normal operation of transistor, the batteries	A. V_{CC}is of much lower value than V_{BB} B. V_{CC}is of much higher value than V_{BB} C. V_{CC is equal to}V_{BB} D. none of these
742	In n-p-n transistor, emitter base junction is kept	A. reversed B. forward biased C. may be reversed or may be forward biased D. none of these
743	In a normally biased n-p-n transistor, an electron c current $I_E$flows from the	A. emitter into the base B. collector into the base C. base into collector D. none of these
744	For a n-p-n transistor, the conventional current equation can be written as	A. I_E+ I_C= I_B B. I_C- I_B= I_E C. I_C+ I_B= I_E D. I_B+ I_E= I_C
745	The value of current gain of n-p-n transistor is of the order of	A. tens B. hundreds C. thousands D. ten thousands
746	When the emitter-base junction of a transistor is reverse biased, collector current	A. Reverses B. Increases C. Decreases D. Stops
747	The emitter-base junction of a transistor is forward-biased and collector-base junction is reverse-biased. If the base current is increased, its	A. I_cwill decrease B. V_{CE}will increase C. I_Cwill increase D. V_{CC}will increase
748	When a transistor is used as a switch the circuit in which the current is to be switched OFF and ON, is connected between the	A. base and emitter B. collector and emitter C. base and collector D. any one of these
749	The amplifier which us used to perform mathematical operations electronically is known as	A. calculator B. OP-AMP C. computer D. any one of them
750	OP-AMP has the following input terminals	A. one B. two C. three D. four
751	A signal appears after amplification, at the output terminal with a phase shift of 180° , if it is applied at	A. inverting input B. non-inverting input C. any one of the input terminal D. none of them
752	A signal is amplified at the output without any change of phase, if it is applied at the	A. inverting input B. non-inverting input C. at any of the input D. none of these
753	The input resistance of the OP-AMP is the resistance between the	A. (-) input and output B. (+) input and output C. (-) and (+) inputs D. between any inputs
754	The value of the input resistance of OP-AMP is of the order of	A. few ohms B. few hundred ohms

754	The value of the input resistance of OP-AMP is of the order of	C. several kilo ohms D. several maga ohms
755	Due to the high value of the input resistance, practically, the value of the current which flows between the input terminals is	A. zero B. small C. large D. very large
756	The value of output resistance of OP-AMOP is of the order of	A. few ohms B. few hundred ohms C. several kilo ohms D. several mega ohms
757	The open loop gain of OP-AMP is of the order of	A. 10² B. 10³ C. 10⁴ D. 10⁵
758	The closed loop gain of the inverting amplifier is written as	A. G = R₂/R₁ B. G = 1 + R₂/R₁ C. G = -R₂/R₁ D. G = 1 - R₂/R₁
759	The closed loop gain of the non-inverting amplifier is given by	A. G = R₂/R₁ B. G = -R₂/R₁ C. G = 1 - R₂/R₁ D. G = 1 + T₂/R₁
760	The R_1= infinity and R_2= 0, then the gain of non-inverting amplifier is	A. zero B. infinity C. one D. any one of these
761	Most OP-AMP operates with	A. <u>+</u> 6 V supply B. <u>+</u> 10 V supply C. <u>+</u> 12 V supply D. <u>+</u> 24 V supply
762	A digital system deals with quantities or variables which have	A. only one state B. only two discrete states C. three discrete states D. four discrete states
763	Mathematical manipulation of the two quantized states can be best carried if they are represented by	A. high - low B. yes - no C. on - off D. 0 - 1
764	In describing functions of digital systems, a closed switch will be shown as	A. 0 B. 1 C. low D. any one of these
765	The graphical representation of ohm's law is	A. hyperbola B. straight line C. ellipse D. parabola
766	Ohm is the unit of	A. current B. capacitance C. energy D. resistance
767	The relation V = IR represents	A. Ampere law B. Faraday's law C. Ohm's law D. Len's law
768	The ohm's is defined as	A. 1 ampere / 1 volts B. 1 coulomb / 1 volt C. 1 volt / 1 ampere D. 1 volt / 1 coulomb
769	Ohm established a relation between	A. voltage and resistance B. voltage and charge C. voltage and current D. voltage resistance and charge
770	The material in the form of wire or rod or plate which leads the current into or cut of the electrolyte is known as	A. voltmeters B. resistance C. electrode D. current
771	The electrode connected with the positive terminal of the current source is called	A. cathode B. anode C. electrolyte D. position
		A. The current through a resistor is directly

772	Ohm's law states that	proportional to the applied voltage B. The voltage across a resistor is directly proportional to the current passing through it C. Resistance is the constant of proportionality between the voltage and current D. all of these
773	If one volt is needed to cause a current of one ampere to flow in a conductor, its resistance is	A. one ohm B. one joule C. one volt D. one ampere
774	Resistor is a device which convert electric energy to	A. Heat energy B. Chemical energy C. Elastic energy D. All of the above
775	What is the current is a 2 x 10^6ohm resistor having a potential difference of 2 x 10^3volts?	A. 10⁻¹A B. 10⁻²A C. 10⁻⁴A D. 1 mA
776	If we plot graph between potential difference (V) and current (I) obeying ohm's law, it will give us	A. parabola B. straight line C. hyper bola D. ellipse
777	Physicist George Simon ohm was a	A. German physical B. French physicist C. Chinese physicist D. Russian physicist
778	The unit of resistance is	A. volt B. ampere C. ohm D. coat
779	Magnetic effect at a point caused due to flow a current depend upon the	A. Quantity of current B. Distance from current C. Both the quantity of current and distance from current element D. None of the all
780	The potential difference across each resistance in series combination is	A. same B. different C. zero D. none of these
781	Resistance of a conductor depends upon	A. the quantity of current passing through it B. the voltage applied between its end C. its dimensions, physical state and nature of its material D. all of the above
782	If the resistance of 2 ohm and 4 ohm are connected in parallel, the equivalent resistance will be	A. 6 ohm B. 4 ohm C. zero ohm D. 1.33 ohm
783	Three resistors of resistance 2,3 and 6 ohms are connected in parallel, their equivalent resistance is	A. 11.0 ohm B. 1.0 ohm C. 7.0 ohm D. 3.0 ohm
784	Three resistance 500,500 and 50 ohms are connected in series across 555 volts mains. The current flowing through them will be	A. 0.52 A B. 1 mA C. 0.7 mA D. 1.4 A
785	The resistance of a conductor does not depend on its	A. mass B. resistivity C. length D. cross-sectional area
786	Resistance of a conductor is increased, the currant will	A. Decrease B. Increase C. Remain the same D. None of these
787	The unit of resistivity is	A. ohm B. ohm-m² C. ohm-meter D. ohm-m⁻¹
788	The unit of conductance is	A. ohm B. meter C. mho D. ohm-meter

789	The SI unit of conductivity is	A. ohm-m B. ohm⁻¹m⁻¹ C. ohm-m⁻¹ D. ohm⁻¹m
790	The resistivity of a substance depends upon the	A. length B. mass C. area D. temperature
791	If the length of the conductor is double and its cross sectional area is halved, its conductance will	A. Increase four fold B. Become one-fourth C. Become one-half D. Remains unchanged
792	The fractional change in resistance per kelvin is known as	A. temperature coefficient B. resistance coefficient C. super temperature D. critical temperature
793	The vector representation of force experience give the direction of	A. magnetic field B. current C. length of conductor D. force
794	The current sensitivity of the galvanometer is	A. C/BAN B. BAN/C C. CAN/B D. CBN/A
795	A galvanometer is an instrument used to	A. measure voltage across a circuit B. detect current in a circuit C. measure current flowing through a circuit D. none of these
796	The galvanometer can be made sensitive if the value of the factor C/BAN is	A. constant B. small C. large D. none of these
797	To convert galvanometer into ammeter we connect	A. small resistance in parallel with galvanometer B. small resistance in series with galvanometer C. high resistance in series with galvanometer D. high resistance in parallel with galvanometer
798	The working of all DC electric meters (galvanometers, ammetersand voltmeters) depends upon	A. Heating effect of current B. Chemical effect of current C. Magnetic effect of current D. Electromagnetic effect of current
799	Galvanometer is a device used for the detection of	A. voltage B. current C. temperature D. pressure
800	The working of galvanometer depends upon torque exerted on a current carrying coil in	A. magnetic field B. electric field C. gravitational field D. nuclear field
801	For the conversion of galvanometer into voltmeter, we connect a	A. small resistance in series with galvanometer B. small resistance in parallel with galvanometer C. high resistance in parallel with galvanometer D. high resistance series with galvanometer
802	In a moving coil galvanometer, the deflecting couple depends upon	A. area of the coil B. number of turns of coil C. value of magnetic field D. all of the above
803	A shunt resistance parallel to the galvanometer is used to convert it into	A. avometer B. millimeter C. voltmeter D. none of these
804	The angle of deflection of coil can be measured by the	A. one method B. three method C. two method D. none of these
805	If the value of galvanometer constant k = C/BAN is made small, the galvanometer can be made	A. Sensitive B. Accurate C. Stable D. None of these
806	Method "lamp and scale arrangement" used to measure the	A. angle of deflection B. restoring torque C. magnetic field strength

		D. current
807	The torque per unit twist of coil is called	A. proportionality constant B. gravitational constant C. boltzman constant D. coupling constant
808	The current in microamperes required to produce one millimeter deflection on a scale placed one meter away from the mirror of the galvanometer, defined the sensitivity of	A. ammeter B. voltmeter C. galvanometer D. avo-meter
809	A galvanometer in which the coil comes to rest quickly after the current passed through it, or the current stopped form flowing through it, is called	A. dead beat galvanometer B. stable galvanometer C. shunt galvanometer D. sensitive galvanomter
810	Ammeter is used to measure	A. voltage B. resistance C. voltage and current D. current
811	The current is measured in	A. volts B. watt C. ampere D. ohm
812	A full-scale deflection is obtained in a galvanometer with a current of few	A. ampere B. volts C. milliampere D. ohm
813	For measuring large currents, an ordinary galvanometer cannot be used without proper, then both relates with each other as	A. modification B. voltage C. current D. resistance
814	A voltmeter is used to measure the	A. potential difference B. current C. temperature D. resistance
815	Which is modified form of galvanometer	A. potentiometer B. battery C. voltmeter D. slide wire bridge
816	In order to make a voltmeter, high resistance is connected with galvanometer, in	A. perpendicular B. may be paralled or pendicular C. series D. none of these
817	A resistance used in voltmeter is called	A. shunt resistance B. high resistance C. low resistance D. zero resistance
818	When a suitable small resistance is put in parallel with the galvanometer coil, it is converted into	A. Voltmeter B. Avometer C. Ammeter D. None of these
819	A resistance used in galvanometer to make it voltmeter is called	A. shunt resistance B. high resistance C. zero resistance D. none of these
820	Avo-meter is used of measure the	A. current, voltage B. voltage, resistance C. resistance, current D. current, voltage and resistance
821	Resistance is measured in	A. volts B. ampere C. ohm D. watt
822	Current is measured in	A. volts B. watt C. ohm D. ampere
823	In the compton's effect, it is found that the wavelength of incident x-rays is	A. greater than the wavelength of scattered x-rays B. equal to the wavelength of scattered x-rays C. less than the wavelength of scattered x-rays D. any one of these
		A. 1921 B. 1923

824	Compton was awarded Nobel prize in physics in	C. 1925 D. 1927
825	When low energy photon interact with a metal,which of the following effect is likely to be taken place	A. pair production B. photoelectric C. Compton effect D. None of these
826	When a high energy photon interact with a metal, which of the following effect is most likely to be taken place	A. pair production B. photoelectric effect C. Compton effect D. None of these
827	If the radius of first orbit of hydrogen atom is 0.53° A the radius of second orbit will be	A. 2.120°A B. 0.212°A C. 21.2°A D. 0.14° a
828	In order to produce pair production, a photon must have a energy	A. 0.511 Me v B. 0.256 Me v C. 1.02 Me v D. 0.956 Me v
829	Converse of pair production is known as	A. Compton effect B. annihilation of matter C. photoelectric effect D. none of these
830	When a position comes close to an electron they annihilate into	A. one photon B. two photons which travel in the same direction C. two photons which travels in the opposite direction D. two photons which travel in any direction
831	When a position comes close to an electron they annihilate into photons such that	A. each photon has energy 0.51 Me v B. each photon has energy 1.02 Me v C. each photon has energy 0.25 Me v D. none of these
832	The existence of position was predicted by Dirace in	A. 1920 B. 1925 C. 1930 D. 1928
833	Position was discovered by Carl Anderson in	A. 1920 B. 1925 C. 1928 D. 1932
834	Pair production is the phenomenon in which	A. matter is converted into energy B. energy is converted into matter C. light is converted into electrical energy D. electrical energy is converted into light
835	In process of annihilation of matter, the two photons produced move in opposite direction to converse	A. momentum B. charge C. energy D. mass
836	Photocell is a device which converts	A. chemical energy into electrical energy B. electrical energy into light energy C. heat energy into electrical energy D. light energy into electrical energy
837	According to the de-Brogile relation, an object of large mass and ordinary speed has	A. very small wavelength B. very large wavelength C. very small frequency D. all of these
838	The stopping voltage for a certain metal is 100 volts, then the work function for the cathode plate is	A. 100 J B. 1.6 x 10⁻¹⁷J C. 100 eV D. 1.6 x 10⁻¹⁷eV
839	0.1 kg mass will be equivalent to the energy	A. 9 x 10¹⁵J B. 5 x 10⁸J C. 6 x 10¹⁶J D. 9 x 10⁻¹⁶J
840	Victor de-Brogile received the Nobel prize in physics in	A. 1925 B. 1929 C. 1932 D. 1935

841	A particle of mass 5.0 mg moves with a speed of 8.0 m/s. Its de-Brogile wavelength is	A. 1.66 m B. 1.66 x 10⁻¹⁰m C. 1.66 x 10⁻²⁹cm D. 1.66 x 10⁻²⁹m
842	An electron is accelerated through a potential difference of 50v. its de-Brogile wavelength is	A. 1.66 x 10⁻²⁹m B. 1.74 x 10⁻¹⁰cm C. 17.4 x 10⁻⁶m D. 1.74 x 10⁻¹⁰m
843	Which of the following phenomenon proves the particle nature of light	A. interference B. diffraction C. photoelectric effect D. none of these
844	With the help of 50 K v electron microscope, a resolution of	A. 0.5 to 1 m to possible B. 1 m to 10 m is possible C. 0.5 to 1 nm is possible D. 1 to 10 nm is possible
845	Momentum is a parameter associated with	A. wave motion B. particle motion C. neither wave nor particle motion D. none of these
846	Wave nature of particle was proposed by	A. Einstein B. Plank C. De-Brogile D. Max well
847	Davision and Germer performed experiment to verify	A. de-Brogile hypothesis B. theory of relativity C. Newton's law of gravitation D. Mass-energy relation
848	G.P. Thomson observer experimentally that electrons and neutrons possess	A. particle-like properties B. wave-like properties C. neither particle nor wave like properties D. none of these
849	de-Broglies hypthesis was experimentally verified by	A. Maxwell B. Compton C. Einstein D. Davison and Germer
850	Position and momentum of a particle cannot both be measured simultaneously with perfect accuracy. This is the statement of	A. photoelectric effect B. pair production C. Compton effect D. uncertainty principle
851	The energy of the 4th orbit in hydrogen atom is	A. 2.5 ev B. - 3.5 ev C. -0.85 ev D. -13.6 ev
852	The rate of decay of radioactive substance	A. is constant B. decrease exponentially with time C. varies inversely as time D. decreases linearly with time
853	A curie represents a very strong source of	A. α-particle B. β-particle C. γ-particle D. none of these
854	Phenomenon of radioactivity is due to disintegration of	A. nucleus B. neutron C. proton D. molecule
855	When radioactive nucleus emits aβ-particle, the proton-neutron ratio	A. decrease B. increase C. same D. none of these
856	After alpha decay the atomic number of the atom	A. increase by four B. decreases by two C. increases by two D. decrease by four
857	The rate of decay of a radioactive substance	A. decrease exponentially with time B. decreases linearly with time C. increases linearly with time D. increases exponentially with time

858	Different radioactive material have	A. same half lives B. different half lives C. same mean lives D. same total lives
859	The half life of radioactive substances depends upon	A. amount of substance B. energy of substance C. state of substance D. temperature of substance
860	The time required for a radioactive material to decrease in active by one half is called	A. half time B. half life C. disintegration time D. mean life
861	The emission of radiations take place in elements, having charge number greater than	A. 109 B. 82 C. 69 D. 52
862	In radio-active decay, the original element which disintegrate to another element is called	A. element B. daughter element C. parent element D. none of these
863	In radioactive decay, the new element which is formed due to the disintegration of original element is called	A. element B. daughter element C. parent element D. none of these
864	Fraction of the decaying atoms per unit time is called	A. decay atom B. decay element C. decay constant D. decay
865	The unit of decay constant is	A. sex B. sec² C. sec⁻¹ D. sec⁻²
866	The half lie of radium-226 is	A. 238 years B. 4.5 x 10⁹days C. 1620 years D. 332 years
867	The half life of uranium-238 is	A. 6.2 x 10⁹years B. 4.5 x 10⁹days C. 4.5 x 10⁹years D. 1.3 x 10⁶years
868	Which of the following material has longer half life	A. radium B. polonium C. radium D. uranium
869	Which of the following material has smaller has life	A. uranium B. polonium C. radium D. radian
870	The distance travelled byα-particle in a medium before coming to rest, is called	A. range ofγ-particle B. range of neutrons C. range of particle D. none of these
871	The range of particle depends upon the factor	A. charge, mass and energy of particle B. density of medium C. ionization potential of the atoms D. all the above
872	How much time, theα-particle more massive than an electron	A. 600 B. 7000 C. 5000 D. 15000
873	β-particles are easily deflected by collisions than heavy	A. α-particles B. β-particles C. γ-particles D. none of these
874	The range ofβ-particle in air is greater than that ofα-particle by	A. 1000 times B. 100 times C. 15 times D. 10 times

875	The penetration power ofβ-particle is	A. zero B. less thanα-particle C. equal toα-particle D. greater thanα-particle
876	γ-rays are	A. electrostatic waves B. electromagnetic waves C. heavy particles D. longitudinal waves
877	γ-rays behave like a particle because they explain the	A. Compton effect B. Photoelectric effect C. Pair-production D. all the above
878	Pair production take place when energy ofγ-rays photon is	A. equal to 1.02 Mev- B. greater than 1.02 Mev C. less than 1.02 Mev D. none of these
879	Radiation detector are used to	A. measure intensity of radiation B. measure energy of radiation C. difference between different types of radiation D. all the above
880	When a charged particle passes through matter, it produces ionization, this effect is used in	A. fission reaction B. reactor C. radiation detector D. fusion reaction
881	Which of these is not a radiation detector	A. Wilson cloud chamber B. cyclotron acceleration C. Geiger Miller counter D. solid state detector
882	Current, voltage, resistance measuring circuit is connected with the galvanometer with the help of switch, known as	A. ON switch B. off switch C. function switch D. none of these
883	Ferromagnetic substances lose their magnetism when heated above a certain temperature, known as	A. critical temperature B. curie temperature C. high temperature D. fixed temperature
884	Above the curie temperature, iron becomes	A. ferromagnetic B. paramagnetic C. diamagnetic D. any one of them
885	The curie temperature of iron is about	A. 250°C B. 500°C C. 750°C D. 1000°C
886	In the phenomenon of hysteresis	A. magnetism leads the magnetising current B. magnetism lags behind the magnetising current C. meganetism goes along the magnetising current D. none of them
887	The substances whose resistance decreases with the increase in temperature these substances have coefficient of	A. positive temperature B. negative temperature C. absolute temperature D. zero temperature
888	A P-N juction or semiconductor diode cannot be used as	A. A rectifier B. Detector C. Oscillator D. An amplifier
889	With the increase of temperature viscosity	A. Increase B. Decrease C. Remains same D. Doubles
890	The smooth or steady stream-line flow is know as	A. Laminar flow B. Turbulent flow C. Both a and b

		C. Both a and b D. None of the above
891	In the case of an incompressible fluid in stead flow the net rate of flow of mass entering one end of the tube of flow is equal to the net rate of flow of mass leaving the other end. This equation is called	A. Quadratic equation B. Equation of discontinuity C. Equation of continuity D. None of the above
892	In Bernoulli's theorem the relation between velocity and pressure is	A. Inverse B. Direct C. None of the above D. Both a and b
893	To get a resultant displacement of 10 m, two displacement vectors of magnitude 6 m and 8 m should be combined	A. Parallel B. Antiparallel C. At angle 60>° D. Perpendicular to each other
894	In velocity of a particle at an instant is 10 m/s and after 5s the velocity of the particle is 20 m/s. The velocity 3s before in m/s is	A. 8 B. 4 C. 6 D. 7
895	A motorist travels A to B at a speed at 40 km/h and returns at speed of 60km/h. His average speed will be	A. 40 km/h B. 48 km/h C. 50 km/h D. 60 km/h
896	The sum of the magnitude of two forces acting at a point is 18 and the magnitude of their resultant is 12. If the resultant is at 90° with the force of the smaller magnitude, then their magnitudes are	A. 3, 15 B. 4, 14 C. 5, 13 D. 6, 12
897	A train of 150 m length is going towards north direction at a speed of 10 ms^{-1}. A parrot files at a speed of 5 ms^{-1}towards south direction parallel to the railway track. The time taken by the parrot to cross the train is equal to	A. 12 s B. 8 s C. 15 s D. 10 s
898	What will be the ratio of the distance moved by a freely falling body from rest in 4th and 5th seconds of journey?	A. 4 : 5 B. 7 : 9 C. 16 : 25 D. 1 : 1
899	A body is dropped from a tower with zero velocity, reaches ground in 4s. The height of the tower is about	A. 80 m B. 20 m C. 160 m D. 40 m
900	Which of the following four statements is false?	A. A body can have zero velocity and still be accelerated B. A body can have a constant velocity and still have a varying speed C. A body can have a constant speed and still have a varying velocity D. The direction of the velocity of a body can change when its acceleration is constant
901	At the top of the trajectory of a projectile the acceleration is	A. The maximum B. The minimum C. Zero D. g
902	A ball is thrown upwards with a velocity of 100 m/s. It will reach the ground after	A. 10 s B. 20 s C. 5 s D. 40 s
903	A body walks to his school at a distance of 6 km with a speed of 2.5 km/h and walks back with a constant speed of 5 km/h. His average speed for round trip expressed in km/h is	A. 24/13 B. 10/3 C. 3 D. 4,8
904	For a moving body, at any instant of time	A. If the body is not moving the acceleration is necessarily zero B. If the body is slowing, the retardation is negative C. If the body is slowing, the distance is negative D. If displacement, velocity and acceleration at that instant are known, we can find the displacement at any given time in future
905	An airplane is flying horizontally with a velocity of 600 km/h and at a height of 1960 m. When it is vertically above a point A on the ground, a bomb is released from it. The bomb strikes the ground, at point B. The distance AB is	A. 1200 m B. 0.33 km C. 3.33 km D. 33 km
906	A car moves for half of its time at 80 km/h and rest half of time at 40 km/h, The total distance covered is 60 km. What is the average speed of the car?	A. 60 km/hr B. 80 km/hr C. 120 km/hr

	The total distance covered is 60 km. What is the average speed of the car?	C. 120 km/hr D. 180 km/hr
907	A ball of mass m moving with uniform speed collides elastically with another stationary ball. The incident ball will lose maximum kinetic energy when mass of the stationary ball is	A. m B. 2 m C. 4 m D. Infinity
908	A 120 m long train is moving in a direction with speed 20 m/s. A train B moving with 30 m/s in the opposite direction and 130 m long crosses the first train in a time	A. 6 s B. 36 s C. 38 s D. None of these
909	By which velocity a ball be projected vertically so that the distance covered by it in 5th seconds is twice the distance it covers in its 6th second ($g=10m/s^2$)	A. 58.8 m/s B. 49 m/s C. 65 m/s D. 19.6 m/s
910	A ball falls on the surface from 10 m height and rebounds to 2.5 m. if the duration of contact with the floor is 0.01 seconds then the average acceleration during contact is	A. 2100 m/s² B. 1400 m/s² C. 700 m/s² D. 400 m/s²
911	If a car rest acceleration uniformly to a speed of 144 km/h in 20 s it covers a distance of	A. 20 m B. 400 m C. 1440 m D. 2880 m
912	Essential characteristic of equilibrium is	A. Momentum equal to zero B. Acceleration equal to zero C. Kinetic energy equal to zero D. Velocity equal to zero
913	A vehicle of mass 120 kg is moving with a uniform velocity of 108 km/h. The force required to stop the vehicle in 10s is	A. 120 x 10.8 N B. 180 N C. 720 N D. 360 N
914	A lift is descending at a constant speed V. A passenger in the lift drops a coin. The acceleration of the coin towards the floor will be	A. Zero B. g C. -g D. V + g
915	A monkey sits on the pan of spring scale kept in an elevator. The reading of the spring scale will be maximum when	A. Elevator is stationary B. Elevator cable breaks and it falls freely towards earth C. Elevator accelerates downwards D. Elevator accelerates upward
916	A lift is moving up with acceleration equal to 1/5 of that due to gravity. The apparent weight of a 60 kg man standing in lift is	A. 60 kg wt B. 72 kg wt C. 48 kg wt D. Zero
917	The mass of a body measured by a physical balance in a lift at rest is found to be m, if the lift is going up with an acceleration a, its mass will be measured as	A. m (1 - a/g) B. m (1 + a/g) C. m D. Zero
918	A person is sitting in a traveling train and facing the engine. He tosses up a coin and the coin falls behind him. It can be concluded that the train is	A. Moving forward and gaining speed B. Moving forward and losing speed C. Moving forward with uniform speed D. Moving backward with uniform speed
919	A body falls freely from rest. It covers as much distance in the last second of its motion as covered in the first three seconds. The body has fallen for a time of	A. 3 s B. 5 s C. 7 s D. 9 s
920	If an iron ball and a wooden ball of the same radius was released from a height 'h' in vacuum, then time taken by both of them to reach ground will be	A. Unequal B. Exactly equal C. Roughly equal D. Zero
921	A car travels first half distance between two places with a speed of 30 km/h and remaining half with a speed of 50 km/h. The average speed of the car is	A. 37.5 km/h B. 10 km/h C. 42 km/h D. 40 km/h
922	If a train traveling at 72 kmph is to be brought to rest in a distance of 200 meters then its retardation should be	A. 20 ms⁻² B. 10 ms⁻² C. 2 ms⁻² D. 1 ms⁻²
923	A ball is dropped downwards After 1 second another ball is dropped downwards from the same point. What is the distance between them after 3 seconds	A. 25 m B. 20 m C. 50 m D. 9.8 m

924	Distance traveled by a body falling from rest in the first, second and third second is in the ration of	A. 1 : 2 : 3 B. 1 : 3 : 5 C. 1 : 4 : 9 D. None of the above
925	If speed of electron is 5 x 10^5m/s. How long does it take one electron to transverse 1 m?	A. 1 x 10⁶ B. 2 x 10⁶ C. 2 x 10⁵ D. 1 x 10⁵
926	If the water falls from a dam into a turbine wheel 19.6 m below, then the velocity of water at the turbine, is (Take g=9.8 m/s^2)	A. 9.8 m/s B. 19.6 m/s C. 39.2 m/s D. 98.0 m/s
927	Range of a projectile is R, when the angle of projection is 30° . Then, the value of the other angle of projection for the same range, is	A. 45° B. 60° C. 50° D. 40°
928	A man sitting in a bus travelling in a direction from west to east with a speed of 40 km/h observes that the rain drops are falling vertically down. To the another man standing on ground the rain will appear	A. To fall vertically down B. To fall at an angle going from west to east C. To fall at an angle going from east to west D. The information given is insufficient to decide the direction of rain
929	A ball is dropped from a certain height and another ball is projected horizontally from the same point. Which of the following statement is correct?	A. Both hit the ground at the same velocitiy B. Both hit the ground at the same speed C. The change of velocity during the path for both balls is the same D. The change of speed during the path for both balls is the same
930	A ball is dropped vertically down and it takes time t to reach the ground. At time t/2	A. The ball had covered exactly half the distance B. The velocity of the ball was V/3 where V is the velocity when it reached the ground C. The ball had covered less than half the distance D. The ball had covered more than half the distance
931	A body is thrown from a height h with speed u, it hits the ground with speed V	A. The value of V is maximum if the body is thrown vertically downward B. The value of V is maximum if the body is thrown vertically upwards C. The value of V is minimum if the body is thrown horizontally D. The value of V does not depend on the direction of which it is thrown
932	A train is moving with a velocity of 25 m/s and a car is moving behind it by a velocity of 8 m/s in same direction. The relative velocity of train with respect to car is	A. 17 m/s B. 33 m/s C. 17.5 m/s D. none
933	Find the total displacement of a body in 8 seconds starting from rest with an acceleration of 20 cm/s^2	A. 0.064 m B. 640 cm C. 64 cm D. 64 m
934	Maximum height of a bullet when fixed at 30 with horizontal is 11 m. Then height when it is fired at 60° is	A. 22 m B. 6 m C. 33 m D. 7.8 m
935	Two projectiles are fired from the same point with the same speed at angles of projection 60° and 30° respectively. Which one of the following is true?	A. Their range will be same B. Their maximum height will be same C. Their landing velocity will be same D. Their time of flight will be same
936	Which of the following statements for an object in equilibrium is not true?	A. The object must be at rest B. The object can be at rest C. The object is moving at constant speed D. The acceleration of the object is zero
937	A projectile on its path gets divided into two pieces at its highest point. Which is true?	A. Momentum increases B. Momentum decreases C. Kinetic energy increases D. Kinetic energy decreases
938	The range of projectile is 50 m whenθ is inclined with horizontal at 15°. What is the range whenθ becomes 45°?	A. 400 m B. 300 m C. 200 m D. 100 m
	A stone is dropped from rest from the top of a tower 19.6 m high. The	A. 9.8 m

939	A stone is dropped from rest from the top of a tower 19.6 m high. The distance traveled during the last second of its fall is (giving g=9.8 m/s^s)	B. 14.7 m C. 4.9 m D. 19.6 m
940	Angular momentum	A. Scalar B. Axial vector C. Polar vector D. At 45° angle
941	A the top of the trajectory of a projectile, the directions of its velocity and acceleration are	A. Perpendicular to each other B. Parallel to each other C. Inclined to each other at an angle of 45° D. Anitparallel to each other
942	Two bullets are fired simultaneously, horizontally and with different speeds from the same place. Which bullet will hit the ground first?	A. The faster one B. Depends on their mass C. The slower one D. Both will reach simultaneously
943	For a given angle of projection, if the time of flight of a projectile is doubled, the horizontal range will increases to	A. Four times B. Thrice C. Once D. Twice
944	A boat of mass 40 kg is at rest, A dog of mass 4 kg moves in the boat with a velocity of 10 m/s. What is the velocity of boat?	A. 4 m/s B. 2 m/s C. 8 m/s D. 1 m/s
945	An aircraft is moving with a velocity of 300 ms^{-1}. If all the forces acting on it are balanced, then	A. It still moves with the same velocity B. It will be just floating at the same point in space C. It will be fall down instantaneously D. It will lose its velocity gradually
946	When a bicycle is in motion but not pedaled, the force of friction exerted by the ground on the two wheels is such that it acts	A. In the backward direction on the front wheel and in the forward direction on the rear wheel B. In the forwards directions on the front wheel and in the backward direction on the rear wheel C. In the forward direction on both the wheels D. In the backward direction on both the wheels
947	A cold soft drink is kept on the balance. When the cap is opened, then the weight	A. Increases B. Decreases C. First increases, then decreases D. Remains same
948	A man fires a bullet of mass 200 g at a speed of 5 m/s. The gun is of one kg mass. By what velocity the gun rebounds backwards?	A. 0.1 m/s B. 10 m/s C. 1 m/s D. 0.01 m/s
949	Unit of impulse in	A. Newton B. Kg m C. Kg m/s D. Joule
950	A force of 50 dynes is acted on a body of mass 5 g which is at rest, for an interval of 3 seconds, then impulse is	A. 0.15 x 10⁻³Ns B. 0.98 x 10⁻³Ns C. 1.5 x 10⁻³Ns D. 2.5 x 10⁻³Ns
951	When the surfaces are coated with a lubricant, then they	A. Stick to each other B. Slide upon each other C. Roll upon each other D. None of these
952	Two bodies of masses 1 kg and 5 kg are dropped gently form the top of a tower. A a point 20 cm from the ground both the bodies will have the same	A. Momentum B. Kinetic energy C. Velocity D. Total energy
953	Rocket engines lift a rocket from the earth surface, because hot gas with high velocity	A. Push against the air B. React against the rocket and push it up C. Heat up the air which lifts the rocket D. Push against the earth
954	In an elevator moving vertically up with an acceleration 'g' the force exerted on the floor by a passenger of mass M is	A. Mg B. 1/2 Mg C. Zero D. 2 Mg
955	When a bicycle is in motion, the frictional forces exerted by the ground are	A. In the forward direction on both the wheels B. In the backward direction on both the wheels C. In the forward direction on the front wheel and the backward direction on the rear wheel

		D. In the backward direction on the front wheel and the forward direction on the rear wheel
956	When a horse pulls a cart, the force that makes the horse run forward is the force exerted by	A. The horse on the ground B. The horse on the cart C. The ground on the horse D. The ground on the cart
957	A railway engine (mass 10^4kg) is moving with a speed of 73 km/h. The force which should be applied to bring it to rest over a distance of 20 m is	A. 3,600 N B. 7,200 N C. 10,000 N D. 100,000 N
958	When a body is moving on a surface, the force of friction is called	A. Static friction B. Dynamic friction C. Limiting friction D. Rolling friction
959	A body of mass 1.0 kg is falling with an acceleration of 10 m/s^2. Its apparent weight will be (g=10 m/s^2)	A. 1.0 kg wt B. 2.0 kg wt C. 0.5 kg wt D. Zero
960	If rope of lift breaks suddenly. The tension exerted by the surface of lift is (a=Acceleration of lift)	A. mg B. m (g+a) C. m (g - a) D. 0
961	Swimming is based on the principle of	A. Newton's 1st law B. Newton's 2nd law C. Newton's 3rd law D. All
962	A body whose momentum is constant must have constant	A. Acceleration B. Velocity C. Force D. None of these
963	The velocity of falling raindrops attains limited value because of	A. Up thrust of air B. Air currents of the earth atmosphere C. Surface tension effect D. Viscous force exerted by air
964	The terminal velocity of a small size spherical body of radius R moving in a fluid varies as	A. R B. R² C. 1/R D. (1/R)²
965	Bernoulli's equation is based upon law of conversation	A. Mass B. Momentum C. Energy D. None of these
966	Surface tension of water is due to	A. Inter molecular attractions B. Inter molecular spaces C. Inter molecular repulsion D. None of above
967	A person standing near the track of a fast moving train has tendency to fall towards it because of	A. Vibration due to motion of train B. Gravitation force of attraction between person and trains C. The high speed of train D. Some other effect
968	Ball pen functions on the principle of	A. Viscosity B. Boyle's law C. Gravitational force D. Surface tnesion
969	According to Stoke's law, drag force depends on	A. Initial velocity B. Final velocity C. Terminal velocity D. Instantaneous velocity
970	Blood has a density	A. Equal to water B. Greater then water C. Lesser then water D. None of these
971	The pressure will be low where the speed of the fluid is	A. Zero B. High C. Low D. Constant
972	At high altitude the blood oozes out of the nose and ear because	A. The blood pressure increase at high altitudes B. The percentage of oxygen in the air increase C. The atmospheric pressure decrease there D. The density of blood decrease at high altitudes

973	Internal friction of fluid is called	A. Surface tension B. Viscosity C. Resistance D. Cohesive force
974	In a container having water filled up to a height h, a hole is made in the bottom. The velocity of water flowing out of the hole is	A. Independent of h B. Proportional to h^{1/2} C. Proportional to h D. Proportional to h²
975	In a surface tension experiment with a capillary tube water rises up to 0.1 m. if the same experiment is repeated on an artificial satellite, which is resolving around the earth, water will rise in the capillary tube up to a height of	A. 0.1 m B. 0.2 m C. 0.98 m D. Full length of the capillary tube
976	A body is floating in a liquid. The up thrust on the body is	A. Equal to weight of liquid displaced B. Zero C. Less than the weight of liquid displaced D. Weight of body-weight of liquid displaced
977	Pressure exerted by a gas on the walls of its container in due to	A. adhesion between the gas molecules and the container B. cohesion between the gas molecules and the container C. collision between the gas molecules and the container D. surface tension of the gas
978	The term Brownian movement refers to	A. irregular motions of small particles suspended in a fluid B. convection currents in a liquid or gas C. convection currents in a gas but not in a liquid D. the stretching of a body beyond its elastic limit
979	The density of water is $10^3 kg/m^3$. The water pressure on a submarine is $2.0 \times 10^7 N/m^2$. The depth of the submarine below the surface of the water, in maters, is approximately	A. 200 m B. 11000 m C. 2000 m D. 8000 m
980	The force exerted by the fluid in a hydraulic pump on the piston is 10 cm^2, the fluid pressure on the piston is, in N/cm^2	A. 20 B. 200 C. 2000 D. 20,000
981	A flowing liquid possess	A. K.E B. P.E C. Pressure Energy D. All
982	Bernoulli's equation is based upon law of conversation of	A. mass B. momentum C. Energy D. None
983	Surface tension of water is reduced by adding	A. Detergents B. Camphor C. Plastic D. Both A and B
984	Fire fighters have a jet attached to the head of their water pipes in order to head of their water pipes in order to	A. Increase the mass of water flowing per second B. Avoid wastage of water C. Increase the velocity of water flowing out D. Increase the volume of water flowing per second
985	Deep water almost runs still when surface water flow in rivers. What does it explains	A. Magnus effect B. Equation of continuity C. Surface energy D. Bernoulli's equation
986	Fire fighters have jet attached to the head of their water pipes in order to	A. Increase the mass of water flowing per second B. Increase the velocity of water flowing out C. Increase the volume of water flowing per second D. Avoid wastage of water
987	When the velocity of a liquid flowing steadily in a tube increases, its pressure?	A. Decreases B. Increases C. Remains same D. Zero
988	If water rises 4 cm in a long, thin tube because of capillary action, then, under corresponding conditions of use, the rise (in the tube) of a liquid whose density is 2 g/cm^2will be	A. 1 cm B. 2 cm C. 8 cm D. None
989	A container has a small hole in the bottom. Air can go through this hole,but water cannot. This can be best explained by the statement that	A. water contains hydrogen atoms, air does not B. water molecules are smaller than molecules in the air C. water molecules are smaller than molecules in the air

		D. surface tension of the water prevents it from
990	The electrical forces between the molecules of a liquid are	A. Repulsive B. Attractive C. Both A and B D. None
991	The fluid which is incompressible and non viscous is called	A. Ideal fluid B. Non-ideal fluid C. Prefect fluid D. All
992	Fluids resist force, This property is called	A. Stiffness B. Strength C. Ductility D. Elasticity
993	In case of streamed lined flow of liquid, the loss of energy is	A. Maximum B. Minimum C. Infinite D. equal to what is in turbulent flow
994	The rain drop falling from the sky reach the ground with	A. Constant terminal velocity B. Constant gravitational acceleration C. Variable acceleration D. acceleration greater than g
995	Two water pipes of diameters 4 cm and 8 cm are connected with a supply line. The velocity of flow of water in the pipe 4 cm diameter is	A. 1/4 times B. 4 times C. Twice D. 1/2 of 8 cm diameter pipe
996	If v is the velocity of flow of liquid through a tube of area of cross-section A, then according to equation of continuity	A. v/A = constant B. A/v = constant C. Av = constant D. None
997	A tube is tapered from 20 cm diameter to 2 cm diameter, the velocity at the first cross-section is 50 cm/s, then the velocity at the second cross-section is	A. 50 m/s B. 20 m/s C. 40 cm/s D. 5 cm/s
998	When sound waves travel from air to water which of these remains constant?	A. Velocity B. Frequency C. Wavelength D. All the above
999	Two sources of sound are said to be coherent if	A. The produce sounds of equal intensity B. They produce sounds of equal frequency C. They produce sound waves vibrating with the same phase D. They produce sound waves with zero or constant phase difference all instant of time
1000	The temperature at which the speed of sound becomes double as was at 27°C is	A. 273°C B. 0°C C. 927°C D. 1027°C
1001	For production of beats the two sources must have	A. Different frequencies and same amplitude B. Different frequencies C. Different frequencies, same amplitude and same phase D. Different frequencies and same phase
1002	If the amplitude of sound is doubled and the frequency reduced to one-fourth, the intensity of sound at the same point will be	A. Increasing by a factor of 2 B. Decreasing by a factor of 2 C. Decreasing by a factor of 4 D. Unchanged
1003	With the propagation of a longitudinal wave through a material medium, the quantities transmitted in the propagation direction are	A. Energy, momentum and mass B. Energy C. Energy and mass D. Energy and linear momentum
1004	At a certain instant a stationary transverse wave is found to have maximum kinetic energy. The appearance of string of that instant is	A. Sinusoidal shape with amplitude A/3 B. Sinusoidal shape with amplitude A/2 C. Sinusoidal shape with amplitude A D. Straight line
1005	Velocity of sound in a diatomic as is 300 m/sec. what is its rms velocity?	A. 400 m/sec B. 40 m/sec C. 430 m/sec D. 300 m/sec

		D. 300 m/sec
1006	Mechanical waves on the surface of a liquid are	A. Transverse B. Longitudinal C. Torsional D. both transverse and longitudinal
1007	Which waves are used in sonography?	A. Microwaves B. Infra red waved C. Sound waves D. Ultrasonic waves
1008	Laplace formula is derived from	A. Isothermal change B. Adiabatic change C. Isobaric change D. None of these
1009	Which of the following is the longitudinal waves?	A. Sound waves B. Waves on plucked string C. Water waves D. Light waves
1010	Which one is not produced by sound waves in air?	A. Polarization B. Diffraction C. Refraction D. Reflection
1011	Energy is not carried by	A. Transverse progressive waves B. Longitudinal vibration C. Stationary waves D. Electromagnetic
1012	What is frequency of radio waves transmitted by a station, if the wavelength of those waves is 300 m?	A. 1 MHz B. 10 Hz C. 1 GHz D. 100000 Hz
1013	Velocity of sound in vacuum (in m/s) is	A. 330 B. 1000 C. 156 D. 0
1014	The velocity of sound is greatest in	A. Water B. Air C. Vacuum D. Metal
1015	In the production of beats by 2 waves of same amplitude and nearly same frequency, the maximum intensity to each of the constituent waves is	A. Same B. 2 times C. 4 times D. 8 times
1016	When two progressive waves of nearly same frequencies superimpose and give rise to beats, then	A. Frequency of beat changes with time B. Frequency of beat changes with location of observer C. All particles of medium vibrate simple harmonically with frequency equal to the difference between frequencies of component waves D. Amplitude of vibration of particles at any point changes simple harmonically with frequency equal to difference between two component waves
1017	Two sound waves of slightly different frequencies propagating in the same direction produce beats due to	A. Interference B. Diffraction C. Polarization D. Refraction
1018	It two waves of amplitude 'a' produce a resultant wave of amplitude a, then the phase difference between them will be	A. 60° B. 90° C. 120° D. 180°
1019	The velocity of sound at same temperature is maximum in	A. H₂ B. N₂ C. O₂ D. NH₃
1020	The waves moving from a sitar to a listener in air are	A. Longitudinal progressive B. Longitudinal stationary C. Transverse progressive D. Transverse stationary
1021	Sound waves in air always	A. Longitudinal B. Transverse C. Stationary D. Electromagnetic

1022	A stationary sound wave has frequency 165 Hz (speed of sound in air = 330 m/s) then distance between two consecutive nodes is	A. 2 m B. 1 m C. 0.5 m D. 4 m
1023	Decibel is unit of	A. Intensity of light B. x-ray radiation capacity C. sound loudness D. Energy of radiation
1024	Through which character we can distinguish the light waves from sound waves	A. Interference B. Refraction C. Polarization D. Reflection
1025	There is no net transfer of energy by particle of medium in	A. Longitudinal wave B. Transverse wave C. Progressive wave D. Stationary wave
1026	Data transmitted along glass-fiber cables is in the form of pulses of monochromatic red light each of duration 2.5 ns. Which of the following is the best estimate of the number of wavelength in each pulse?	A. 10³ B. 10⁶ C. 10⁹ D. 10¹²
1027	Progressive waves of frequency 300 Hz are superimposed in produced a system of stationary waves in which adjacent nodes are 1.5 m apart. What is the speed of the progressive waves?	A. 100 ms⁻¹ B. 200 ms⁻¹ C. 450 ms⁻¹ D. 900 ms⁻¹
1028	Ultra-violet rays differ from X-rays in that they	A. Cannot be diffracted B. Cannot be polarized C. Have a lower frequency D. Are deviated when they pass through a magnetic field
1029	The principle of superposition states that	A. The total displacement due to several waves is the sum of the displacement due to those waves acting individually B. Two stationary waves superimpose to give two progressive waves C. A diffraction pattern consists of many interference patterns superimposed on one another D. Two progressive waves superimpose to give a stationary wave
1030	Which one of the following could be the frequency of ultraviolet radiation?	A. 1.0 x 10⁶Hz B. 1.0 x 10⁹Hz C. 1.0 x 10¹²Hz D. 1.0 x 10¹⁵Hz
1031	If a wave can be polarized, it must be	A. An electromagnetic wave B. A longitudinal wave C. A progressive wave D. A transverse wave
1032	When temperature increase, the frequency of a tuning fork	A. Increases B. Decreases C. Remains same D. Increase or decreases depending on the material
1033	In stationary waves	A. Energy is uniformly distributed B. Energy is minimum at nodes and maximum at antinodes C. Energy is maximum at nodes and minimum at antidotes D. Alternating maximum and minimum energy producing at nodes and antinodes
1034	The velocity of sound in air depends upon	A. Density and elasticity of gas B. Pressure C. Wavelength D. Amplitude and frequency of sound
1035	Which of the following changes at an antinode in a stationary wave?	A. Density only B. Pressure only C. Both pressure and density D. Neither pressure nor density
1036	When two waves with same frequency and constant phase difference phase difference interfere	A. There is a gain of energy B. There is a loss of energy C. The energy is redistributed and the distribution changes with time D. The energy is redistributed and the distribution remains constant with time
		A. The elastic property but not on the inertia property B. The inertia property but not on the elastic property

1037	The speed of sound in a medium depends on	C. The elastic property as well as the inertia property D. Neither the elastic property nor the inertia property
1038	To hear a clear echo, the reflecting surface must be at a minimum distance of	A. 10 m B. 16.5 m C. 33 m D. 66 m
1039	If two waves of length 50 cm and 51 cm produced 12 beats per second, the velocity of sound is	A. 360 m/s B. 306 m/s C. 331 m/s D. 340 ms
1040	It is possible to recognize a person by hearing his voice even if he is hidden behind a solid wall. This is due to the fact that his voice	A. Has a definite pitch B. Has a definite quality C. Has a definite capacity D. Can penetrate the wall
1041	The ratio of velocity of sound in air at 4 atm pressure and that at 1 atm pressure would be	A. 1 : 2 B. 4 : 1 C. 1 : 4 D. 2 : 1
1042	The velocity of sound in air not effected by changes in	A. Moisture contents in air B. Temperature of air C. The atmosphere pressure D. The composition of air
1043	The loudness and pitch of a sound note depends on	A. Intensity and velocity B. Frequency and velocity C. Intensity and frequency D. Frequency and number of harmonic
1044	Fidelity refers to	A. Reproduction of original sound B. Reproduction of original image C. Reproduction of music D. Reproduction of a CD from original copy
1045	The number of translation degress of freedom for a diatomic gas is	A. 2 B. 3 C. 5 D. 6
1046	At constant volume temperature is increased. Then	A. Collision on walls will be less B. Number of collisions per unit time will increase C. Collision will be in straight lines D. Collision will not change
1047	Which of the following is not thermo dynamical function?	A. Enthalpy B. Work done C. Gibb's energy D. Internal energy
1048	Absolute temperature can be calculated by	A. Means squares velocity B. Motion of the molecule C. Both A and B D. None of these
1049	Boyle's law is applicable in	A. Isochoric process B. Isothermal process C. Isobaric process D. Isotonic process
1050	The product of the pressure and volume of an ideal gas is	A. A constant B. Approximately equal to the universal gas constant C. Directly proportional to its temperature D. Inversely proportional to its temperature
1051	At O° K which of the following properties of a gas will be zero?	A. Kinetic energy B. Potential energy C. Vibrational energy D. Density
1052	Maximum density of H_2O is at the temperature	A. 32°F B. 39.2°F C. 42°F D. 4°F
1053	R.M.S velocity of a particle is V at pressure P. If pressure increases by two times, then R.M.S velocity becomes	A. 2V B. 3V C. 0.5V D. V
		A. High temperature and low pressure

1054	Energy gas behaves like an ideal gast at	B. Low temperature and high pressure C. Both A and B D. None
1055	The volume of a gas will be double of what it is at 0°C (pressure remaining constant) at	A. 546 K B. 273 K C. 546°C D. 273°C
1056	If the ratio of densities of two gases is 1:4, then the ratio of their rates of diffusion into one another is	A. 2 : 1 B. 4 : 1 C. 1 : 4 D. 3 : 4
1057	Brownian motion increases due to	A. Increase in size of Brownian particle B. Increase in temperature of medium C. Increase in density of medium D. Increase in viscosity of medium
1058	An isochoric process is one which take place at	A. Constant internal energy B. Constant entropy C. Constant volume D. Constant pressure
1059	10 c.c. each of oxygen and hydrogen are kept in separate flasks. Then which of the following relations is correct?	A. Each have same number of molecules B. Don't have same number of molecules C. Can't be predicted D. None
1060	According to kinetic theory of gases, molecules of a gas behave like	A. Inelastic spheres B. Perfectly elastic rigid sphere C. Perfectly elastic non-rigid spheres D. Inelastic non-rigid spheres
1061	Pressure of a gas at constant volume is proportion to	A. Total energy of gas B. Average P.E to molecules C. Average K.E of molecules D. Total internal energy of gas
1062	Rate of diffusion is	A. Faster in solids than in liquids and gases B. Faster in liquids than in solids and gases C. Equal to solids, liquids and gases D. Faster in gases than in liquids and solids
1063	Triple point of water is	A. 273.16°F B. 372.16K C. 273.16°F D. 273.16
1064	If R is gas constant for 1 gram mole, $C_p$and $C_v$are specific heat for a solid then	A. C_p- C_v= R B. C_p- C<sub>v < R C. C_p- C<sub>v = 0 D. C_p- C<sub>v > R
1065	A real gas can be approximated to an ideal gas at	A. Low density B. High pressure C. High density D. Low temperature
1066	If the volume of the gas is to be increased by 4 times, then	A. Temperature and pressure must be doubled B. At constant P the temperature must be increased by 4 times C. At constant T the pressure must be increased by four times D. It cannot be increased
1067	The temperature of gas is produced by	A. At potential energy of its molecules B. The kinetic energy of its molecules C. The attractive force between its molecules D. The repulsive force between its molecules
1068	Pressure exerted by a gas is	A. Independent of density of the gas B. Inversely proportional to the density of the gas C. Directly proportional to the square of the density of the gas D. Directly proportional to the density of the gas
1069	At absolute temperature, the kinetic energy of the molecules	A. Becomes zero B. Becomes maximum C. Becomes minimum D. Remain constant
1070	On colliding in a closed container, the gas molecules	A. Transfer momentum to the walls B. Momentum becomes zero C. Move in opposite directions D. Perform Brownian motion

		D. Perform Brownian motion
1071	At constant temperature, on increasing the pressure of a gas by 5%, its volume. The final temperature of the gas will be	A. 81 K B. 355 K C. 627 K D. 627°C
1072	The kinetic energy of one molecule of a gas at normal temperature and pressure will be (k = 8.31 J/mole K) :	A. 1.7 x 10³J B. 10.2 x 10³J C. 3..4 x 10³J D. 6.8 x 10³J
1073	Hydrogen and helium of same volume V at same temperature T and same pressure P are mixed to have same volume V. The resulting pressure of the mixtures will be	A. R/2 B. P C. 2P D. Depending on the relative mass of the gases
1074	The length of a metallic rod is 5 meter at 100°C. The coefficient of cubical expansion of the metal will be	A. 2.0 x 10⁻⁵/°C B. 4.0x10⁻⁵/°C C. 6.0x10⁻⁵/°C D. 2.33x10⁻⁵/°C
1075	Two metal rods A and B have their initial lengths in the ratio 2 : 3 and coefficients of linear expansion in the ratio 4 : 3. When they are heated through same temperature difference the ratio of their linear expansion is	A. 1 : 2 B. 2 : 3 C. 3 : 4 D. 8 : 9
1076	The coefficient of linear expansion of iron is 0.000011 per°K. An iron rod is 10 metre long at 27°C. The length of the rod will be decreased by 1.1 mm when the temperature of the rod changes to	A. 0°C B. 10°C C. 17°C D. 20°C
1077	If a liquid is heated in weightlessness, the heat is transmitted through	A. Conduction B. Convection C. Radiation D. Neither, because the liquid cannot be heated in weightlessness
1078	For making cooking utensils, which of the following pairs of properties is most suited?	A. Low specific heat and high conductivity B. Low specific heat and low conductivity C. High specific heat and high conductivity D. High specific heat and low conductivity
1079	Heat travels through vacuum by	A. Conduction B. Convection C. Radiation D. Both A and B
1080	On a cold morning a metal surface will fell colder to touch than a wooden surface, because	A. Metal has high specific heat B. Metal has high thermal conductivity C. Metal has low specific heat D. Metal has low thermal conductivity
1081	Good absorbers of heat are	A. Poor emitters B. Non emitters C. Good emitters D. Highly polarized
1082	Amount of heat required to raise the temperature of a body through 1 K is called its	A. Specific heat B. Water equivalent C. Thermal capacity D. Entropy
1083	What temperature is the same on Celsius scale as well as on Fahrenheit scale?	A. 32°C B. -32°C C. -40°C D. -212°C
1084	If water in a closed bottle is taken up to the moon and opened, the water gets	A. Freeze B. Boiled C. Dissociated into O₂and H₂

		D. Evaporated
1085	Specific heat at constant pressure is greater than the specific heat at constant volume because	A. Heat is used up to increase temperature at constant pressure B. Heat is used by gas for expansions purposes at constant pressure C. Heat is use dup to increase internal energy D. The above statement is invalid
1086	An amount of water of mass 20 g at 0°C is mixed with 40 g of water at 10°C. Final temperature of mixture is	A. -20°C B. 6.67°C C. 5°C D. 0°C
1087	Melting point of ice	A. Increases with increasing pressure B. Decreases with increasing pressure C. Is independent of pressure D. Is proportional to pressure
1088	Rice takes longest to cook	A. In a submarine 100 m below the surface of the sea B. At sea level C. At Murree D. At Mount Everest
1089	Two samples A and B of a gas initially of the same temperature and pressure are compressed from a volume V to a volume V/2 such that A is compressed isothermally and B adiabatically. The final pressure	A. A greater than than of B B. A is equal to that of B C. A is less than that of B D. A is twice the pressure of B
1090	First law of thermodynamic is special case of	A. Law of conservation of energy B. Charle's law C. Law of conservation of mass D. Boyle's law
1091	At what temperature the adiabatic change is equivalent to the isothermal change?	A. Zero degree Celsius B. Zero Kelvin C. Critical temperature D. Above critical temperature
1092	First law of thermodynamics is consequence of conservation of	A. Work B. Energy C. Heat D. All of these
1093	A gas is compressed adiabatically till its temperature is double. The ratio of its final volume to initial volume will be	A. 1/2 B. More than 1/2 C. Less than 1/2 D. Between 1 and 2
1094	The force between two chares 0.06 m apart is 5 N. If each charge is moved towards the other by 0.01 m, then the force between them will become	A. 7.20 N B. 11.25 N C. 22.50 N D. 45.00
1095	Two point charge +3**µC and +8µC repel each other with a force of 40 N. If a charge of -5µC is added to each of them, then the force between then will become**	A. -10 N B. +10 N C. +20 N D. -20 N
1096	In a Milikian's oil drop experiment the charge on an oil drop is calculated to be 6.35 x 10^{-19}C. The number of excess electrons on the drop is	A. 3.9 B. 4 C. 4.2 D. 6
1097	The unit of intensity of electric field is	A. newton/coluomb B. jule/coluomb C. volt x metre D. newton/metre
1098	Consider a spherical shell of metal at he centre of which a positive point charge is kept	A. The electric filed is zero outside the shell B. The electric field is zero everywhere C. The electric field is zero in the region inside the shell D. The electric field is non-zero in both regions outside and inside the shell
1099	An electric dipole is at the centre of a hollow sphere of radius r. The total normal electric flux through the sphere is (here Q is the charge and d is the	A. Q/4πr² B. 2Q/4<i style="box-sizing: border-box; color: rgb(34, 34, 34); font-family: "Times New Roman";

	distance between the two charges of the dipole)	34, 34); font-family: "Times New Roman"; font-size: 18px; background-color: rgb(255, 255, 248);">π</i>r² C. Q.d D. Zero
1100	A hollow insulated conduction sphere is given a positive charge of 10μC. What will be the electric field at the centre of the sphere if its radius is 2 meters?	A. Zero B. 5μC m⁻² C. 20μC m⁻² D. 8μC m⁻²
1101	A point charge A of charge +4μC and another B of charge -1μC are placed in air at a distance 1 m apart. Then the distance of the point on the line joining the charge B, where the resultant electric field is zero, is (in m)	A. 2 B. 1 C. 0.5 D. 1.5
1102	A point charge Q is placed at the mid-point of a line joining two charges. 4q and q. if the net force on charge q is zero. then Q must be equal to	A. -q B. +q C. -2q D. +4q
1103	The force of repulsion between two point charges is F, when these are at a distance 0.1 m apart. Now the point charges are replaced by sphere of radii 5 cm each having the same charge as that of the respective point charges. The distance between their centre is again kept 0.1 m ; then the force of repulsion will	A. Increase B. Decrease C. Remain F D. Become 10F/9
1104	A charge Q is divided into two parts q and Q - q and separated by a distance R. The force of repulsion between them will be maximum when	A. q = Q/4 B. q = Q/2 C. q = ! D. None of these
1105	Two point charges A and B separated by a distance R attract each other with a force of 12 x 10^{-3}N. The force between A and B when the charges on them are doubled and distance is halved	A. 1.92 N B. 19.2 N C. 12 N D. 0.192 N
1106	The excess (equal in number) of electrons that must be placed on each of two small spheres spaced 3 cm apart, with force of repulsion between the spheres to be 10^{-19}N, is	A. 25 B. 225 C. 625 D. 1250
1107	A wire is bent into a ring of radius R is given a charge q. The magnitude of the electrical field at the centre of the ring is	A. Two B. 1/2 C. Zero D. 3/2
1108	The electric field due to an infinite long thin wire at a distance R varies as	A. 1/R B. 1/R² C. R D. R²
1109	An electron of charge e coulomb passes through a potential difference of V volts its energy in joules will be	A. V/e B. eV C. e/V D. V
1110	Equal charges are given to two spheres of different radii. The potential will	A. Be more on the smaller sphere B. Be more on the bigger sphere C. Be equal on both the sphere D. Depend on the nature of the material of the sphere
1111	If a charged spherical conductor of radius 10 cm has potential V at a point distance 5 cm from its centre, then the potential at a point distance 15 cm from the centre will be	A. 1/3 V B. 2/3 V C. 3/2 V D. 3V
1112	If the distance of separation between two chares is increased, the electrical potential energy of the system will	A. Increase B. Decrease C. May increase or decrease D. Remain the same
1113	A cube of metal is given a positive charge Q. For the above system, which of the following statements is true?	A. Electric potential at the surface of the cube is zero B. Electric potential within the cube is zero C. Electric filed is normal to the surface of the cube D. Electric filed varies within the cube
1114	Two conductors having the same type of charges are connected by a conducting wire. There would not be any amount of charges on them if	A. They have the same potential B. They have the same amount of charge C. They have the same capacity

		D. They have the same shape
1115	Some charge is being given to a conductor. Then its potential	A. Is maximum at surface B. Is maximum at centre C. Is remain same throughout the conductor D. Is maximum somewhere between surface and centre
1116	At any point on the right bisector of the line joining two equal and opposite charges	A. At electric field is zero B. The electric potential is zero C. The electric potential decreases with increasing distance from the centre D. The electric field is perpendicular to the line joining the charges
1117	The electric potential at the surface of an atomic nucleus (Z = 50) of radius 9.0×10^{-15} is	A. 9 x 10⁵V B. 9 V C. 8 x 10⁶V D. 80 V
1118	In bringing an electron towards another electron, electrostatic potential energy of system	A. Decreases B. Increases C. Remains uncharged D. Becomes zero
1119	Electric potential of earth is taken to be zero because the earth is good	A. Semiconductor B. Conductor C. Insulator D. Dielectric
1120	A proton is about 1840 times heavier than an electron. When it is accelerated by a potential difference of 1 KV, its kinetic energy will be	A. 1840 KeV B. 1/1840 KeV C. 1 KeV D. 920 KeV
1121	An alpha particle is accelerated through a potential difference of 10^6volt. Its kinetic energy will be	A. 1 MeV B. 2 MeV C. 4 MeV D. 8 MeV
1122	One moving a charge of 20 coulombs by 2 cm, 2 J of work is done, then the potential difference between the points is	A. 0.1 V B. 8 V C. 2 V D. 0.5 V
1123	A capacitor is charged with a battery and then it is disconnected. A slab of dielectric is now inserted between the plates, then	A. The charge in the plates reduces and potential difference increase B. Potential difference between the plates increase, stored energy decreases and charge remains the same C. Potential difference between the plates decreases and charge remains unchanged D. None of the above
1124	If we increase the distance between two plates of the capacitor, the capacitance will	A. Increase B. Decrease C. Remain same D. First increase then decrease
1125	A parallel plate capacitor is first charged and then a dielectric slab is introduced between the plates. The quantity that remains unchanged is	A. Charge Q B. Potential V C. Capacity D. Energy U
1126	Force acting upon a charged particle kept between the plates of a charged condenser if F. IF one of the plates of the condenser is removed, force acting on the same will become	A. Zero B. F/2 C. F D. 2F
1127	A medium of dielectric constant 'K' is introduced between the plates of parallel plate condenser. As a result its capcitance	A. Increase k time B. Decreases k times C. Decreases 1/K times D. Remains unchanged
1128	A one microfarad capacitor of a TV is subjected to 4000 V potential difference. The energy stored in capacitor is	A. 8 J B. 16 J C. 4 x 10⁻³J D. 2 x 10⁻³J
1129	A metal plate of thickness half the separation between the capacitor plates of capacitance C is inserted. The new capacitance is	A. C B. C/2 C. Zero D. 2C
1130	A condenser of capacity 50μF is charged to 10 V.The energy stored is	A. 1.25 x 10⁻³J B. 3.75 x 10⁻³J C. 2.5 x 10⁻³J D. 5 x 10⁻³J

1131	In a charged capacitor the energy is stored in	A. Both in positive and negative charges B. Positive charges C. The edges of the capacitor plates D. The electric field between the plates
1132	The capacity of a parallel plat capacitor depends on the	A. Type to metal used B. Thickness of plates C. Potential applied across the plates D. Separation between the plates
1133	If the distance between the plates of a parallel plate condenser of capacity 10μF is doubled then new capacity will be	A. 5μF B. 20μF C. 10μF D. 15μF
1134	A capacitor of capacity 1μF is charged to 1 KV. The energy stored in J	A. 5 B. 0.5 C. 0.005 D. 50
1135	When a dielectric material is introduced between the plates of a charged condenser the electric field between the plates	A. Decreases B. Increases C. No change D. May increase or decresase
1136	The energy required to charge a capacitor of 5μF by connecting D.C. source of 20 KV is	A. 10 KJ B. 5 KJ C. 2 KJ D. 1 KJ
1137	A sheet of aluminium foil of negligible thickness is introduced between the plates of a capacitor. The capacitance of the capacitor	A. Increases B. Decreases C. Remain unchanged D. Becomes infinite
1138	The nature of capacity of electrostatic capacitor depends on	A. Shape B. Size C. Thickness of plates D. Area
1139	Taking the earth to be a spherical conductor of diameter 12.8 x 10^3km. Its capacity will be	A. 711μF B. 611μF C. 811μF D. 511μF
1140	Question Image	A. 5μF B. 10μF C. 3μF D. 6μF
1141	A ten ohm electric heater operates on a 110 V line. Calculate the rate at which it develops heat in watts	A. 1310 W B. 670 W C. 810 W

	which it develops heat in watts	C. 810 W D. 1210 W
1142	Two electric bulbs of 200 W and 100 W have same voltage. If $R_1$and R_2be their resistance respectively then	A. R₁= 2R₂ B. R₂= 2R₁ C. R₂=4R₁ D. R₁= 4R₂
1143	A wire of radius r has resistance R. If it is stretched to a wire of r/2 radius, then the resistance becomes	A. 2R B. 4R C. 16R D. Zero
1144	A (100 W , 200 W) bulb is connected to a 160 V power supply. The power consumption would be	A. 64 W B. 80 W C. 100 W D. 125 W
1145	A 50 volt battery is connected across 10 ohm resistor. The current is 4.5 A. The internal resistance of the battery is	A. Zero B. 0.5Ω C. 1.1Ω D. 5.0Ω
1146	If 2.2 kilowatt power is transmitted through 1 10 ohm line at 22000 volt, the power loss in the form of heat will be	A. 0.1 watt B. 1 watt C. 10 watt D. 100 watt
1147	The conductivity of a superconductor is	A. Infinite B. Very large C. Very small D. Zero
1148	If 2.2 kilowatt power is transmitted through a 10 ohm line at 22000 volt, the power loss in the form of heat will be	A. 0.1 watt B. 1 watt C. 10 watt D. 100 watt
1149	A piece of fuse wire melts when a current of 15 ampere flows through it. With this current. If it dissipates 22.5 W, the resistance of fuse wire will be	A. Zero B. 10Ω C. 1Ω D. 0.10Ω
1150	A conducting wire is drawn to double its length. Final resistivity of the material will be	A. Double of the original one B. Half of the original one C. One fourth of the original one D. Same as original one
1151	In a voltmeter the conduction takes place due to	A. Electrons only B. Holes only C. Electrons and holes D. Electrons and ions
1152	A certain charge liberates 0.8 g of oxygen. The same charge will liberate. how many g of silver?	A. 108 g B. 10.8 g C. 0.8 g D. 108/0.8 g
1153	A 10 F capacitor is charged to a potential difference of 50 V and is connected to another uncharged capacitor in parallel. Now the common potential difference becomes 20 volt.The capacitance of second capacitor is	A. 10μF B. 20μF C. 30μF D. 15<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-

		"Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);">μF
1154	The powers of tow electric bulbs are 100 W and 200 W. Both of them are joined with 220 V mains. The ratio of resistances of their filaments will be	A. 1 : 2 B. 2 : 1 C. 1 : 4 D. 4 : 1
1155	In a building, there are 15 bulbs of 40 watts, 5 bulbs of 100 watts, 5 fans of 80 watts and a heater of 1 kilowatt. The voltage of the electric main is 220 volts. The minimum efficiency of the main fuse of the building will be	A. 0.4 A B. 11.4 A C. 9.8 A D. 10.6 A
1156	Cause of heat production in a current carrying conductor is	A. Collisions of free electrons with one another B. High drift speed of free electrons C. Collisions of free electrons with atoms or ions of conductor D. High resistance value
1157	Specific resistance of a wire depends upon	A. Length B. Cross-section area C. Mass D. None
1158	A car battery has e.m.f 12 volt and internal resistance 5 x 10^{-2}ohm. If it draws 60 ampere current, the terminal voltage of the battery will be	A. 5 volt B. 3 volt C. 15 volt D. 9 volt
1159	Potentiometer is more sensitive than voltmeter, because	A. Voltmeter has a very high resistance B. Voltmeter has a very low resistance C. Potentiometer does not draw any current from a source of unknown potential difference D. Potentiometer is sensitive
1160	At ordinary temperature, an increase in temperature increases the conductivity of	A. Conductor B. Semiconductor C. Insulator D. Alloy
1161	A 60 W bulb operates on 220 V supply. The current flowing through the bulb is	A. 11/3 A B. 3 A C. 3/11 A D. 6
1162	A 100 W, 200 V bulb is connected to a 160 volts supply. The actual power consumption would be	A. 64 W B. 80 W C. 100 W D. 125 W
1163	The resistance of the given conductor can be increased by	A. Increasing the area B. Changing resistivity C. Decreasing the length D. None of the above because change does not matter because in any case the volume remains the same
1164	Three resistors of resistance R each are combined in various ways. Which of the following cannot be obtained?	A. 3RΩ B. 2R/4Ω C. R/3Ω D. 2R/3Ω
1165	Which one of the following causes production of heat when current is set up in a wire?	A. Fall of electrons from higher orbits to lower orbits B. Inter-atomic collisions C. Inter-electron collisions D. Collisions of conduction electron with atoms
1166	If two bulbs one of 60 W and other of 100 W are connected in parallel, then which one of the following will flow more?	A. 60 W bulb B. 100 W bulb C. Both equally D. None of these
		A. 10Ω B. 20<span style="color: rgb(34, 34, 34); font-family:

1167	The resistance of 20 cm long wire is 10Ω. When the length is changed to 40 cm. The new resistance is	B. 20<span style= color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);">Ω C. 30Ω D. 40Ω
1168	10^6electrons are moving through a wire per second, the current developed is	A. 1.6 x 10⁻¹⁹ B. 1 A C. 1.6 x 10⁻¹⁵A D. 10⁶A
1169	Calculate the amount of charge flowing in 2 minutes in a wire of resistance 10$\Omega$when a potential difference of 20 V is applied between its ends	A. 120 C B. 240 C C. 20 C D. 4 C
1170	A uniform resistance wire of Length L and diameter d has a resistance R. Another wire of same material has length, 4L and diameter 2d, the resistance will be	A. 2 R B. R C. R/2 D. R/4
1171	For two resistance wires joined in parallel, the resultant resistance is 6/5 ohm. When one of the resistance wire breaks, the effective resistance becomes 2 ohm. The resistance of the broken wire is	A. 3/5 ohm B. 2 ohm C. 6/5 ohm D. 3 ohm
1172	The colour sequence in a carbon resistor in red, brown, orange and silver. The resistance of the resistor is	A. 21 x 10³<u>+</u> 10% B. 23 x 10¹<u>+</u> 10% C. 21 x 10³<u>+</u> 5% D. 12 x 10³<u>+</u> 5%
1173	A heater coil rated at (1000 W - 200 V) is connected to 110 volt line. What will be the power consumed?	A. 200 W B. 302.5 C. 250 W D. 350 W
1174	A current of 1.6 A is passed through a solution of $CuSO_4$. How many Cu^{2+}ions are liberated in one minute?	A. 3 x 10²⁰ B. 3 x 10¹⁰ C. 6 x 10²⁰ D. 6 x 10¹⁰
1175	The resistance of an incandescent lamp is	A. Smaller when switched on B. Greater when switched off C. The same whether it is switch off or switch on D. Greater when switched on
1176	The minimum resistance that can be obtained by connecting 5 resistance of 1/4Ωeach is	A. 4/5Ω B. 5/4Ω C. 20Ω D. 0.05 Ω
1177	Battery is charged in motor cars, which is based on	A. Chemical effect B. Magnetic effect C. Electric effect D. None
1178	Which of the following does not obey ohm's law?	A. Copper B. Al C. Diode D. None
1179	When three identical bulbs of 60 watt, 200 volt rating are connected in series to a 200 volt supply, the power drawn by them will be	A. 180 watt B. 10 watt C. 20 watt D. 60 watt
1180	In Pakistan electricity is supplied for domestic use at 220 V, it is supplied at 110 V in USA. If the resistance of a 60 W bulb for use in Pakistan is R, the resistance of a 60 W bulb for use in USA will be	A. 2 R B. R/4 C. R/2 D. R

1181	The thermistors are usually made of	A. Metals with low temperature coefficient of resistivity B. Metals with high temperature coefficient of resistivity C. Metal oxides with high temperature coefficient of resistivity D. Semi conducting materials having low temperature coefficient of resistivity
1182	Current provided by a battery is maximum when	A. Internal resistance equal to external resistance B. Internal resistance is greater than external resistance C. Internal resistance is less then external resistance D. None of these
1183	Thermocouple is an arrangement of two different metals	A. To convert heat energy in to electrical energy B. To produce more heat C. To convert heat energy into chemical energy D. To convert electric energy in to heat energy
1184	In L.C.R series A.C. circuit, the phase angle between current and voltage is	A. Any angle between 0 and <u>+</u>π/2 B. π/2 C. π D. Any angle between 0 andπ/2
1185	In an A.C. circuit, a resistance of R ohm is connected in series with an inductance L. If phase angle between voltage and current be 45°. the value of inductive reactance will be	A. R/4 B. R/2 C. R D. Cannot be found with the given data
1186	A 220 V, 50 Hz. A.C. source is connected to an inductance of 0.2 H and a resistance of 20 ohm in series. What is the current in the circuit?	A. 10 A B. 5 A C. 33.3 A D. 3.33 A
1187	A capacitor acts as an infinite resistance for	A. AC B. DC C. Both AC and DC D. Neither AC nor DC
1188	An ideal choke (used along with fluorescent tube) would be	A. A pure resistor B. A pure capacitor C. A pure inductor D. A combination of an inductor and a capacitor
1189	The peak voltage in a 220 volt A.C. supply is nearly	A. 220 volt B. 253 volt C. .311 volt D. 440 volt
1190	In a capacitive circuit	A. Current leads voltage by phase ofπ/2 B. Voltage leads current by phase ofπ/2 C. Current and voltage are in same phase D. Sometime current and sometime voltage leads
1191	The reactance of a coil when used in the domestic A.C. power supply (220 volts, 50 cycles per second) is 50 ohms. The inductance of the coil is nearly	A. 2.2 henry B. 1.6 henry C. 0.22 henry D. 0.16 henry
1192	Energy is stored in the choke coil in the form of	A. Heat B. Magnetic energy C. Electric energy

		D. Electro-magnetic energy
1193	The henry is the unit for	A. Resistance B. Magnetic flux C. Magnetic field D. Inductance
1194	In and A.C. circuit, the current lags behind the emf. The power factor is 50% In order to make it 100%, What additional component is to be used?	A. Impedance B. Inductance C. Capacitance D. Resistance
1195	An L-R circuit has R = 10 Ω and L = 2 H. If 120 V, 60 Hz A.C. voltage is applied, then current in the circuit will be	A. 0.32 A B. 0.16 A C. 0.48 A D. 0.80 A
1196	A fuse wire is having 5 ampere current rating. What is the peak value of current it can have?	A. 0.7074 A B. 7.07 A C. 0.0707 A D. 7.707 A
1197	In LCR circuit which one of the following statement is correct?	A. L and R oppose each other B. R value increase with frequency C. The inductive reactance increases with frequency D. The capacitive reactance increases with frequency
1198	A circuit has a resistance of 11Ωan inductive reactance of 25$\Omega$and a capacitance reactance of 18Ω. It is connected to an a.c. source of 200 V and 50 Hz. The current through the circuit (in amperes) is	A. 11 B. 15 C. 18 D. 20
1199	The value of current at resonance in series LCR circuit is affected by the value	A. R only B. C only C. L only D. R, C and L
1200	Alternating current can not be measured by D.C. ammeter because	A. A.C. can not pass through D.C. Ammeter B. A.C. changes direction C. Average value of current for complete cycle is zero D. D.C. Ammeter will get damaged
1201	The current in LCR circuit will be maximum when$\omega$is	A. As large as possible B. Equal to natural frequency of LCR system
1202	The peak value of alternating voltage is given by	
1203	The root mean square voltage for alternating current is	D. All of these
1204	The angle which specifies the instantaneous value of the alternating voltage or current is called	A. phase B. critical angle C. angle of incidence D. all of these
1205	The highest value reached by voltage or current in one cycle is called	A. root means square value B. peak value C. peak to peak value D. instantaneous value
1206	The sum of positive and negative peak values are usually written as	A. P-P value B. negative C. zero D. may be positive or negative
1207	The r.m.s value of a.c. current is always	A. positive B. negative C. zero D. all of these
1208	The phase at the positive peak is	A. Π/2 B. Π C. 3Π/2 D. 2Π
		A. Positive

1209	The average value of current and voltage over a cycle is	A. Positive B. Negative C. Zero D. May be positive or negative
1210	The basic circuit element in a d.c. circuit is a/an	A. Inductor B. Resistor C. Capacitor D. Battery
1211	Current varies with voltage	A. Inversely B. as square root C. Directly D. None of these
1212	The reactance of a cell changes directly with	A. frequency of a.c B. the inductance C. both a and b D. none of these
1213	The combined effect of resistance and reactance in a.c. circuit is called	A. conductance B. resistance C. impedance D. choke
1214	Units of impedance are	A. Henry B. Ohms C. moh D. Watt
1215	Such an inductor coil which does not consume energy and is often employed for controlling a.c. without consumption of energy is called	A. Choke B. impedance C. Semi-conductor D. None
1216	The ratio of the r.m.s value of the applied voltage to the r.m.s value of resulting a.c. is	A. Impedance B. Inductance C. Reactance D. Resistance
1217	The power dissipation in a pure inductive or capacitance circuit is	A. maximum B. positive C. zero D. none
1218	The circuit in which current and voltage are in phase, the power factor is	A. zero B. 1 C. negative D. 0.83
1219	The L-C parallel circuit the capacitor draws a	A. leading current B. lagging current C. main current D. none of these
1220	For a parallel resonant circuit at resonance, current from supply is	A. minimum B. maximum C. zero D. none of these
1221	In a three phase a.c. generator, there are	A. 2 coils B. 3 coils C. 1 coild D. No coil
1222	In a three phase a.c generator if the first coil has a phase 0, then the other two coils will have phases	A. 90° - 120 ° B. 20° and 140 ° C. 120° and 240 ° D. 120° and 140 °
1223	A piece of wire along which charges are made to accelerate is known as	A. transmitting antenna B. receiving antenna C. modulator D. nor of these
1224	The electric field, magnetic field and the direction of their propagation are mutually	A. perpendicular B. parallel

	mutually	C. none of these
1225	Which of the following waves are more energetic	A. radio waves B. infrared waves C. ultraviolet D. γ-rays
1226	The A.M. transmission frequency range from	A. 500-1000 KHz B. 540-1600 KHz C. 300-490 KHz D. 900-2040 KHz
1227	A choke coil is used as a resistance in	A. d.c. circuit B. a.c. circuit C. d.c. potentiometer circuit D. wheatstone bridge
1228	At the present time, the main frontiers of fundamental science are	A. 2 B. 3 C. 4 D. 5
1229	The instrument used to gather information form the far side of the universe is	A. Compound microscope B. Radio telescope C. Astronomical Telescope D. Simple microscope
1230	The branch of physics which concerned with the ultimate particles of which the universe is composed is known as	A. SolidState physics B. Particle Physics C. Nuclear Physics D. Atomic Physics
1231	Computer chips are made from	A. Conductors B. Semiconductors C. Insulators D. Both A and B
1232	Which branch of physics deals with the structure and properties of solids	A. Atomic Physics B. Plasma Physics C. Molecular Physics D. Solid state physics
1233	Those quantities which can be measured accurately are known as	A. Physical Quantities B. Scalar Quantities C. Vector Quantities D. Non Physical Quantities
1234	Physical quantities are often divided into _____ categories	A. 3 B. 2 C. 9 D. 5
1235	Distance to nearest galaxy from earth is	A. 10¹⁰m B. 10¹⁵m C. 10⁴⁰m D. 10³⁰m
1236	Diameter of the nucleus s of the order of	A. 10⁻¹⁰m B. 10⁻¹²m C. 10⁻¹⁵m D. 10⁻¹⁸m
1237	Diameter of the atom is of the order of	A. 10⁻¹⁰m B. 10⁻¹²m C. 10⁻¹⁵m D. 10⁻⁹m
1238	The vector is space has:	A. One Component B. Two Compnents C. Three Components D. Non of these
1239	The principle characteristics of an ideal standard are	A. Inaccessible and Invariable B. Accessible and Invariable C. Accessible and Variable D. None of these
1240	The system international (SI) is built from _____ kind of unites	A. Two B. Three C. Four D. Five
1241	Two forces of 10N and 8N are applied simultaneously to a body. The maximum value of their resultant is:	A. 20 N B. -2 N C. 18 N D. 36 N

1242	Total number of base units are	A. Three B. Five C. Seven D. Nine
1243	Number of supplementary units are	A. Three B. Two C. Seven D. Five
1244	All trigonometric functions (since, cosine tangent etc.) are positive in:	A. 1st Quadrant B. 2nd Quadrant C. 3rd Quadrant D. 4th Quadrant
1245	Which of the following are the units of intensity of light	A. Pois B. Lux C. Siemen D. Candela
1246	The sum of two or more vectors is equal to a single vector which is called:	A. Component vector B. Resultant vector C. Product vector D. None of these
1247	The driection of vector si space is specified by:	A. One angle B. Two angles C. Three angles D. None of above
1248	Work is a scalar product of	A. Force, Velocity B. Velocity, Displacement C. Force, Displacement D. Force, Momentum
1249	Work is a Quantity	A. Vector B. Scalar C. Non-physical D. None of these
1250	Unit vector is used to specify:	A. Magnitude of a vector B. Dimensions of a vector C. Direction of a vector D. Position of a vector
1251	Maximum work is done when force and displacement are	A. Parallel B. Antiparallel C. Perpendicular D. Both a and b
1252	When force and displacement are perpendicular to each other than work is equal to	A. Unity B. Infinity C. Zero D. -Fd
1253	Two vectors having different magnitudes:	A. Have their directions opposite B. May have their resultant zero C. Cannot have their resultant zero D. None of these
1254	Work done by the force of friction is always	A. Positive B. Zero C. Negative D. Maximum
1255	SI Unit of work is	A. Nm⁻¹ B. Joule C. Nms D. Both a and b
1256	Area under the force displacement graph gives	A. Power B. Work C. Heat D. Energy
1257	The change of order of vectors in a dot product of two vectors:	A. Changes its value B. Doesn't change it's value C. Changes the direction product quantity D. None of these
1258	The dimensions of work	A. [MLT⁻¹] B. [MLT⁻²] C. [ML²T⁻²] D. [MLT]
1259	If one newton force acts on a body and displaces the body through 1m work done on body is	A. 1 dyne B. 1 joule C. 1KJ D. 1 Watt

1260	Scalar product is also called:	A. Cross product B. Dot product C. Product scalar D. Product vector
1261	1 J = _____?	A. 10⁷erges B. 10⁻⁷erges C. 10⁵erges D. 10⁻⁵erges
1262	The unit of work in CGS system is	A. Joule B. Erg C. Dyne D. Watt
1263	For measuring the angle between two vectors graphically, we join:	A. Tails of both the vectors B. Tail of one vector with the head of other C. Heads of both the vectors D. None of these
1264	The space around the earth in which its gravitational force acts on a body is called	A. Electric Field B. Gravitational field C. Magnetic field D. Conservative field
1265	Work done on a body by gravity in lifting it up to certain height is	A. Maximum B. Minimum C. Zero D. Negative
1266	Work done is independent of path followed in _____	A. Gravitational field B. Magnetic field C. Electric field D. All of these
1267	Tick the correct answer:	A. Torque is a vector quantity B. Torque is the turning effect of a force C. Torque is called moment of a force D. All of above
1268	Which one is conservative force	A. Electric force B. Frictional force C. Normal force D. Air resistance
1269	By convention, torques producing clockwise rotation are taken as:	A. Positive B. Nagative C. Zero D. None of these
1270	Torque is also called:	A. Momentum B. Linear inertia C. Moment of a force D. Mass
1271	The perpendicular distance from the axis of rotation to the line of action of force is called:	A. Moment arm B. Moment of a force C. Torque D. Non of these
1272	Direction of motion _____ in circular motion	A. Changes off and on B. Changes continously C. Does not change D. None of them
1273	When angular acceleration is positive, the body rotates:	A. Slower B. Slowest C. Faster D. None of these
1274	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to degree D. none of these
1275	SHM is type of _____ motion	A. Vibratory B. Linear C. Circular D. None
1276	Which of the following forces is responsible for SHM	A. Applied force B. Restoring force C. Fractional force D. Elastic force
1277	Which of the following is an example of SHM(in ideal situations)	A. Motion of simple pendulum B. Motion of horizontal spring man system C. Motion of violin string D. All of these

		D. All of these
1278	Acceleration of body executing SHM is always directed towards	A. Extreme position B. Mean position C. Along the direction of motion D. None
1279	Vibratory motion is always under	A. Applied force B. Restoring force C. Periodic force D. Gravitational force
1280	In vibrational motion(SHM)	A. P.E remains conserved B. Average K.E remain constant C. Neither P.E nor K.E remains constant D. Total energy remains constant
1281	Centripetal acceleration is also called _____ acceleration	A. Tangential B. Radial C. Angular D. None of them
1282	The acceleration of body executing SHM is directly proportional to	A. Applied force B. Amplitude C. Displacement D. Frictional force
1283	The wave form of SHM is	A. Pulsed wave B. Square wave C. Triangular waved D. Sine wave
1284	The maximum distance of body from mean position when body is executing SHM is called	A. Time period B. Displacement C. Amplitude D. Frequency
1285	_____ plays the same role during angular motion as played by the mass in linear motion	A. Torque B. Angular Momentum C. Moment of a force D. Moment of inertia
1286	When a body moves with a constant speed in a circle:	A. No work is done on it B. No acceleration is produced in the body C. Velocity remains constant D. None of these
1287	The S.I unit of frequency is	A. Vibrations s⁻² B. Ms⁻¹ C. Hertz D. s⁻¹
1288	The center of mass of a sphere lies at:	A. The axis of the sphere B. Circumference of sphere C. Center of the sphere D. None of them
1289	The displacement of body executing SHM is	A. x_ocoswt B. x_osinwt C. x_osin²wt D. Both A, B
1290	Moment of inertia depends upon:	A. Mass B. Selection of axis of rotation C. Both of them D. None of these
1291	Which of the following pairs does not have identical dimensions?	A. Torque and energy B. Energy and work C. Momentum and impulse D. Mass and moment of inertia
1292	A particle moving uniformly along circle its projection along diameter performs	A. Linear motion B. Projectile motion C. SHM D. Rotatory motion
1293	Which of the following quantity for particle executing SHM is non-zero at mean position	A. Force B. Acceleration C. Velocity D. Displacement
1294	A disc rolls down a hill and its speed at bottom is found to be 11.4 m/sec. Height of the hill is then nearly:	A. 10 m B. 12 m C. 13 m D. 15 m
	A particle executes SHM with frequency. The frequency with which its K.E	A. f/2 B. 2f

1295	A particle executes SHM with frequency. The frequency with which its K.E oscillates is	B. 2f C. f D. 4f
1296	Direction of angular momentum is determined by:	A. Right hand rule B. Head to tail rule C. Left hand rule D. None of them
1297	Angular momentum is a:	A. vector quantity B. Imaginary quantity C. Complex Quantity D. Scalar Quantity
1298	Which one is related to angular motion:	A. Moment of a force B. Moment of inertia C. Moment of momentum D. None of these
1299	Satellites are held in orbits around Earth by its:	A. Gravitational field B. Magnetic field C. Own orbital motion D. Own spin motion
1300	Velocity of particle executing SHM will be maximum at	A. Extreme position B. Mean position C. b/w mean and extreme D. None
1301	The number of countries who manage the largest satellite system is:	A. 3 B. 24 C. 126 D. 200
1302	If the distance between two charges is doubled,the force between them will become:	A. Double B. Half C. One third D. One fourth
1303	A prism splits a beam of white light into seven component colors. This is so because	A. Phase of different colors is different B. Amplitude of different colors is different C. Wavelength of different colors is different D. Velocity of different colors is different
1304	The inkjet printer eject a thin stream of:	A. Water B. Oil C. Ink D. Any above E. None of these
1305	Stars twinkle due to	A. The fact that they do not emit light continuously B. The refractive index of earth's atmosphere fluctuates C. The Star's atmosphere absorbs its light intermittently D. None of these
1306	Selenium is:	A. An insulator B. A conductor C. Both A and B D. Excellent conductor E. None of these
1307	Light appears to travel in straight line because	A. It is not absorbed by the atmosphere B. It is refracted by the atmosphere C. Its wavelength is very small D. Its velocity is very large
1308	The photocopying process is called:	A. Geography B. Sonography C. Xerography D. Zerography E. None of these
1309	Which one of the following phenomenon cannot be explained on the bases of Huygen's theory	A. Refraction B. Reflection C. Diffraction D. Formation of spectrum
1310	The electric field lines start from:	A. Positive charge B. Negative charge C. Either A and B D. Neutron E. An atom
1311	If yellow light emitted by sodium lamp in Young's double slit experiment is replaced by blue light of the same intensity	A. Fringe width will decrease B. Fringe width will increase C. Fringe width will remain unchanged D. Fringe will become less intense

1312	Static electricity is produced by the transfer of:	A. Electrons B. Protons C. One fluid D. Two fluid E. None of these
1313	The contrast in the fringes in an interference pattern depends upon	A. Fringe width B. Relative difference intensities of the two sources C. Distance between the slits D. Wavelength
1314	Huygen's theory cannot explain	A. Diffraction B. Interference C. Polarization D. Photoelectric effect
1315	Which one the following gives three regions of electromagnetic spectrum in order of increasing wavelength?	A. Gamma rays, micro waves, visible light B. Radio waves, ultraviolet waves, X-rays C. Ultraviolet rays, infrared rays, micro waves D. Visible light, gamma rays, radio waves
1316	The image of the tip of a needle is never sharp because of	A. Polarization of light B. Interference of light C. Diffraction of light D. Reflection of light
1317	The velocity of light in vacuum can be changed by changing	A. Frequency B. Amplitude C. Wavelength D. None of these
1318	Coulomb multiplied by volt by volt gives the unit called:	A. farad B. Ohm C. Second D. joule E. Watt
1319	The cause of mirage observed in deserts in bright sunlight is due to	A. Refraction of light B. Reflection of light C. Scattering of light D. Total internal reflection of light
1320	According to Huygen's principle	A. light travels in straight line B. Light is a transvers wave C. Light has dual nature D. All points on the primary wave-front are the sources of secondary wavelets
1321	Gaussian surface is always:	A. Rectangular B. Spherical C. Cylinder D. Box shape E. Any of these
1322	The locus of all points in a medium having same phase of vibration is called	A. Crest B. Trough C. Wavelength D. Wave-front
1323	The superposition of the two waves of same frequency and amplitude travelling in the same direction gives to an effect called	A. Diffraction B. Interference C. Polarization D. Dispersion
1324	In order to get interference using two light rays	A. The sources should be monochromatic and coherent B. The sources should have the same frequency C. Superposition should be linear D. All of these
1325	Photons must have energy equal to	A. ev B. En C. hf D. None of these
1326	Graph of Black body radiation is example of	A. Band spectra B. Continuo's spectra C. Line spectra D. All
1327	In gases, the charge carriers are:	A. Electrons B. Positive ions C. Negative ions D. Both A and C E. Both A and B
1328	Ultraviolet region lies in series	A. Layman B. Balmer

1328	Ultraviolet region lies in _____ series	C. P fund D. B racket
1329	In a metal, the valence electrons are:	A. Attached to individual atoms B. Not attached to individual atoms C. Free to move within the metal D. Both A and B E. Both A and C
1330	The value of resistivity is the least for:	A. Copper B. Aluminimum C. Silver D. Tungsten E. Iron
1331	We can excite an atom by	A. Bombardment of particles B. Radiating photons C. Providing potential difference D. All answer are true
1332	The life time of metastable state is equal to	A. Life time of excited state B. Greater than by excited state C. Zero D. Less than by excited state
1333	The fourth band is a:	A. Silver band B. Red band C. Gold band D. Either A or C E. Either A or B
1334	The first shell near the neucles is	A. L-shell B. X-shell C. N-shell D. M-shell
1335	CT scanning is the abbreviated name of	A. Computed Technology B. Computed Technique C. Computed Technology D. Computerized Technique
1336	The minimum wavelength of X-rays produced of 1KV potential difference is applied across the anode and cathode of the tube is	A. 1.24 x 10⁻¹⁰m B. 7.92 x 10⁻²⁰m C. 2.78 x 10⁻¹⁴m D. 3.88 x 10⁻¹¹m
1337	As the current flows through the wire	A. It generates heat in the wire B. It produces sound in the wire C. Resistance of the wire decrease D. Voltage across the ends is the increase E. None of these
1338	X-ray are also known as	A. Roentgen rays B. Maxwell rays C. Plank range D. Einstein rays
1339	The best conductor is:	A. Silver B. Copper C. Aluminimum D. Both B and C E. None of them
1340	In flesh, light element like carbon, hydrogen and oxygen predominate. Three elements allows _____ amount of incident X-ray to pass through them	A. Small B. Greater C. Equal D. Sometimes
1341	The value of the metastable state for Neon is	A. 20.66eV B. 20.61eV C. 19.23eV D. 18.70eV
1342	A rheostat can e used:	A. As variable resistor B. As potential divider C. For varying the current D. All of these E. None of these
1343	In helium Neon Laser Neon = 15% and Helium = 85% used. The lasing gas this unit is	A. Helium B. Neon C. Both D. None of these
1344	The third band of the colour code:	A. Gives the number of zeroes B. Is decimal multiplier C. Gives the resistance tolerance D. Gives the third digit E. Both (A) and (B)

1345	X-rays produced in a tube operating at 10^5V. The speed of X-rays produced is	A. 3 x 10⁸m/s B. 3.1 x 10⁸m/s C. 2.8 x 10⁸m/s D. 1.88 x 10⁸m/s
1346	Kirchhoff's first rule is also called:	A. Loop rule B. Thumb rule C. Point rule D. Right hand rule E. None of these
1347	An ideal voltmeter has:	A. Zero resistance B. Small resistance C. Large resistance D. Infinite resistance E. Both A and B
1348	Which instrument is expensive and difficult to use?	A. Voltmeter B. Potentiometer C. CRO D. Both A and C E. Both A and B
1349	The quantity having the same unit as that of emf is:	A. Force B. Energy C. Potential D. Current E. Charge
1350	The emf is measured in:	A. Newton B. Volt C. J/C D. Both A and B E. Both B and C
1351	Consider a photon of continuous X-ray and a photon of characteristics X-ray of same wavelength. Which of the following is/are different for the two photons	A. Frequency B. Penetrating power C. Energy D. Method of creation
1352	Thermistors are prepared under	A. High pressure and low temperature B. High pressure and high temperature C. Low pressure and low temperature D. Low pressure and high temprature E. None of these
1353	A thermistor is a resistor which is:	A. Light Sensitive B. Heat Sensitive C. Sound Sensitive D. All of these E. None of these
1354	Which of the following substances has got positive temperature coefficient of resistance?	A. Carbon B. Germanium C. Silicon D. Aluminium E. None of these
1355	Whenever a covalent bond breaks, it creates:	A. An electron B. A hole C. An electron-hole pair D. A positron E. All of these
1356	The change of magnetic flux through a circuit will produce	A. Magnetic Field B. Electric Field C. emf D. a.c
1357	Lenz's law is the consequence of	A. Mass B. Energy conservation C. Momentum conservation D. Charge
1358	Transformer is used to	A. Increase alternating current B. Increase d.c voltage C. Increase & Decrease emf D. All answers are right
1359	Computer chips are made from:	A. Iron B. Silicon C. Helium D. Stontium E. Aluminium
1360	The SI unit of magnetic induction is	A. Weber B. Weber/meter C. Henry

		D. Tesla
1361	Back emf is produced due to	A. Self induction B. Mutual induction C. A.C D. Lenz's law
1362	The motional e.m.f depends upon the	A. Length of a conductor B. Strength of a magnet C. Speed of the conductor D. All of the above
1363	Lens's law deals with the	A. Magnitude of induced current B. Magnitude of induced e.m.f C. Direction of induced e.m.f D. Direction of induced current
1364	Depletion region contains:	A. Protons B. Positive ions C. Negative ions D. Both (B) and (C) E. Both (A) and (C)
1365	The ratio of average e.m.f in the coil tot he time rate of change of current in the same coil is called	A. Mutual induction B. Mutual inductance C. Capacitance D. Self inductance
1366	A potential barrier of 0.7V exists across p-n junction made from:	A. Germanium B. Silicon C. Arsenic D. Gallium E. Indium
1367	Self inducede e.m.f. is also called	A. Motional e.m.f. B. Thermistor C. Electrostatic induction D. Back e.m.f
1368	.Depletion region contains:	A. Protons B. Positive ions C. Negative ions D. Both (B) and (C) E. Both (A) and (C)
1369	The work is stored in the inductor as	A. Electric potential energy B. Elastic potential energy C. Magnetic energy D. Absolute potential energy
1370	Split rings act as	A. Vibrator B. Resistor C. Motor D. Commulator
1371	An LED emits light when it is:	A. Forward biased B. Reverse biased C. Operated without battery D. Operated with heat source E. None of these
1372	A.C. can be measure with the help of	A. Nuclear effect B. Magnetic effect C. Chemical effect D. Heating effect
1373	A device which converts Electrical energy into mechanical energy is called as	A. Transformer B. Generator C. Motor D. All of these
1374	Inverter is the name given to:	A. NOT gate B. OR gate C. NOR gate D. AND gate E. XOR gate
1375	The practical application of the phenomenon of Mutual induction is	A. Transformers B. Generator C. Motor D. All of these
1376	Which of the following is most suitable as the core of transformer	A. Soft iron B. Alinco C. Steel D. None of these
		A. Closed switch

1377	In describing function of digital systems, 1 represents:	B. True Statement C. Lighted bulb D. Only (B) and (C) E. All are true
1378	The value of LDR depends upon intensity of:	A. Sound falling on it B. Current passing through it C. Magnetic field surrounding it D. Light falling on it E. Non of these
1379	The values 1 and 0 are designated as:	A. Continuous values B. Binary values C. Boolean values D. Decimal values E. Either (B) and (C)
1380	Silicon can be obtained from	A. Lead B. Uranium C. An isotope of oxygen D. Sand
1381	Light year is a unit of	A. Time B. Distance C. Velocity D. Intensity of light
1382	1 gm-cm^{-3}is equal to	A. 10³kg-m⁻³ B. 10⁻³kg-m⁻³ C. 1kg-m⁻³ D. 10⁶kg-m⁻¹
1383	Significant figures in 0.0010 are	A. Four B. Three C. Two D. One
1384	Which one is the least multiple	A. Pico B. Femto C. Nano D. Atto
1385	Work is a	A. Scalar quantity B. Vector quantity C. Base quantity D. None of these
1386	Work is a always done on a body when	A. A force acts on it B. It moves through certain distance C. None of A or B is correct D. Both A and B are correct
1387	The work performed on an object does not depend on	A. Force applied B. Angle at which force is inclined to the displacement C. Initial velocity of the object D. Displacement
1388	If force and displacement are in opposite direction, the work done is taken as	A. Positive work B. Negative work C. Zero work D. Infinite work
1389	Work has the dimensions as that of	A. Torque B. Angular momentum C. Linear momentum D. Power
1390	If a gymnast sitting on a rotating stool with his arms outstretched, brings his arms towards the chest, then its angular velocity will	A. Increase B. Decrease C. Remain constant D. None of these
1391	The net force acting on a 100 kg man standing in an elevator accelerating downward with a = 9.8 m sec^{-2}comes out to be	A. 980 N B. 580 N C. 1380 N D. Zero
1392	The number of "Earth Stations" which transmit signals to satellites and receive signals fro them are	A. 3 B. 24 C. 126 D. 200
1393	INTELSAT operates at frequencies 4, 6, 11, 14 having unit of	A. KHz B. MHz C. GHz D. BHz
1394	If time period of a pendulum is doubled by increasing its length, then its	A. Also be doubled B. Become half

1394	frequency will	C. Become one fourth D. Becomes four times
1395	Most practical applications of electricity involve	A. Charges at rest B. Charges in motion C. Electrons at rest D. Atoms in motion E. Molecules in motion
1396	The current that flows through the coil of a motor causes	A. Its shaft to revolve B. Its brushes to rotate C. Motor to move D. Its shaft to rotate E. None of these
1397	SI unit of current describes the flow of charge at the rate of	A. One ampere per second B. One coulomb per second C. One electron per second D. 6.25 x 10¹⁸electrons per second E. Both B and D
1398	In case of metallic conductors, the charge carriers are	A. Protons B. Electrons C. Antiprotons D. Positrons E. Both A and B
1399	The charge carriers in an electrolyte are	A. Positive ions B. Negative ions C. Either A or B D. Both A and B E. Neither A nor B
1400	The current produced by moving a loop of wire across a magnetic field is called	A. Direct current B. Magnetic current C. Alternating current D. Induced current E. None of these
1401	An emf is set up in a conductor when it	A. Is kept in a magnetic field B. Is kept in an electric field C. Moves across a magnetic field D. Both A and B E. None of these
1402	An induced current can be produced by	A. Constant magnetic field B. Changing magnetic field C. Varying electric field D. Constant electric field E. None of these
1403	The Phenomenon of generation of induced emf is called	A. Electrostatic induction B. Magnetic induction C. Electromagnetic induction D. Electric induction E. Both A and B
1404	The induced current in a conductor depends upon	A. Resistance of the loop B. Speed with which the conductor moves C. Any of these D. Both A and B E. None of these
1405	In an N-type silicon, which of the following statement is true	A. Electrons are majority carriers and trivalent atoms are the dopants B. Electrons are minority carriers and pentavalent atoms are the dopants C. Holes are minority carriers and pentavalent atoms are the dopants D. Holes are majority carriers and trivalent atoms are the dopants
1406	The reverse saturation current in a PN junction diode is only due to	A. Majority carriers B. Minority Carriers C. Acceptor ions D. Donor ions
1407	Improper biasing of a transistor circuit produces	A. Heavy loading of emitter current B. Distortion in the output signal C. Excessive heat at collector terminal D. Faulty location of load line
1408	When transistors are used in digital circuits they usually operate in the	A. Active region B. Breakdown region C. Saturation and cutoff regions D. Linear region
1409	Most of the electrons in the base of an NPN transistor flow	A. Out of the base lead B. Into the collector

1409	Most of the electrons in the base of an NPN transistor flow	C. Into the emit D. Into the base supply
1410	In a transistor, collector current is controlled by	A. Collector voltage B. Base current C. Collector resistance D. All of the above
1411	If the distance between two charges is doubled, the force between them will become	A. Double B. Half C. Three times D. One fourth E. One third
1412	Origin of the electric and the gravitational forces	A. Was known in 1911 A.D. B. Was known in 1811 A.D. C. Was known in 1711 A.D. D. is still unknown E. Was known in 1611 A.D.
1413	The concept of electric field theory was introduced by	A. Michael Faraday B. Newton C. Dalton D. Kepler E. Einstein
1414	Michael Faraday is known by his work on	A. Nuclear strong force B. Gravitational force C. Nuclear weak force D. Electric force E. None of these
1415	The body of physics involves	A. Structure of space and time B. Interaction of electromagnetic radiation with matter C. Both of them D. Chemical Changes
1416	Physics deals with the study of	A. Matter B. Energy C. Both of them D. Human Body
1417	The information from far side of the universe are gathered by	A. Radio telescope B. Microscope C. Telescope D. Spectro scpe
1418	Astrophysics is a branch of physics, which deals with	A. Sub-atomic B. Stars and galaxies C. Light and sound D. Music
1419	The mechanics, which deals with the objects moving with velocities approaching that of light is called	A. Relativistic mechanics B. Wave mechanics C. Quantum mechanics D. Statics
1420	Particles have the mass smallest of following is	A. Electron B. Proton C. Neutron D. Quark
1421	Silicon can be obtained from	A. Lead B. Uranium C. An isotope of oxygen D. Sand
1422	Aerodynamics is a branch of	A. Hydrodynamics B. Thermodynamics C. Both of them D. Statics
1423	Radio telescope is used to gather information from	A. Earth B. Moon only C. Far side of the universe D. Sea water
1424	Work done is maximum when angle between force and displacement is	A. 0° B. 90° C. 180° D. None of these
1425	The Space around the Earth within which it exerts a force of attraction on other bodies is known as	A. Nuclear field B. Conservative field C. Electric field D. Gravitational field
	A body moves a distance of 10 m along a straight line under the action of a	A. 60° B. 90°

1426	force of 5 N and work done in 25J. The angle which the force makes with the direction of motion will be	C. 30° D. 0°
1427	Which of the following types of force can do no work on the particle on which it acts	A. Frictional force B. Gravitational force C. Electric force D. Centripetal force
1428	The work done in moving a body between two points in a conservative field is independent of the	A. Direction B. Force applied C. Path followed by the body D. Power
1429	When a force of 0.5 N displaces a body through a distance of 2m in the direction of force, the work done is	A. 0.5 J B. 2 J C. 0.25 J D. 1 J
1430	A field in which the work done in moving a body along closed path is zero is called	A. Nuclear Field B. Conservative field C. Gravitational field D. Non-conservative field
1431	Tick the conservative force	A. Tension in a string B. Air resistance C. Elastic spring D. Frictional force
1432	A point on the rim of a wheel moves 0.2 m when the wheel turns through an angle of 14.3 degrees. The radius of the wheel is	A. 0.05 m B. 0.08 cm C. 0.8 m D. 0.008 m
1433	Conventionally the angular velocity is directed at an angle of	A. 90° to the axis of rotation B. 30° to the axis of rotation C. 0° to the axis of rotation D. None of the above
1434	An axis of rotation	A. Is a straight line B. Is normal to the plane of rotation C. Passes through pivot point O D. All of them
1435	Direction of motion _____ in circular motion	A. Changes off and on B. Changes continuously C. Does not change D. None of them
1436	Centripetal acceleration is also called _____ acceleration	A. Tangential B. Radial C. Angular D. None of these
1437	One radian is	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of these
1438	When a body moves along a circular path with constant speed, it has an acceleration, which is always directed	A. Along the tangent B. Towards the centre C. Away from the centre D. None of them
1439	The unit of spring constant is	A. J-sec B. Metre C. Nm⁻¹ D. None of these
1440	Which one of the following is an example of SHM	A. Motion in a plane B. Motion in a swing C. Motion in a car D. None of these
1441	The SI unit of spring constant is identical with that of	A. Force B. Surface tension C. Pressure D. Loudness
1442	The restoring force is _____ and opposite tot he applied force within _____	A. Equal, Elastic limit B. Different, The walls of the laboratory C. Different, Elastic limit D. None of these
1443	When a body is vibrating, the displacement from mean position	A. Increases with time B. Decreases with time C. Changes with time D. None of these

1444	The graph showing the variation of displacement with time is a	A. Sine curve B. Straight line C. Parabola D. None of these
1445	Amplitude in SHM is equivalent to _____ in circular motion	A. Diameter B. Radius C. Circumference D. None of these
1446	The body oscillates due to _____ accelerates and overshoots the rest position due to _____	A. Applied force, Inertia B. Restoring force, Friction C. Frictional force, Inertia D. Restoring force, Inertia
1447	The induced current in the loop can be Increased by	A. Using a stronger magnetic field B. Moving the loop faster C. Replacing the loop by a coil of many turns D. All above E. Both A and B
1448	In magnet-coil experiment, emf can be produced by	A. Keeping the coil stationary and moving the magnet B. Keeping the magnet stationary and moving C. Relative motion of the loop and magnet D. Any one of above E. All above
1449	Michael Faraday and Joseph Henry belong respectively to	A. USA and England B. England and France C. England and USA D. USA and France E. None of these
1450	The magnitude of induced emf depends upon the	A. Rate of decrease of magnetic field B. Rate of change of magnetic field C. Rate of increase of magnetic flux D. Constancy of magnetic field E. None of these
1451	When there is no relative motion between the magnet and coil, the galvanometer indicated	A. No current in the circuit B. An increasing current C. A decreasing current D. A constant current E. Either B or C
1452	Instead of moving the coil towards a magnet, the magnet is moved towards the coil with the same speed. The galvanometer shows current	A. Of same magnitude in the same direction B. Of different magnitude in the same direction C. Of same magnitude but in opposite direction D. Of different magnitude in the opposite direction E. None of these
1453	A coil of constant area is placed in a constant magnetic field. An induced current is produced in the coil when	A. The coil is distorted B. The coil is rotated C. The coil is neither distorted nor rotated D. Both A and B E. None of these
1454	Referring to above figure, current in the coil P grows from zero to its maximum value	A. At the instant the switch is closed B. At the instant the switch is opened C. When switch is kept open D. All of above E. Neither of above
1455	Referring to above figure, current in coil P falls from its maximum value to zero	A. At the instant the switch is closed B. At the instant the switch is opened C. When switch is kept open D. When switch is kept closed E. None of these
1456	Referring to above figure, due to change in current in the coil P, the change in magnetic flux	A. Is associated with coil P B. Is associated with coil S C. Causes and induced current in coil S D. All of these E. None of these
1457	Electric field strength is defined as	A. Work done on unit charge B. Force exerted on unit charge C. Distance covered by unit charge D. Power exerted by unit charge E. None of these
1458	Electric intensity at a place due to a charged conductor is a	A. Scalar quantity B. Vector quantity C. Semi vector and semi scalar D. Dimensionless quantity E. Both A and D are true
		A. Amount of charge

1459	The intensity at a point due to a charge is inversely proportional to	B. Size of the charge C. Distance between charge and the point D. Square of the distance from the charge E. None of these
1460	The SI unit of charge is	A. Ampere B. Watt C. Coulomb D. Volt E. Joule
1461	The electric field lines start from	A. Positive charge B. Negative charge C. Either A or B D. Neutron E. An atom
1462	Electric lines of force	A. Intersect each other B. Are always parallel C. Are always anti-parallel D. Never intersect E. None of these
1463	By placing a dielectric in between the charges, the electrostatic force between them	A. Is always reduced B. Is always increased C. Is not affected D. Is increased one million times E. None of these
1464	The value of relative permittivity of different dielectrics are	A. Equal B. Different C. Greater than one D. Smaller than one E. Both B and C
1465	Electric field lines emerge from the charges in	A. One dimension B. Two dimensions C. Three dimensions D. Four dimensions E. None of these
1466	Field lines are closer to each other in the region where the filed is	A. Stronger B. Weaker C. Much weaker D. Absent E. None of these
1467	Atoms of hydrogen gas can be excited by passing electric current through it when the gas is filled into the discharge tube at a pressure which is	A. Less than atmospheric pressure B. Much less than atmospheric pressure C. Greater than atmospheric pressure D. Much greater than atmospheric pressure E. Both C and D
1468	The range of wavelengths of colurs in the visible colours is	A. 140 nm to 456 nm B. 10 nm to 56 nm C. 410 nm to 656 nm D. 910 nm to 956 nm E. None of these
1469	The results of spectra obtained by Blamer were expressed in 1896 by	A. Bohr B. Rydberg C. Planck D. Rutherford E. Coulomb
1470	In case of metallic conductors, the charge carriers are	A. Protons B. Electrons C. Antiprotons D. Positrons E. Both A and B
1471	The conventional current is the name given to current due to flow of	A. Positrons B. Positive charges C. Negative charges D. Both A and C E. None of these
1472	A current of 1 ampere is passing through a conductor. The charge passing through it in half a minute s	A. One coulomb B. 0.5 coulomb C. 30 coulombs D. 2 coulombs E. None of these
1473	Light year is a unit of:	A. Time B. Distance C. Velocity D. Intensity of light
		A. 10³kg-m⁻³ B. 10⁻³kg-m⁻³

1474	1 gm-cm^{-3}is equal to:	C. 1 kg-m⁻³ D. 10⁶kg-m⁻¹
1475	Which one of the least multiple:	A. Pico B. Femto C. Nano D. Atto
1476	Significant figures in 0.0010 are:	A. Four B. Three C. Two D. One
1477	Addition of 2.189 kg, 0.089 kg, 11.8 kg, and 5.32 kg gives the rounded off answer as:	A. 19.398 B. 19.400 C. 19.4 D. 19.3
1478	Which quantity has different dimensions:	A. Work B. Pressure C. Energy D. Torque
1479	The quantity have dimension of ML^{2}T^{02}will have SI unit of:	A. Watt B. Newton C. Joule D. Metre
1480	The time taken by light to travel from moon to earth is:	A. 80 sec B. 500 sec C. 1.802 X 10⁴sec D. Aerophysics
1481	Physics details with the study of:	A. Matter B. Energy C. Both of them D. Human body
1482	The information from far side of the universal are gathered by:	A. Radio telescope B. Microscope C. Telescope D. Spectro scpe
1483	Astrophysics is a branch of physics, which deals with:	A. Sub-atomic particles B. Stars and galaxies C. Light and sound D. Music
1484	The mechanics, which deals with the objects moving with velocities approaching that of light is called:	A. Relativistic mechanics B. Wave mechanic C. Quantum mechanics D. Statics
1485	Particles have the mass smallest of following is:	A. Electron B. Proton C. Neutron D. Quark
1486	The branch of physics which deals with the properties of fundamental particles is called:	A. High energy physics B. Molecular physics C. Astrophysics D. Space physics
1487	Aerodynamics is a branch of:	A. Hydrodynamics B. Thermodynamics C. Both of them D. Statics
1488	Electron is a particle whose mass is:	A. Greater than that of a proton B. Smaller than that of a proton C. Smaller than that of a proton or a neutron D. Greater than that of an atom
1489	The branch of physics which is mainly concerned with the motion of bodies under the action of forces is called:	A. Optics B. Mechanics C. Thermodynamics D. Astro physics
1490	From sand, we get a material used for construction of computer chips. That material is called:	A. Germanium B. Silicon C. Copper D. Lead
1491	In the equation E=mc^{2}value of c is:	A. 1,86,000 miles per hour B. 1,86,000 miles per sec C. 3 X 10⁸m/sec D. Both A and C E. Both B and C

1492	High energy physics is branch of physics, which deals with:	A. Stars and galaxies B. Sub-atomic particles C. Light and sound D. Molecules
1493	Density is defined as:	A. Mass per volume B. Volume per mass C. Mass x volume D. Mass per length
1494	The branch of physics, which deals with the structure an properties of solids is called:	A. Plasma physics B. Solid state physics C. Any of above D. Astro physics
1495	Relativistic mechanics is a branch of physics, which deal with the bodies moving with velocities:	A. More then c B. Approaching c C. Equal to c D. Much less than x
1496	Work done along a closed path in a gravitational field is:	A. Maximum B. Minimum C. Zero D. Unity
1497	Tick the conservation force:	A. Tension in a string B. Air resistance string C. Elastic spring force D. Frictional force
1498	A body of weight 1 N has a kinetic energy of 1 joule when its speed is:	A. 1.46 m sec⁻¹ B. 2.44 m sec⁻¹ C. 3.42 m sec⁻¹ D. 4.43 m sec⁻¹
1499	When two protons are brought closer potential energy of both of them:	A. Increases B. Decreases C. Remains same D. None of these
1500	The velocity given to a body to go out of the influence of earth's gravity is known as:	A. Terminal velocity B. Orbital velocity C. Escape velocity D. None of these
1501	One KWh is equal to:	A. 3.6 x 10²J B. 3.6 KJ C. 3.6 x 10¹KJ D. 3.6 MJ
1502	The consumption of energy by a 1000 watt heter in half an hour is:	A. 5 Kwh B. 0.5 Kwh C. 2.5 Kwh D. 3.2 Kwh
1503	Biomass includes:	A. Crop residue B. Natural vegetation C. Animal dung D. All of these
1504	Root out of the conventional source of energy:	A. Energy from biomass B. Hydroelectric energy C. Geothermal energy D. None of these
1505	Ethanol (alcohol) as a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
1506	The shortest distance between two points directed from its initial point to final point is called:	A. Velocity B. Displacement C. Speed D. Distance
1507	A body moving with an acceleration of 5 m/sec^{2}started with velocity of 10 m/sec. What will be the distance traversed in 10 seconds?	A. 150 m B. 250 m C. 350 m D. 400 m
1508	A ball is dropped from a height of 4.2 meters. To what height will take it rise if there is no loss of KE after rebounding?	A. 4.2 m B. 8.4 m C. 12.6 m D. none of these
		A. MLT² B. ML<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-

1509	The dimension of linear inertia is:	image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°<span style="font-size: 10.5pt; line-height: 107%; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">T⁻² C. ML<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°T<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. MLT⁻¹
1510	Which one of the following is dimensionless.	A. Acceleration B. Velocity C. Density D. Angle
1511	When brakes are applied to a fast moving car, the passengers will be thrown:	A. Forward B. Backward C. Downward D. None of these
1512	A body of mass 5 kg is acted upon by a total change n momentum will be:	A. 10 NS B. 100 NS C. 140 NS D. 200 NS
1513	A body is moving with constant velocity of 10 m/sec in the north east direction. Then its acceleration will be:	A. 10 m/sec2 B. 20 m/sec2 C. 30 m/sec2 D. Zero
1514	The magnitude of the force producing an acceleration of 10 m/sec2 in a body of mass 500 grams is:	A. 3 N B. 4 N C. 5 N D. 6 N
1515	If the velocity time graph is a straight line parallel to time-axis, then it means that:	A. The body is moving with uniform velocity B. The body is moving with uniform acceleration C. The body is at rest D. None of above
1516	In the above figures, tell which set is graphs shows that a body is moving uniform velocity:	A. (i) and (ii) B. (ii) and (iii) C. (i) and (iii) D. (ii) and (iv)
1517	Slope of velocity-time graph represents:	A. Acceleration B. Speed C. Torque D. Work
1518	A certain force gives an acceleration of 2 m/sec2 to a body if mass 5 kg. The same force would give a 29 kg object an acceleration of:	A. 0.5 m/sec2 B. 5 m/sec2 C. 1.5 m/sec2 D. 9.8 m/sec2
1519	A dirty carpet is to be cleaned by heating. This is an accordance with____ law of motion:	A. First B. Second C. Third D. None of these
1520	Swimming becomes possible because of_____law of motion:	A. First B. Second C. Third D. None of these
1521	Bodies which falls freely under gravity provides good example of motion under:	A. Uniform acceleration B. Non-uniform acceleration C. Uniform velocity D. None of these
1522	An object is dropped from a height of 100 m. Its velocity at the moment it touches the ground is:	A. 100 m/sec B. 140 m/sec C. 1960 m/sec D. 196 m/sec
		A. Scalar quantity

1523	Force is a:	A. Scalar quantity B. Base quantity C. Derived quantity D. None of these
1524	One newton is a force that produces an acceleration of 0.5 m/sec^{2}in a body of mass:	A. 2 kg B. 3 kg C. 4 kg D. 8 kg
1525	The time rate of change of displacement is called:	A. Time B. Acceleration C. Speed D. Velocity
1526	Work is a:	A. Scalar quantity B. Vector quantity C. Base quantity D. None of these
1527	Work is always done on a body when:	A. A force acts on it B. It moves through certain distance C. None of A or B is correct D. Both A and B is correct
1528	The work performed on an object does not depend on:	A. Force applied B. Angle at which force is inclined to the displacement C. Initial velocity of the object D. Displacement
1529	If force and displacement are in opposite direction, the work done is taken as:	A. Positive work B. Negative work C. Zero work D. Infinite work
1530	Work has the dimension as that of:	A. Torque B. Angular momentum C. Linear momentum D. Power
1531	Work done is maximum when angle between force and displacement is:	A. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 180<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. None of these
1532	The space around the earth within it exerts a force of attraction on other bodies of known as:	A. Nuclear field B. Conservative field C. Electric field D. Gravitational field
1533	A body moves a distance of 10 m along a straight line under the action of a force of 5 N and work done is 25J. The angle which the force makes the direction of motion will be:	A. 60<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 30<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°

1534	The field in which work done in moving a body between two points depends upon the path followed is called:	A. Conservative field B. Non-conservative field C. Electric field D. None of these
1535	The work done moving a body between two points in a conservation field is independent of the:	A. Direction B. Force applied C. Path followed by the body ` D. Power
1536	Tick the conservation force:	A. Tension in a string B. Air resistance force C. Elastic spring D. Frictional force
1537	The angle between centripetal force and displacement of the body moving in a circle is:	A. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 180<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. None of these
1538	Work done is lowering the bucket into the well is:	A. Zero B. Positive C. Negative D. None of these
1539	A two Kg block is held 1 m above the floor for 50 seconds, the work done is:	A. Zero B. 10.2 J C. 100 J D. 980 J
1540	In the force applied is parallel to the direction of motion, then work done is:	A. Maximum B. Minimum C. Zero D. None of these
1541	When the body is moves against the force of friction on a horizontal plane, the work done by the body is:	A. Positive B. Negative C. Zero D. None of these
1542	The total work done in moving the body up and then down through the same height in a gravitational field is equal to:	A. mgh B. Its wight C. Weight X height D. Zero
1543	A 100 Kg car is moving at the speed of 10 m/sec and comes to rest after covering a distance of 50 m. The amount of work done against the friction is:	A. +5 X 10¹J B. +5 X 10²J C. +5 X 10³J D. +5 X 10⁴J
1544	A body moves a distance of 10 m among a straight line under the action of a force of 5 N. If the work done is 25 J, the angle which the force makes with the direction of motion of a body is:	A. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 30<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 60<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°

1545	A labourer carrying a distance a load on his head moves from rest on a horizontal road to another point where he comes to rest. He has done:`	A. Minimum work B. Maximum work C. Zero work D. Negative work
1546	Which force is not a conservative force:	A. Frictional force B. Gravitational force C. Electric force D. Elastic spring force
1547	The work done by a force keeping an object in circular motion with constant speed is:	A. Zero J. B. 0.1 J C. 1 J D. 0.01 J
1548	When a wall is pushed by a person very strongly, he has done:	A. Maximum work B. Zero work C. Positive work D. Negative work
1549	If we draw a graph between d (along x-axis) and F (along y-axis) and get a straight line horizontal to x-axis, then area under this straight line represents:	A. Power B. Work C. Pressure D. None of these
1550	A boy pulls a toy car through a distance of 5 m by applying a force of 0.5 N, which makes and angle of 60° with the horizontal. The work done by the boy is:	A. 1.25 J B. 12.5 J C. 125 J D. None of these
1551	The work done on the body will be zero if:	A. No force is applied on the body B. Force is applied but no displacement C. Angle between F(force) and d(displacement) is 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. All of these are correct
1552	Conventional the angular Velocity is Directed at an angle of:	A. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° to the axis of rotation B. 30<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° to the axis of rotation C. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° to the axis of rotation D. None of above
1553	If a gymnast is sitting on a rotating stool with his arms outstretched, brings his arms towards the chest, then its angular velocity will:	A. Increase B. Decrease C. Remains constant D. None of these
1554	The net force acting on a 100 kg man standing in an elevator accelerating downward with a = 0.8 m sec^{-2}comes out to:	A. 980 N B. 580 N C. 1380 N D. Zero
1555	The number of "Earth stations" which transmit signals to satellites and receive signals from them are:	A. 3 B. 24 C. 126 D. 200
1556	INTELSAT operates at frequencies 4, 6, 11, 14 having unit of:	A. KHz B. MHz C. GHz D. BHz
1557	Einstein's theory about gravity if better than Newton's because it gave explanation of:	A. Inverse square law B. Bending of light C. Both A and B D. None of above

1558	A point on the rim of a wheel moves 0.2 m when the wheel turns through an angle of 14.3 degrees. The radius of the wheel is:	A. 0.05 m B. 0.08 m C. 0.8 m D. 0.008 m
1559	Conventionally the angular velocity is directed to an angle of:	A. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° to the axis of rotation B. 30<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° to the axis of rotation C. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° to the axis of rotation D. None of the above
1560	Direction of motion_____ in circular of motion:	A. Changes off and on B. Changes continuously C. Does not change D. None of them
1561	Centripetal acceleration is also called _____ acceleration:	A. Tangential B. Radial C. Angular D. None of them
1562	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of them
1563	When a body is moves along a circular path with constant speed, it has an acceleration, which is always directed:	A. Along the tangent B. Toward the centre C. Away from the centre D. None of them
1564	One radian is equal to:	A. 30.3<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 45.3<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 50.3<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 57.3<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
1565	A stone is tied to the end of a 20 cm along string is whirled in a horizontal circle. if centripetal acceleration is 9.8 m/sec^2, then its angular velocity in rad/sec is:	A. 22/7 B. 7 C. 14 D. 21
1566	A car is moves around a circular track of radius 0.3 m at the rate of 120 rev/min. The speed v of the car is:	A. 38 m/sec B. 3.8 m/sec C. 0.6 m/sec D. None of these
1567	The rear wheels of an automobile are rev/sec which is reduced to 38 rad/sec in 5 seconds when brakes are applied. Its angular acceleration is:	A. 5 rad/sec² B. -10 rav/sec² C. -10 rad/sec² D. -5 rav/sec²
1568	A rotating wheel accelerates up to the value of 0.75 rev/sec^{2}after 2 seconds of its start. Its angular velocity becomes:	A. 9.42 rad/sec B. 2.6 rev/sec C. 1.5 rev/sec

	of its start. Its angular velocity becomes:	D. Both A and C
1569	A 1000 Kg car travelling with a speed of 90 km/hr turns around a curve of radius 0.1 km. The necessary centripetal force comes out to be:	A. 8.1 X 10⁷N B. 625 N C. 6250 N D. None of these
1570	A car is turning around a corner at 10 m/sec as it travels along an arc of circle. If value of centripetal acceleration is 10 m/sec^2 in this case, find radius of the circular path:	A. 1 m B. 5 m C. 10 m D. 15 m
1571	A flywheel accelerates from rest to an angular velocity of 7 rad/sec in 7 seconds. Its average acceleration will be:	A. 49 rad/sec² B. 1 rad/sec² C. 0.16 rev/sec² D. Both A and C E. Both B and C
1572	A body moving along the circumference of a circle of radius R completes one revolution. The radius of the covered path to the angle subtended at the center is:	A. Radius of the circle B. Twice the radius C. Thrice the radius D. None of these
1573	Radian is defined as the angle subtended at the center of a circle by an arc of:	A. Length equal to its diameter B. Length equal to its radius C. Any length D. None of these
1574	The useful unit of angular replacement in SI unit is:	A. Degree B. Revolution C. Radian D. Metre
1575	In rotational motion, analogue of force F us called:	A. Couple B. Torque C. Mass D. Moment of intertia
1576	Angular velocity is a:	A. Scalar quantity B. Vector quantity C. Complex quantity D. None of these
1577	When quarter of a circle is completed, the phase of vibration is:	A. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 180<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 45<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 360<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
1578	Distance covered during one vibration of an oscillating body in terms of amplitude A is:	A. A B. 2 A C. 3 A D. 4 A
1579	A body of mass 0.031 kg attached to one end of a spring of spring constant 0.3 N/m, then time period of spring mass system will be:	A. 1.5 sec B. 2.0 sec C. 2.3 sec D. 2.5 sec
1580	The time period of a simple pendulum is independent of its:	A. Length B. Mass C. Value of g D. Both A and B
1581	The string of a simple pendulum should be:	A. Heavy B. Extensible C. In-extensible D. None of these

1582	Second's pendulum is the pendulum whose time period is:	A. 1 second B. 2 second C. 3 second D. None of these
1583	An object undergoes SHM. Its maximum equilibrium positions:	A. Maximum B. Half of its maximum value C. Zero D. None
1584	Free oscillations are always produced by:	A. An applied force B. Gravitational force C. Restoring force and inertia D. Inertia only
1585	If the waves produced in a microwave oven are of wave-length 12 cm, then their frequency will be:	A. 2500 MHz B. 0.25 MHz C. 2500 KHz D. None of these
1586	To and fro motion of a body is about its mean position is known as:	A. Translatory motion B. Vibratory motion C. Rotatory motion D. None of these
1587	The unit of spring constant is:	A. J-sec B. Metre C. Nm⁻¹ D. None of these
1588	Which one of the following is an example of SHM:	A. Motion in a plane B. Motion in a swing C. Motion in a car D. None of these
1589	The SI unit of spring constant is identical with that of:	A. Force B. Surface tension C. Pressure D. Loudness
1590	The restoring force is _____ amd opposite to the applied force within _____:	A. Equal, elastic limit B. Different, the walls of the laboratory C. Different, elastic limit D. None of these
1591	When a body is vibrating, the displacement from mean position:	A. Increases with time B. Decreases with time C. Changes with time D. None of these
1592	The graph showing the variation of displacement with time is a:	A. Sine curve B. Straight line C. Parabola D. None of these
1593	Amplitude in SHM is equivalent to_____ in circular motion:	A. Diameter B. Radius C. Circumference D. None of these
1594	The body oscillates due to _____ accelerates and overshoots the rest position due to _____:	A. Applied force , inertia B. Restoring force, friction C. Frictional force, inertia D. Restoring force, inertia
1595	When quarter of a cycle is completed, the phase of vibration is:	A. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 180<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 45<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 360<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin:

		initial; background-clip: initial;">˅
1596	The time taken to complete one vibration is called:	A. Frequency B. Amplitude C. Time D. Time period
1597	A particle is moving along a circular path with uniform speed. Its projection will execute____along the____of the circle:	A. Circular motion, circumference B. Vibrator, chord C. SHM, diameter D. SHM, circumference
1598	If a mass of 10 gm is suspended from a spring of k = 9.8 Nm^{-1}, then the extension will be:	A. 1 cm B. 1 m C. 10 mm D. None of these
1599	If a force of 0.05 N produces an elongation of 20 mm in string, then its spring constant will be:	A. 250 N m⁻¹ B. 25 N m⁻¹ C. 2.5 N m⁻¹ D. None of these
1600	The number of vibrations in two seconds can be expressed as_____if frequency of vibration is f.	A. f B. 2 f C. 3 f D. 1/2 f
1601	In SHM, there is always a constant ratio between displacement if body and its:	A. Velocity B. Period C. Mass D. Acceleration
1602	If a given spring of spring constant k is cut into two indentical segments, the spring constant of each segment is:	A. k/2 B. 2 k C. 4 k D. None of these
1603	A body with frequency would complete one vibration in:	A. f seconds B. 1/f seconds C. 1 second D. f²second
1604	A spring of constant k = 0.4 N $m^{-1}$is to be extended through 10 cm at a place where g = 10 m sec^{-2}. The mass to be suspended should be:	A. 4 gms B. 0.4 gm C. 40 gms D. None of these
1605	For inducting emf in a coil the basic requirement is that:	A. Flux should link the coil B. Change in flux should link the coil C. Coil should form a closed loop D. Both B and C are true
1606	The device in which induced emf is statically induced emf is:	A. Transformer B. AC generator C. Alternator D. Dynamo
1607	What is the coefficient of mutual inductance, when the magnetic flux changes by 2 X 10^{-2}Wb, and change in current is 0.01 A?	A. 2 H B. 3 H C. 1/2 H D. Zero
1608	The induced emf in a coil is proportional to:	A. Magnetic flux through a coil B. Rate of change of magnetic flux through the coil C. Area of the coil D. Product of magnetic flux and area of the coil
1609	In a coil current change from 2 to 4 A in .05 s. If the average induced emf is 8V then coefficient of self-inductance is:	A. 0.2 henry B. 0.1 henry C. 0.8 henry D. 0.04 henry
1610	Which of the following quantities remain constant in step up transformer?	A. Current B. Voltage C. Power D. Heat
1611	Step up transformer has a transformation ratio of 3:2. What is the voltage in secondary, if voltage in primary is 30V:	A. 45 V B. 15 V C. 90 V D. 300 V
1612	Eddy current is produced when:	A. A metal is kept in varying magnetic field B. A metal is kept in steady magnetic field C. A circular coil is placed in a steady magnetic field D. A current is passed through a circular coil
1613	The current produced by moving a loop of wire across a magnetic field is	A. Direct current B. Magnetic current C. Alternating current

1613	called:	C. Alternating current D. Induced current E. None of these
1614	An emf is set up in a conductor when it:	A. Is kept in a magnetic field B. Is kept in an electric field C. Moves across a magnetic field D. Both A and B E. None of these
1615	An induced current can be produced by:	A. Constant magnetic field B. Changing magnetic field C. Varying magnetic field D. Constant electric field E. None of these
1616	An induced current can be produced by:	A. <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">Constant magnetic field B. <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">Changing magnetic field C. <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">Varying magnetic field D. <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">Constant electric field E. <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">None of these
1617	The phenomenon of generation of induced emf is called:	A. Electrostatic induced B. Magnetic induced C. Electromagnetic induced D. Electric induced E. Both A and C
1618	The induced current in a conductor depends upon:	A. Resistance of the loop B. Speed with which the conductor moves C. Any of these D. Both A and B E. None of these
1619	The induced current in the loop can be increased by:	A. Using a strong magnetic field B. Moving the loop faster C. Replacing the loop by a coil of many turns D. All of above E. None of these
1620	In magnet-coil experiment, emf can be produced by:	A. Keeping the coil stationary and moving the magnet B. Keeping the magnet stationary and moving the coil C. Relative motion of the loop and magnet D. Any one of above E. All above
1621	Micheal Faraday and joseph Henry belong respectively to:	A. USA and England B. England and France C. England and USA D. USA and France E. None of these
1622	The magnitude of induced emf depends upon the:	A. Rate of decrease of magnetic field B. Rate of change of magnetic field C. Rate of increase of magnetic flux D. Constancy of magnetic field E. None of these
1623	When there is no relative motion between the magnet and coil, the galvanometer indicates:	A. No current in circuit B. An increasing current C. A decreasing current D. Either B or C
		A. Of same magnitude in the same direction B. Of different magnitude in the same direction

1624	Instead of moving the coil towards a magnet, the magnet is moved towards the coil with the same speed. The galvanometer shows current:	B. Of different magnitude in the same direction C. Of same magnitude but in opposite direction D. Of different magnitude in the opposite direction E. None of these
1625	A coil of constant area is placed in a constant magnetic field. An induced current is produced in the coil when:	A. The coil is distorted B. The coil is rotated C. The coil is neither distorted nor rotated D. Both A and B E. None of these
1626	Referring to above figure, current in the coil P grows from zero to its maximum value:	A. At the instant the switch is closed B. At the instant the switch is opened C. When switch is kept open D. All of above E. Neither of above
1627	Referring to above figure, current in coil P falls from its maximum value to zero:	A. At the instant the switch is closed B. At the instant the switch is opened C. When switch is kept open D. When switch is kept closed E. None of these
1628	Referring to above figure, due to change in current in the coil P, the change in magnetic flux:	A. Is associated with coil P B. Is associated with coil S C. Causes an induced current is coil S D. All of these E. None of these
1629	Referring to above figure, a changing current in coil P can be produced:	A. At the instant the switch is closed B. At the instant the switch is opened C. With the help of rheostat D. All of these E. None of these
1630	The unit of induced emf is:	A. Volt B. Nm/As C. Joule coul⁻¹ D. Both A and C E. All of these
1631	The product of induced current and the resistance of the wire through which the current is passing is called:	A. Electromagnetic induction B. induced emf C. Induced current D. Self induced E. None of these
1632	When a conductor moved with its length parallel to the lines of magnetic fled:	A. An emf is induced across its ends B. Emf induced is similar to that of a battery C. Emf passes through the conductor D. Both A and B E. None of these
1633	When a conductor is moved across a magnetic field, the redistribution of charge sets up:	A. Magnetic field B. Electrostatic field C. Electromagnetic field D. All of these E. None of these
1634	In the equilibrium state, the potential difference between two ends of the conductor moving across a magnetic field is called:	A. Motion emf B. Both A and B C. Both A and C D. Electrostatic emf E. Induced emf
1635	In the equilibrium state, the potential difference between two ends of the conductor moving across a magnetic field is called:	A. Induced emf B. Both A and B C. Both A and C D. Motion emf E. Electrostatic emf
1636	When a conductoris moved across a magnetic field:	A. Emf induced its similar to that of a battery B. Emf induced gives rise to induced current C. An emf is induced across its ends D. All are correct E. None of these
1637	Light year is a unit of:	A. Time B. Distance C. Velocity D. Intensity of light
1638	1 gm-cm^{-3}is equal to:	A. 10³kg-m⁻³ B. 10⁻³kg-m⁻³ C. 1 kg-m⁻³ D. 10⁶kg-m⁻¹
1639	Which one is the least multiple:	A. Pico B. Femto C. Nano

		C. Nano D. Atto
1640	Significant figures in 0.0010 are:	A. Four B. Three C. Two D. One
1641	Addition of 2.189 kg, 11.8 kg and 5.32 kg gives the rounded off answer as:	A. 19.398 B. 19.400 C. 19.4 D. 19.3
1642	Which quantity has different dimension:	A. Work B. Pressure C. Energy D. Torque
1643	The quantity having dimension of ML^2T^{02}will earth is:	A. 80 sec B. 500 sec C. 1.802 X 10⁴sec D. Aerophysics
1644	The study of physics involves?	A. Structure of space and time B. Interaction of electromagnetic radiation with matter C. Both of them D. Chemical changes E. None of them
1645	The information from far side of the universe are gathered by:	A. Radio telescope B. Microscope C. Telescope D. Spectro scope
1646	Astrophysics is a branch of physics, which deals with:	A. Sub-atomic particles B. Stars and galaxies C. Light and sound D. Music
1647	The machines which deals with the objects moving with velocities approaching that of light is called:	A. Relativistic mechanics B. Wave mechanics C. Quantum D. Statics mechanics
1648	Particles have the mass smallest of following is:	A. Electron B. Proton C. Neutron D. Quark
1649	Silicon can be obtained from:	A. Lead B. Uranium C. An isotope of oxygen D. Sand
1650	Branch of physics which deals with the study of stars and galaxies is called:	A. Solid state physics B. Astrophysics C. Molecular physics D. Chemical physics
1651	Physics is one of the branches of:	A. Social sciences B. Physical sciences C. Biological sciences D. Abstract art
1652	Electron is a particle whose mass is:	A. Greater than that of a proton B. Smaller than of a proton and greater than mass of neutron C. Smaller than that of proton or neutron D. Greater than that of an atom
1653	From sand, we get a material used for construction with the motion of bodies under the action of forces is called:	A. Optics B. Mechanics C. Thermodynamics D. Astrophysics
1654	From sand, we get a material used for construction of computer chips. That material is called:	A. Copper B. Lead C. Silicon D. Germanium
1655	In the equation $E=mc^2$ value of c is?	A. 186000 miles per hour B. 186000 miles per sec C. 3 X 10⁸m/sec D. Both A and C E. Both B and C
1656	Examples of physical quantities are:	A. Length B. Color C. Effect of music

		D. All of these
1657	Density is defined as:	A. Mass per volume B. Volume per mass C. Mass X volume D. Mass per length
1658	The branch of physics which deals with the structure and properties of solids is called:	A. Plasma physics B. Solid state physics C. Any of above D. Astrophysics
1659	Choose the set of physical quantities, which have both numerical and directional properties:	A. Velocity, mass B. Speed, acceleration C. acceleration weight D. Distance, force
1660	The direction of a vector in space requires:	A. X-axis B. X and Y-axes C. XYZ axes D. Y and Z-axes
1661	The direction of vector in space is specified by:	A. One angle B. Two angles C. Three angles D. None of these
1662	Parallel vectors of same magnitudes:	A. Are equal B. Are unequal C. When added give the some equal to zero D. Give the answer equal to zero
1663	If a vector lies in second quadrant, than $B_x$and $B_y$are:	A. -,+ B. +,- C. +,+ D. -,-
1664	When the magnitude of two component vectors are equal to that of their resultant, then the angle between the components is:	A. 60<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 120<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 150<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
1665	The rectangular components of a vector are equal in magnitude when the vector makes and angle _____with their x-component:	A. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 30<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 45<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 60<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
1666	If the vector 5 N lies along with x-axis, then its component along y-axis will be:	A. Zero B. 5 N C. 7 N

	be.	D. 10 N
1667	A vector of magnitude 5 N is added to a vector of magnitude 8 N while the orientations are changeable. Range of their possible sum will be very from:	A. Zero to 3 N B. 1 N to 13 N C. 13 N to 3 N D. None of these
1668	A vector of magnitude 5 N is added to a vector of magnitude 8 N while the orientations are changeable. Range of their possible sum will be very from:	A. Zero to 3 N B. 1 N to 13 N C. 13 N to 3 N D. None of these
1669	Two vectors to be combined have magnitudes of 60 N and 35 N. Pick the possible answer:	A. 100 N B. 70 N C. 20 N D. Zero
1670	A person starts his journey from a point 0, travels 4 Km SW, then 4 Km NW, and finally 4 Km north-east. At what distance is he now from point 0?	A. 0 Km B. 4 Km C. 8 Km D. 12 Km
1671	A vector which has magnitude 'one' is called:	A. Resultant vector B. A unit vector C. Position vector D. None of these
1672	An vector of 10 N makes an angle of 45° with x-axis. Angle between its rectangular components with be:	A. 45<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 135<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. Zero
1673	When a vector is multiplied by a negative number, its direction:	A. Remains the same B. Changes C. Changes by 180<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. None of these
1674	Two forces each of 10 N act on a body, if the force are inclined at 30° and 60° respectively with x-axis, then x-component of their resultant is:	A. 20 N B. 13.66 N C. 10 N D. 8.66 N
1675	Two forces of 10 N and 8 N are applied simultaneously to a body. the maximum value of their resultant is:	A. 2 N B. - 2 N C. 18 N D. 36 N
1676	Two forces each of the magnitude F act perpendicular to each other. The angle made by the resultant force with the horizontal will be:	A. 30<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 45<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 60<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment:

		initial; background-origin: initial; background-clip: initial;">°
1677	All trigonometric functions (sine, cosine, tangent etc) are positive in:	A. 1st quadrant B. 2nd quadrant C. 3rd quadrant D. 4th quadrant
1678	Which of the following is scalar quantity?	A. Electric potential B. Velocity C. Momentum D. Force
1679	The vector in space has:	A. One component B. Two components C. Three components D. None of these
1680	The magnitude of the resultant of two forces may be increased by:	A. Increasing the angle between them B. Decreasing the angle between them C. Drawing a triangle to represent them D. None of these
1681	Cosine of an angle is positive in:	A. 2nd quadrant B. 3rd quadrant C. 4th quadrant D. All of these
1682	A force of 5 n is acting Y-axis. Its component along X-axis is:	A. 7 N B. 5 N C. Zero D. 10 N
1683	The resultant of two velocities 3 m/sec and 400 cm/sec making an angle 90° with each other is:	A. 20 m/sec B. 5 m/sec C. 3 m.sec D. None of these
1684	The magnitude of resultant of three vectors is 3. Its x-component is one, y-component is two, then its z-component is:	A. 0 B. 1 C. 2 D. 3
1685	If two forces of magnitudes 3.5 and 2.5 N act on a body such that the angle between the forces is zero, then magnitude of the resultant will be:	A. 1.0 N B. 6 N C. 3.5 N D. 12 N
1686	If x-component of a vector is -3 N and y-component is 3 N, then angle of resultant vector will x-axis is:	A. 45<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 315<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 135<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 225<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
1687	Work done along a closed path in a gravitational force is:	A. maximum B. Minimum C. Zero D. Unity
1688	Tick the conservative force:	A. tension in a string B. Air resistance C. Elastic spring force D. Frictional force
1689	A body of weight 1 N has a kinetic energy of 1 joule when its speed is:	A. 1.46 m sec⁻¹ B. 2.44 m sec⁻¹ C. 3.42 m sec⁻¹ D. 4.43 m sec⁻¹

1690	When two protons are brought closer potential energy of both of them:	A. Increases B. Decreases C. Remains same D. None of these
1691	The velocity given to a body to go out of the influence of earth's gravity is known as:	A. Terminal velocity B. Orbital velocity C. Escape velocity D. None of these
1692	One KWh is equal to:	A. 3.6 x 10²J B. 3.6 KJ C. 3,6 x 10¹KJ D. 3,6 MJ
1693	The consumption source if energy is:	A. Energy from blomass B. Hydroelectric energy C. Geothermal energy D. None of these
1694	Blomass includes:	A. Crop residue B. Natural vegetation C. Animal dung D. All of these
1695	Root out the conventional source of energy:	A. Energy from blomass B. hydroelectric energy C. Geothermal energy D. None of these
1696	Ethanol (alcohol) is a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
1697	The short distance between two points direction from its initial point to final point is called:	A. Velocity B. Displacement C. Speed D. Distance
1698	A body moving with an acceleration of 5 m/sec^{2}started with velocity of 10 m/sec. What will be the distance traversed in 10 seconds?	A. 150 m B. 250 m C. 350 m D. 400 m
1699	A ball is dropped from a height of 4.2 meters. To what height it will rise if there is no loss of KE after rebounding?	A. 4.2 m B. 8.4 C. 12.6 D. None of these
1700	The dimension of linear inertia is:	A. MLT² B. ML⁰T⁻² C. ML⁰T⁰ D. MLT⁻¹
1701	Which one of the following is dimensionless:	A. Acceleration B. Velocity C. Density D. Angle
1702	When brakes are applied to a fast moving car, the passenger will be thrown:	A. Forward B. Backward C. Downward D. none of these
1703	A body of mass 5 kg is acted upon by a constant force of 20 n for 7 seconds. The total change in momentum will be:	A. 10 NS B. 100 NS C. 140 NS D. 200 NS
1704	A body is moving with constant velocity of 10 m/sec in the north-east direction. Then its acceleration will be:	A. 10 m/sec² B. 20 m/sec² C. 30 m/sec² D. Zero
1705	The magnitude of the force producing an acceleration of 10 m/sec^{2}in a body of mass 500 grams is:	A. 3 N B. 4 N C. 5 N D. 6 N
1706	The magnitude of the force producing an acceleration of 10 m/sec^{2}in a body of mass 500 grams is:	A. 3 N B. 4 N C. 5 N D. 6 N
1707	If the velocity time graph is a straight line parallel to the time-axis, then it means:	A. The body is moving with uniform velocity B. The body is moving with uniform acceleration C. The body is at rest D. None of these

		D. None of these
1708	In above figures, tell which set of graphs shows that a body is moving with uniform velocity:	A. (i) and (ii) B. (ii) and (iii) C. (iii) and (iv)
1709	Slope of velocity time graph represents:	A. Acceleration B. Speed C. Torque D. Work
1710	A certain force gives an acceleration of 2 m/sec^{2}to a body mass 5 kg. The same force would give a 20 kg object an acceleration of:	A. 0.5 m/sec² B. 5 m/sec² C. 1.5 m/sec² D. 9.8 m/sec²
1711	A dirty carpet is to be cleaned by heating. This is in according with_____law of motion.	A. First B. Second C. Third D. None of these
1712	Swimming becomes possible because of_____law of motion.	A. First B. Second C. Third D. None of these
1713	Body which falls freely under gravity provides good example of motion under:	A. Uniform acceleration B. Non-uniform acceleration C. Uniform velocity D. None of these
1714	An object is dropped from a height of 100 m. Its velocity at the moment it touches the ground is:	A. 100 m/sec B. 140 m/sec C. 1960 m/sec D. 196 m/sec
1715	Force is a:	A. Scalar quantity B. Base quantity C. Derived quantity D. None of these
1716	One newton is a force that produces an acceleration of 0.5 m/sec^{2}in a body of mass:	A. 2 Kg B. 3 Kg C. 4 Kg D. 8 Kg
1717	Work is a:	A. Scalar quantity B. Vector quantity C. Base quantity D. None of these
1718	Work is always done on a body when:	A. A force acts on it B. It moves through certain distance C. None of A and B is correct D. Both A and B is correct
1719	The work performed on an object does not depend on:	A. Force applied B. Angle at which force is inclined to the displacement C. Initial velocity of the object D. Displacement
1720	If force and displacement are in opposite direction, the work done is taken as:	A. Positive work B. Negative work C. Zero work D. Infinte work
1721	Work has a dimension as that of:	A. Torque B. Angular momentum C. Linear momentum D. Power
1722	Work done is maximum when angle between force and displacement is:	A. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 180<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. None of these

1723	The space around the earth within which it expects a force of attraction on other bodies is known as:	A. Nuclear field B. Conservative field C. Electric field D. Gravitational field
1724	A body moves a distance of 10 m along a straight line under the action of a force of 5 N and work done is 25J. the angle which the force makes with the direction of motion will be:	A. 60<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 30<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
1725	Work done along a closed path in a gravitational field is:	A. Maximum B. Minimum C. Zero D. Unity
1726	The field in which work done is moving body between two points depends upon the path followed is called:	A. Conservative filed B. Non-conservative field C. Electric field D. None of these
1727	Which of the following type of force can do no work on the particle on which it acts:	A. Frictional force B. Gravitational force C. Electric force D. Centripetal force
1728	The work done in moving a body between two points in a conservation field is independent of the:	A. Direction B. Force applied C. Path followed by the body D. Power
1729	When a force of 0.5 N displaces a body through a distance of 2m in the direction of force, the work done is:	A. 2 J B. 0.25 J C. 1 J D. 0.5 J
1730	A field in which the work done is moving a body along closed path is zero is called:	A. Nuclear filed B. Conservative field C. Gravitational field D. Non-conservative field
1731	Work done in lower and bucket into the well is:	A. Zero B. Positive C. Negative D. None of these
1732	A 2 kg block is held 1 m above floor for 50 seconds. The work done is:	A. Zero B. 10.2 J C. 100 J D. 980 J
1733	In the force applied to parallel to the direction of motion, then the work done is:	A. Positive B. Negative C. Zero D. None of these
1734	When a body moves against the force of friction on a horizontal plane, the work done by the body is:	A. Positive B. Negative C. Zero D. None of these
1735	A 100 kg car is moving at a speed of 10 m/sec and comes to rest after covering a distance of 50 m. the amount of work done against friction is:	A. +5 x 10¹J B. +5 x 10²J C. +5 x 10³J D. +5 x 10⁴J
		A. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial;

		background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 30<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 60<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
1736	A body moves a distance of 10 m along a straight line under the action of a force of 5 N. If the work done is 25 J, the angle which force makes with the direction of motion of a body is:	
1737	A laborer carrying a load on his head moves from the rest on a horizontal road to another point where he comes to rest. He has done:	A. Minimum Work B. Maximum Work C. Zero Work D. Negative Work
1738	Which force is not a conservative force?	A. Frictional force B. Gravitational force C. Electric force D. Elastic spring force
1739	The work done by a force, keeping an object in circular motion with constant speed is:	A. Zero J B. 1 J C. 0.1 J D. 0.01 J
1740	If we draw a graph between d(along x-axis) and F (along y-axis) and get a straight line horizontal to x-axis then area under this straight line represents:	A. Power B. Work C. Pressure D. None of these
1741	A boy pulls a toy car through a distance of 5 m by applying a force of 0.5 N, Which makes an angle of 60° with the horizontal. The work done by the boy is:	A. 1.25 J B. 12.5 J C. 125 J D. None of these
1742	Work is product of:	A. Force and velocity B. Heat and energy C. Force and displacement D. None of these
1743	A point on the rim of a wheel moves 0.2 m where the wheel turns through an angle is 14.3 degrees. The radius of the wheel is:	A. 0.05 m B. 0.08 m C. 0.8 m D. 0.008 m
1744	Direction of motion _____ in circular motion:	A. Changes off and on B. Changes continuously C. Does not change D. None of them
1745	Centripetal acceleration is also called _____ acceleration:	A. Tangential B. Radial C. Angular D. None of them
1746	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of these
1747	When angular acceleration is positive, the body rotates:	A. Slower B. Slowest C. Faster D. None of these
1748	One radian is equal to:	A. 30.3° B. 45.3° C. 50.3° D. 57.3°
1749	When body moves along a circular path with constant speed, it has an acceleration, which is always directed;	A. Along the tangent B. Towards the centre C. Away from the centre D. None of them
		A. Positive B. Negative

1750	A rotating body tends to be slower, when its angular acceleration is:	C. Zero D. Infinity
1751	Centripetal force performs:	A. Maximum work B. Negative work C. Positive work D. None of these
1752	A stone tied to the end of a 20 cm long string is whirled in a horizontal circle. If centripetal acceleration is 9.8 m/sec^2, then its angular velocity is rad/sec is:	A. 22/7 B. 7 C. 14 D. 21
1753	A toy car moves around a circular track of radius 0.3 m at the rate of 120 rev/min. The speed V of the car is:	A. 38 m/sec B. 3.8 m/sec C. 0.6 m/sec D. None of these
1754	The rear wheels of an automobile are rotating with an angular velocity of 14 rev/sec which is reduced to 38 rad/sec in 5 second when brakes are applied. Its angular acceleration is:	A. 5 rad/sec² B. -10 rev/sec² C. -10 rad/sec² D. -5 rev/sec²
1755	A car is turning around a corner at 10 m/sec as it travels along an arc of a circle. If value of centripetal acceleration is 10 m/sec^2 in this case, find radius of the circular path:	A. 1 m B. 5 m C. 10 m D. 15 m
1756	A flywheel accelerates from rest to an angular velocity of 7 rad/sec in 7 seconds. Its average acceleration will be:	A. 49 rad/sec² B. 1 rad/sec² C. 0.16 rev/sec² D. Both A and C E. Both B and C
1757	A body moving along the circumference of a circle of radius R completes one revolution. The radius of a covered path to the angle subtended at the centre is:	A. Radius of the circle B. Twice the radius C. Thrice the radius D. None of these
1758	The useful unit of the angular displacement in SI unit is:	A. Degree B. Revolution C. Radian D. Metre
1759	Circular motion is an example of motion in:	A. One dimension B. Two dimensions C. Three dimensions D. None of these
1760	Angular velocity is a:	A. Scalar quantity B. Vector quantity C. Complex quantity D. None of these
1761	The angular speed of a particle moving along a circular path is 5 Pie rad sec^{-1}, Its period of motion is:	A. 2.5 sec B. 0.06 sec C. 15.7 sec D. 0.4 sec
1762	When an object moves with a uniform angular velocity, then its instantaneous angular velocity is equal to:	A. Zero B. Its average velocity C. Its angular displacement D. None of these
1763	When a body moves with a constant speed in a circle:	A. No work is done on it B. No acceleration is produced in the body C. Velocity remains constant D. None of these
1764	The instantaneous acceleration of a body moving with constant speed in a circle:	A. Remains constant B. Is called centripetal acceleration C. Tangential acceleration D. None of these
1765	A body can have constant velocity when it follows:	A. A circular path B. A rectilinear path C. Trajectory of a projectile D. None of these
1766	In case of planets, the necessary acceleration is provided by:	A. Gravitational force B. Coulomb force C. Frictional force D. None of these
1767	The property of fluids due to which they resist their own flow is called:	A. Drag force B. Surface tension C. Viscosity D. None of these

1768	The resistance offered by a fluid to a solid moving inside it is called:	A. Drag force B. Surface force C. Viscosity D. None of these
1769	The body passing a viscous medium affected by:	A. One force only B. Two forces only C. Four forces D. None of these
1770	Machine parts are jammed due to:	A. Increasing in viscosity of lubricant B. Decreasing in viscosity of lubricant C. Decreasing in surface tension of lubricant D. None of these
1771	N s $m^{-2}$is unit of:	A. Drag force B. Pressure C. Surface tension D. Coefficient of viscosity
1772	A body is moving through a viscous medium eventually comes to rest because of:	A. Force of gravity B. Force of friction C. Its weight D. Both A and C
1773	Glycerin has viscosity _____ the viscosity of water:	A. More than B. Equal to C. Less than D. None of these
1774	Unit of viscosity is:	A. Kg m⁻¹sec⁻¹ B. N s m⁻² C. J s m⁻³ D. All of these
1775	Density of fluid is defined as:	A. Its volume to mass ratio B. Product of volume and mass C. Its mass of volume ratio D. None of these
1776	Fluid friction is _____ the friction between two solid surfaces:	A. Greater than B. Smaller than C. Equal to D. None of these
1777	Viscosity of water is _____ that of air but ___ that of plasma.	A. More, more B. Less, more C. Less, less D. More, less
1778	Stock's law holds for:	A. Motion through free space B. Motion through viscous medium C. Bodies of all shapes D. None of these
1779	High speed meteors rushing through air reduces to ashes because of:	A. Force of gravity B. High resistance of air C. Drag force D. None of these
1780	A massive object falls through a fluid:	A. Faster B. Slower C. Slowest D. None
1781	Terminal velocity is the maximum velocity attained by a spherical droplet when the drag force_____the weight of droplet:	A. Is smaller than B. Is greater than C. Becomes equal to D. None of these
1782	The _____ viscous the medium is _____, is the value of terminal velocity of the droplet:	A. More, lesser B. Lesser, more C. Both A and B D. Lesser, lesser
1783	When the droplet moves with terminal velocity in a fluid, the net force acting on the droplet is:	A. F_D-mg B. Zero C. mg-F_D D. None of these
1784	Two copper balls of 1 cm and 2 cm in diameter are simultaneously dropped in the same viscous medium. The terminal velocity of bigger ball is:	A. Not affected due to its size B. Twice that of small size ball C. Four times that of small size ball D. 1/4th of that of small size ball
1785	At high speed, fluid friction _____ and fuel consumption ___,:	A. Increases, decreases B. Increases, increases C. Decreases, increases

		D. None of these
1786	Fog droplets are suspended in air when their weight is balanced by:	A. Force of gravity B. Upward trust due to air C. Surface tension D. None of these
1787	Drag force increases if speed of the object moving through the fluid:	A. Increases B. Decreases C. Remains constant D. None of these
1788	Stoke;s law is not applicable when the speed of the object moving through a fluid is:	A. Zero B. Small C. Large D. None of these
1789	0.10 cm can be written as:	A. 1.0 x 10⁻²m B. 1.0 x 10⁻³cm C. 1.0 x 10⁻⁴cm D. 1. x 10⁻⁴m
1790	When the upward drag force of the fluid becomes equal to downward force of gravity of the droplet, then its velocity:	A. Starts increasing B. Starts decreasing C. Becomes constant D. Is called escape velocity
1791	The unit of viscosity is SI system is:	A. Kg⁻¹m sec⁻¹ B. Kgm⁻¹ sec⁻¹ C. Kg⁻¹m⁻¹ sec D. None of these
1792	The dimensions of viscosity are:	A. M²L⁻¹T⁻² B. M⁻¹L¹T⁻¹ C. M⁻¹L⁻¹T D. ML⁻¹T⁻¹
1793	The drag force acting on a spherical droplet of radius 10^{-5}m moving with a velocity of 1 cm/sec in a fluid of velocity 5.31 x 10^{-7}m/sec. The units comes out to be:	A. 10⁻¹⁶N B. 10⁻¹⁴N C. 10⁻¹²N D. 10⁻¹⁰N
1794	The study of fluid in motion basically involves law of conservation of:	A. Mass B. Energy C. Change D. Both A and C E. Both A and B
1795	In a _____ flow, each particle of the fluid is called a streamline and different streamlines _____cross each other.	A. Streamline, cannot B. Turbulent, cannot C. Streamline, can D. None of these
1796	To and from motion of a body about its mean position is known as:	A. Translatory motion B. Vibratory motion C. Rotatory motion D. None of these
1797	When a mass attached to a spring begins to move left or right from the equilibrium position, its P.E.:	A. Increases B. Decreases C. Remains constant D. None of these
1798	The restoring force is _____ and opposite to the applied force within _____,:	A. Equal, elastic limit B. Different, the walls of the laboratory C. Different, elastic limit D. None of these
1799	Amplitude in SHM is equivalent to _____ in circular motion:	A. Diameter B. Radius C. Circumference D. None of these
1800	The body oscillates due to _____ accelerates and overshoots the rest position due to_____,:	A. Applied force, inertial B. Restoring force, friction C. Frictional force, inertial D. Restoring force, inertial
		A. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 180<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin:

1801	When quarter of a circle is completed, phase of vibration is:	initial; background-clip: initial;">° C. 45<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 360<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
1802	A particle is moving along a circular path with uniform speed. Its projection will execute ___along the _____ of the circle:	A. Circular motion, circumference B. Vibratory, chord C. SHM, diameter D. SHM, circumference
1803	If mass of 10 gm is suspended from a spring of K=0.8 Nm^{-1}then the extension will be:	A. 10 cm B. 1 m C. 10 mn D. None of these
1804	If a force of 0.05 N produces an elongation of 20 mm in a string, then its spring constant will be:	A. 250 N m⁻¹ B. 25 N m⁻¹ C. 2.5 N m⁻¹ D. None of these
1805	The number of vibration in two seconds can be expressed as _____ of frequency of vibration is f:	A. f B. 2 f C. 3 f D. 1/2 f
1806	If a given spring of spring constant K is cut into two identical segments, the spring constant of each segment is:	A. K/2 B. 2 K C. 4 K D. None of these
1807	A body with frequency of would complete one vibration in:	A. f seconds B. 1/f seconds C. 1 second D. f²second
1808	A spring of constant k = 0.4 N $m^{-1}$is to be extended thorugh 10 cm at a place where g = 10 m sec^{-2}. The mass to be suspended should be:	A. 4 gms B. 0.4 gms C. 40 gms D. None of these
1809	Hertz is unit of:	A. Time period B. Displacement C. Amplitude D. Frequency
1810	If there identical strings each of constant K are hooked together the spring constant of resultant spring will be:	A. 3 K B. 2 K C. K/4 D. K/3
1811	An object in SHM will have maximum speed when its displacement from equilibrium position is:	A. Infinity B. Maximum C. Zero D. Minimum
1812	In SHM, the acceleration is _____ when velocity is _____:	A. Zero, smallest B. Smallest, zero C. Zero, zero D. Zero, greatest
1813	An angle of 180° in circular motion is equivalent to _____ in SHM.	A. Half the vibration B. One vibration C. 3/4th of a vibration D. None of these
1814	An oscillating body oscillates due to:	A. Applied force B. Restoring force C. Frictional force D. None of these
1815	Amplitude is the displacement of the vibrating body from:	A. One extreme position to the other extreme position B. Mean position any one extreme position C. Both A and B are correct D. None of these
1816	The restoring force is always directed towards:	A. Rest position B. Equilibrium position C. Mean position D. All of them

1817	The waves which propagate through the oscillations of material particles are known as:	A. Mechanical waves B. Electromagnetic waves C. Any of them D. None of them
1818	The waves which propagate out in the space due to oscillations of electric and magnetic fields are called:	A. Mechanical waves B. Electromagnetic waves C. Matter waves D. All of them
1819	Which of the following is/are example/s if mechanical waves i.e. waves generated in _____:	A. Rope B. Coil of spring C. Water D. All of them
1820	When a wave is travels from one place to another, it transfers:	A. Matter B. Energy C. Momentum D. Both B and C
1821	Which of the following is not mechanical wave?	A. Sound wave B. Light wave C. wave produced in spring D. None of them
1822	Longitudinal waves are also called:	A. Congressional waves B. Transverse waves C. Radio waves D. None of them
1823	The distance covered by the wave during one period is called its:	A. Wave number B. Frequency C. Wavelength D. Time period
1824	The distance covered by the wave in one second is:	A. Wave number B. Wave length C. Frequency D. Wave speed
1825	A traveling wave has a shape of:	A. Square wave B. Sine wave C. Parabola D. hyperbola
1826	In the same medium, velocity of the wave:	A. Goes on increasing B. Remains constant C. Goes on decreasing D. None of these
1827	The square of 0.4 is:	A. Greater than 0.4 B. Smaller than 0.4 C. Equal to 0.4 D. None of them
1828	A string is stretched between two points and is plucked at right angles to its length, the vibration produced is:	A. Longitudinal wave B. Transverse wave C. No vibration at all D. None of them
1829	In compressional wave,the layer of medium having reduced pressure is called:	A. Compression B. Elasticity C. Node D. Rarefaction
1830	Transverse waves can be set up:	A. Solids B. Liquids C. Gases D. All of them
1831	Fluids can transmit:	A. Transverse wave B. Compressional wave C. Both of them D. None of them
1832	In solids, only following type/s of wave can travel:	A. Transverse B. Longitudinal C. Both A and B D. None of them
1833	Which of the following medium/media can transmit both transverse and longitudinal waves:	A. Solids B. Liquids C. Gases D. All of them
1834	Which one of the following elasticizes is possessed by fluids:	A. Young's elastic modulus (length) B. Bulk elastic modulus (volume) C. Modulus of rigidity (shape) D. None of these

		D. None of these
1835	In the formula for finding the speed of waves in the spring, unit of m in SIn units is:	A. kg B. kg-meter C. kg/meter D. Meter/kg
1836	When the particles of the medium vibrate about their mean position, along the direction of the motion of waves, then the waves are called:	A. Longitudinal waves B. Transverse waves C. Water waves D. Complex waves
1837	SI unit of wave length is:	A. Kilometer B. Metre C. Centimetre D. Hertz
1838	The portion of the water above its mean level forms a:	A. Crest B. Trough C. Both A and B D. None of these
1839	In transverse waves, the individual particles of the medium move:	A. In circles B. Perpendicular to the direction of level C. Parallel to the direction of level D. None of these
1840	Crests and troughs are formed in:	A. Longitudinal waves B. Transverse waves C. Both of these D. None of these
1841	Of the following, the option _____ reminds of longitudinal waves.	A. Sound waves B. Heat waves C. Electromagnetic waves D. Light waves
1842	Which one of the following wave motions is transverse:	A. Wave motion produced in water when a piece of stone is thrown into it B. Pulling of weight hanging vertically with a spiral spring C. Both of these D. None of these
1843	If one end of a rubber cord is fixed with a support and the other end is wiggled by hand, the waves generated on the card are:	A. Stationary waves B. Transverse waves C. Both of these D. None of these
1844	The wave motion set up in any medium depends upon:	A. Elasticity B. Inertia C. Density D. All of these
1845	transverse wave motion is possible in:	A. Air B. A mixture of NH₃and O₂ C. Strings D. All of these
1846	For transmission of both transverse and longitudinal waves, we can use:	A. Solid B. Gas C. Plasma D. None of these
1847	Light has:	A. Wave nature B. Particle nature C. Dual nature D. None of these
1848	Light waves are:	A. Transverse wave B. Longitudinal wave C. Compressional wave D. None of them
1849	Wave length of light, on the average, is given by:	A. 10⁻¹⁴_m B. 10⁻¹⁰_m C. 10⁻⁶_m D. 10⁻⁴_m
1850	Electromagnetic waves transport:	A. Energy only B. Momentum only C. Both A and B are correct D. None of is correct
1851	Which one of the following can act approximately as a source of monochromatic light;	A. Neon lamp B. Fluorescent tube C. Sodium lamp D. None of these

1852	Wave length of that color as compared to that of violet color is:	A. Smaller B. Longer C. Equal D. None of these
1853	Frequency of red color as compared to that of violet color is:	A. Equal B. Smaller C. Greater D. None of these
1854	Monochromatic light means waves of:	A. Same frequency B. Same colour C. Same wavelength D. All of them
1855	The locus of all the points in the same phase of vibration is called:	A. Wave packet B. Wave front C. Wave number D. None of them
1856	Angle between the ray of light and the corresponding wavefront is:	A. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 60<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 120<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
1857	Huygen principle is used to determine:	A. Speed of light B. Location of wavefront C. About polarized or unpolarized light D. None of them
1858	In case of point, source of light shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
1859	Speed of light in vacuum depends upon:	A. Frequency B. Wavelength C. Amplitude D. None of these
1860	When a source of light isat very large distance,the shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
1861	The speed of the secondary wavelets as mentioned in Huygen's principle is _____ the speed of propagation of the wave itself.	A. Equal to B. Greater than C. Smaller than D. None of these
1862	Laws of reflection and refraction can also be explained by:	A. Particle nature of light B. Quantum nature of light C. Wave nature of light D. Complex nature of light
1863	The wave nature of light was proposed by:	A. Newton B. Thomas Young C. Huygen D. None of these
1864	Huygen's principles states that:	A. Light has dual nature B. Either of these C. None of these D. Light travels in straigth line
1865	A line which represents the direction of travel of a wave is known as:	A. Spherical Wavefront B. Locus C. Ray D. Either B or C

1866	The property of light which does not change with the nature of the medium is:	A. Frequency B. Amplitude C. Wavelength D. None of these
1867	The appearance of the colour in the soap (oil) film results from:	A. Dispersion B. Interference C. Reflection D. Refraction
1868	To sources are said to be coherent if they have:	A. Same amplitude B. Same wavelength C. Definite phase relation with each other D. None of them
1869	To observe interference of light, the condition, which must be met with is that the sources must be:	A. Monochromatic B. Phase coherent C. Both of above D. None of above
1870	In case of destructive interference of two waves, the amplitude of the resultant wave will be ____ either of the waves:	A. Greater than B. Smaller than C. Equal to D. None of these
1871	The terms phase difference and path difference are:	A. Same B. Different C. Equal D. None of these
1872	In case of constructive interference of two waves, the amplitude of the resultant wave is _____ either of the waves:	A. Greater than B. Equal to C. Smaller than D. None of these
1873	In an interference pattern of Young's double slit(YDS) experiment:	A. Bright fringesare wider than dark fringes B. Dark fringes are wider than bright fringes C. Both dark and bright fringes are of equal width D. Central fringes are wider than the outer fringes
1874	In YDS experiment, fringe spacing means the distance between two consecutive ____fringes.	A. Bright B. Dark C. Any of A and B D. None of these
1875	The least distance of distinct vision is:	A. 10 cm B. 25 cm C. 50 cm D. 100 cm
1876	With age, least distance of distinct vision:	A. Increases B. Decreases C. Is not affected D. None is correct
1877	The distance from eye to near point is taken as:	A. 10 cm B. 15 cm C. 20 cm D. 25 cm
1878	A convex lens acts as diverging lens when the object is placed:	A. Between F and 2F B. At 2F C. With focal length D. Beyond 2F
1879	A convex lens acts as diverging lens when the object is placed:	A. Beyond 2F B. At 2F C. With focal length D. Between F and 2F
1880	When the object lies between F and 2F, the image formed by is formed at:	A. Real B. Virtual C. Diminished D. Erect
1881	When the object lies between F and 2F, the image formed by is formed at:	A. Virtual B. Diminished C. Erect D. Real
1882	If the object is situated at focus of a convex lens, then its image is formed at:	A. F B. 2F C. Infinity D. None of these
1883	How is the image formed by a convex lens affected if the upper half of the	A. The upper half of the image is cut off B. The brightness of the image is reduced

	lens is covered with a paper:	C. The brightness of the image is increased D. No effect at all
1884	If the focal length of the convex lens is 5 cm, then to get the real and inverted image of the same size as that of object, the object should be placed at:	A. 5 cm B. 10 cm C. 20 cm D. 15 cm
1885	If the focal length of the convex lens is 5 cm, then to get the real and inverted image of the same size as that of object, the object should be placed at:	A. 15 cm B. 20 cm C. 10 cm D. 5 cm
1886	The ratio of the diameter of two convex lenses is _____-the ratio of their focal lengths:	A. Greater than B. Less than C. Equal to D. None of these
1887	Least distance of distinct vision of an old man possibly becomes:	A. A little less than 25 cm B. A little more than 25 cm C. Much less than 25 cm D. None of these
1888	Conventionally, all the distance p, q, f are measured from _____ of the lens:	A. Focus B. Optical center C. Edges D. None of these
1889	If the object and its image are located at a distance of 5 cm from the focus of a convex lens, the focus length of the lens will be:	A. 5 cm B. 10 cm C. 20 cm D. 25 cm
1890	A ray passing through optical center of a lens, after refraction:	A. Passes through focus B. Go deviated C. Retraces its path D. Both B and C
1891	For the virtual image, option _____ is not correct:	A. 1/p = 1/f -1/q B. 1/f = 1/p -1/q C. 1/p=1/p-1/f D. 1/p=1/f+1/q
1892	A virtual image is formed when object is placed:	A. Within focal length of a convex lens B. Near the focal point of a concave lens C. Both A and B D. Away from 2F of a convex lens
1893	When the same object is viewed at a shorter distance, the image on the retina of the eye is _____ the so the object appears:	A. Greater, smaller B. Smaller, smaller C. Smaller, larger D. Greater, larger
1894	If the object is placed at 12 cm distance from a convex lens of focal length 6 cm, then we get an image of ____ as that of object:	A. Double the size B. Same size C. Half the size D. None of these
1895	The ratio of the size of the image to that of object is called:	A. Focal length B. Aperture C. Linear magnification D. Principal axis
1896	The size of the image is maximum when its distance from the magnifying glass is:	A. 0.10 m B. 0.15 m C. 0.20 m D. 0.25 m
1897	The magnifier forms a virtual image of the object at:	A. None of these B. Least distance of distinct vision C. Much farther than the least distance D. Both A and B are correct
1898	The magnifier forms a virtual image of the object at:	A. None of these B. Both A and B are correct C. Much farther than the least distance D. Least distance of distinct vision
1899	A magnifier gives an image which is:	A. Virtual, inverted B. Real, erect C. Virtual, erect D. Real, inverted
1900	The image of an object 5 mm length is only 1 cm high. The magnification produced by lens is:	A. 1 B. 0.2 C. 2 D. 0.1
		A. 5.5 cm

1901	The focal length of convex lens having magnifying power of 5.55 is:	B. 5 cm C. 4.5 cm D. 6 cm
1902	To see the minor details of the object by microscope, it should have:	A. High magnifying power B. High resolving power C. Am objective of larger focal length D. None of these
1903	Resolving power in mth order diffraction for grating is given by:	A. R = N/m B. R = m/N C. None of these D. R = N x m
1904	Resolving power in mth order diffraction for grating is given by:	A. R = m/N B. R = N x m C. None of these D. R = N/m
1905	A grating with high resolving power can distinguish _____ difference in wavelengths :	A. Smaller B. Larger C. Zero D. None of these
1906	A grating with high resolving power can distinguish _____ difference in wavelengths :	A. Larger B. Zero C. None of these D. Smaller
1907	In the formula R = N x m for diffraction grating, N denotes:	A. No. of lines/cm B. No. of lines/meter C. Total number of lines D. None of above
1908	Certain light of wavelength 600 nm is used to view an object under the microscope. If the aperture of its objective is 1.22 cm, then the limiting angle of resolution will be:	A. 6 x 10⁻⁵rad B. 7 x 10⁻⁵rad C. 8 x 10⁻⁵rad D. None of these
1909	Hotness and coldness of an object is represented in terms:	A. Heat B. Temperature C. Chemical energy D. None of these
1910	Absolute zero is considered as that temperature at which:	A. All liquid become gases B. All gases become liquid C. Water freezes D. None of these
1911	When two objects come to common temperature, the body is said to be in:	A. Static equilibrium B. Dynamic equilibrium C. Thermal equilibrium D. None of these
1912	A gas which strictly obeys the gas laws under all conditions of temperature and pressure is called:	A. Ideal gas B. Inert gas C. Real gas D. None of these
1913	Real gases strictly obey gas law at:	A. High pressure and low temperatures B. Low pressures and high temperatures C. High pressures and high temperatures D. None of these
1914	At the constant temperature, if the value of a given mass of a gas is double, then the density of gas becomes:	A. Double B. Remains constant C. Half D. None of these
1915	The only significant motion possessed by the mono-atomic gas represented is:	A. Translatory B. Rotatory C. Vibratory D. None of these
1916	In the theory of dimensional analysis, heat may be properly represented by:	A. ML²T⁻² B. MT⁻² C. ML⁻¹T⁻¹ D. None of these
1917	The temperature scale approved in SI units is:	A. Celsius scale B. Kelvin scale C. Fehrenheit scale D. None of these
1918	Which of the following does not have the same units:	A. Work B. Heat C. Kinetic energy D. Power

1919	In an ideal gas, the molecules have:	A. Kinetic energy only B. Potential energy only C. Both KE and PE D. None of these
1920	The motion of molecules in gases is:	A. Orderly B. Random C. Circular D. All of these
1921	At constant temperature, if the density of the gas is increased, its pressure will:	A. One kg of a substance B. Unit volume of a substance C. One mole of a substance D. None of these
1922	The relationship between Boltzmann constant k with R and $N_A$is given as:	A. k = RN_A B. k =R/N_A C. k = NR/N_A D. None of these
1923	The nature of thermal radiation is similar to:	A. Ultraviolet rays B. Light rays C. Both of them D. None of these
1924	Electromagnetic waves emitted by hot bodies are called:	A. Photoelectrons B. Alpha rays C. Thermal radiation D. None of these
1925	Truth of kinetic energy is confirmed by:	A. Diffusion of gases B. Brownian motion C. Both A and B D. None of these
1926	Pressure may be define as _____ per second per unit area:	A. Change in force B. Change in momentum C. Change in energy D. Work done
1927	If a molecule with momentum mv strikes a wall and rebound then the change in momentum will be:	A. -2 mv B. Zero C. 2 mv D. mv
1928	The rate of change of momentum of a molecule is equal to:	A. Pressure B. Work C. Density D. Force
1929	If denotes the total number of molecules in cubic vessel such that m is mass of each milecule and l is length of each side of vessel, then mN/l^3gives the:	A. Force B. Density C. Work done D. Pressure
1930	Pressure applied at any point of gas at rest is transmitted equally to all parts of the gas. This is the statement of:	A. Newton's second law B. Pascal's law C. Carnot theorem D. Second law of thermodynamics
1931	While deriving equation of pressure by kinetic theory of gases, we take into account:	A. Only linear motion of molecules B. Only rotational motion C. Only vibratory motion D. All of these
1932	If the formula PV = nRT, n denotes:	A. Number of molecules per unit volume B. Number of moles C. Number of molecules D. None of these
1933	The volume of universal gas constant R is:	A. 8.314 J/K mole K B. 8314 J/K mole K C. 8.314 J/mole K D. None of these
1934	In the formula $P = N_0KT$, N_0denotes:	A. Number of molecules per unit per volume B. Number of moles C. Number of molecules D. None of these
1935	Tick the correct pair when M denotes the molecular mass and other symbols carry usual meanings:	A. N = nN_Am = MN_A B. n = N N_A, M = mN_A C. M = N_A/N , N_A= m/n D. N = nN_A, M = mN_A
1936	Gas constant per molecule is called:	A. Universal gas constant B. Stefen's constant

		C. Boltzmann constant D. Gravitation constant
1937	Average KE of a gas molecule has:	A. Direct relation with absolute temperature and inverse relation with pressure B. Direction relation with both absolute temperature and pressure C. Inverse relation with both absolute temperature and pressure D. None of these
1938	If the distance between two charges is doubled, the force between them will become:	A. Double B. Half C. Three times D. One fourth E. One third
1939	The value of E_0 in coulomb's law is:	A. 9 x 10⁹Nm²C⁻² B. 8.85 x 10⁻¹²C²N⁻¹m⁻² C. 8.85 x 10⁻¹²Nm²C⁻² D. 9 x 10⁹C²N⁻¹m⁻²
1940	The value of relative permittivity of different dielectrics are:	A. Equal B. Different C. Greater than one D. Smaller than one E. Both (B) and (C)<o:p></o:p>
1941	Electric field lines emerge from the charge in:	A. One dimension<o:p></o:p> B. Two dimensions<o:p></o:p> C. Three dimensions<o:p></o:p> D. Four dimensions<o:p></o:p> E. None of them<o:p></o:p>
1942	Field lines are closer to each other in the region where the field is:	A. Stronger<o:p></o:p> B. Weaker<o:p></o:p> C. Much weaker<o:p></o:p> D. Absent<o:p></o:p> E. None of these<o:p></o:p>
		A. Straight lines<o:p></o:p> B. <span style="font-

1943	In case of two identical charges placed certain distance apart, the electric field lines are:	size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">Sine curves<o:p></o:p> C. Curved<o:p></o:p> D. Both (A) and (B)<o:p></o:p> E. None of these<o:p></o:p>
1944	Electrostatics is the branch of physics which deals with the study of electro charges:	A. At rest<o:p></o:p> B. At rest under the action of electric forces<o:p></o:p> C. In motion under the action of electric forces<o:p></o:p> D. In motion<o:p></o:p> E. At rest under the action of nuclear forces<o:p></o:p>
1945	Static electricity is produced by the transfer of:	A. Electrons<o:p></o:p> B. Protons<o:p></o:p> C. One fluid<o:p></o:p> D. Two fluids<o:p></o:p> E. None of these<o:p></o:p>
1946	Xerography means:	A. Dry writing<o:p></o:p> B. Wet writing <o:p></o:p> C. Poor writing<o:p></o:p> D. Excellent writing<o:p></o:p> E. Both (A) and (B)<o:p></o:p>
		A. Boron<o:p></o:p> B. Carbon<o:p></o:p> C. <span style="font-

1947	An example of photoconductor is:	size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">Iron<o:p></o:p> D. Aluminum<o:p></o:p> E. Selenium<o:p></o:p>
1948	An important part of photocopier is:	A. Toner cartridge<o:p></o:p> B. Deflection plates <o:p></o:p> C. Charging electrode<o:p></o:p> D. Print head<o:p></o:p> E. None of these<o:p></o:p>
1949	Selenium is:	A. An insulator<o:p></o:p> B. A conductor<o:p></o:p> C. Insulator in the dark and becomes conductor when exposed to light<o:p></o:p> D. Conductor in the dark only<o:p></o:p> E. None of these<o:p></o:p>
1950	Aluminum is a:	A. Good insulator<o:p></o:p> B. Bad conductor<o:p></o:p> C. Both (A) and (B)<o:p></o:p> D. Excellent conductor<o:p></o:p> E. Semiconductor<o:p></o:p>
1951	The inkjet printer ejects a thin stream of	A. Water<o:p></o:p> B. Oil<o:p></o:p> C. <span style="font-size:12.0pt;line-height:107%;font-family: "Times

1951	The inkjet printer ejects a thin stream of:	New Roman","serif"">Ink<o:p></o:p> D. Any of above<o:p></o:p> E. None of these<o:p></o:p>
1952	An important part of inkjet printer is:	A. <span style="font-size:12.0pt;line-height:107%;font-family:"Times New Roman","serif";mso-fareast-font-family:Calibri; mso-fareast-theme-font:minor-latin;mso-ansi-language:EN-US;mso-fareast-language: EN-US;mso-bidi-language:AR-SA">Toner B. Drum<o:p></o:p> C. Deflection plates<o:p></o:p> D. Heated roles<o:p></o:p> E. None of these<o:p></o:p>
1953	An inkjet printer uses in its operation:	A. Neutrons only<o:p></o:p> B. Mesons only<o:p></o:p> C. Positrons and photons<o:p></o:p> D. An electric charge<o:p></o:p> E. None of these<o:p></o:p>
1954	Electric flux is:	A. Cross product of two vector <o:p></o:p> B. Dot product of two vectors<o:p></o:p> C. A vector quantity<o:p></o:p> D. A scalar quantity<o:p></o:p> E. Both (B) and (D)<o:p></o:p>
1955	The number of field lines passing through unit area held perpendicular to the field lines represent:	A. Flux in that region<o:p></o:p> B. Intensity of the field<o:p></o:p> C. Charge<o:p></o:p>

		D. Area of the region<o:p></o:p> E. None of these<o:p></o:p>
1956	When certain area A is held parallel to the field lines, then:	A. No lines cross this area<o:p></o:p> B. Maximum lines pass through this area<o:p></o:p> C. The number of lines are between zero and maximum<o:p></o:p> D. Both (A) and (B) correct<o:p></o:p> E. None of these<o:p></o:p>
1957	The electric flux through any surface depends upon:	A. Intensity of electric field<o:p></o:p> B. Area of the surface<o:p></o:p> C. Angle between intensity and area<o:p></o:p> D. All of these<o:p></o:p> E. None of these<o:p></o:p>
1958	Certain charge +q is placed at the center of a sphere. At each of the sphere,The directions of electric intensity and vector area are:	A. Same<o:p></o:p> B. Different<o:p></o:p> C. Opposite to each other<o:p></o:p> D. At 60º with each other<o:p></o:p> E. Both (B) and (C)<o:p></o:p>
1959	Flux through a closed surface of any shape and flux through the surface of a sphere drawn around a charge are:	A. Different<o:p></o:p> B. Same<o:p></o:p> C. Such that it is greater in the first case<o:p></o:p> D. Such that it is greater in the second case<o:p></o:p>

		E. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">None of these<o:p></o:p>
1960	The flux through a closed surface depends upon:	A. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Shape of geometry of the closed surface<o:p></o:p> B. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Charge enclosed<o:p></o:p> C. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Nature of the medium<o:p></o:p> D. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Both (A) and (B)<o:p></o:p> E. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Both (B) and (C)<o:p></o:p>
1961	The interior of a hollow charged metal sphere is a region which:	A. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Contain some magnitude of electric field<o:p></o:p> B. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Is full of electric field lines<o:p></o:p> C. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Is field-free region<o:p></o:p> D. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Either (A) or (B)<o:p></o:p> E. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">None of these<o:p></o:p>
1962	While finding the electric intensity at a point between two oppositely charged parallel plates, the Gaussian surface is taken in the form of a hollow:	A. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Circle<o:p></o:p> B. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Rectangle<o:p></o:p> C. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Sphere<o:p></o:p> D. <span style="font-size:12.0pt;line-height:107%;font-family: "Times

		New Roman","serif",mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Box<o:p></o:p> E. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Cylinder<o:p></o:p>
1963	A field free region is found:	A. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Near the outer surface of a hollow charged metal sphere<o:p></o:p> B. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">In the interior of solid metal uncharged sphere<o:p></o:p> C. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">In the interior of solid metal charged sphere<o:p></o:p> D. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Both (A) and (B)<o:p></o:p> E. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Both (A) and (C)<o:p></o:p>
1964	Gaussian surface is always:	A. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Rectangular<o:p></o:p> B. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Spherical<o:p></o:p> C. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Cylindrical<o:p></o:p> D. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Box shape<o:p></o:p> E. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Any of these<o:p></o:p>
1965	The surface destiny of charge is defined is:	A. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Charge per volume<o:p></o:p> B. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Mass per volume<o:p></o:p> C. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-

		theme-font: minor-fareast">Charge per area<o:p></o:p> D. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Mass per area<o:p></o:p> E. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Both (B) and (C)<o:p></o:p>
1966	Tick the correct statement:	A. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Both the potential and potential difference is scalars<o:p></o:p> B. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Potential is a scalar but potential difference is a vector<o:p></o:p> C. Both are vectors <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast"><o:p></o:p> D. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Potential is vector but potential difference is scalar<o:p></o:p> E. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">None of these<o:p></o:p>
1967	Another mean of electric potential energy per unit charge is given by:	A. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Electric intensity<o:p></o:p> B. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Potential gradient<o:p></o:p> C. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Electric Flux<o:p></o:p> D. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Potential difference<o:p></o:p> E. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">None of these<o:p></o:p>
		A. Equal<o:p></o:p> B. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Zero<o:p></o:p>

1968	The earth’s potential and potential at infinity are taken:	 C. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">First is greater than the second<o:p></o:p> D. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Second is greater than the first<o:p></o:p> E. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Both (A) and (B)<o:p> </o:p>
1969	An eV is unit of:	A. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Potential<o:p></o:p> B. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Energy<o:p></o:p> C. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Work<o:p></o:p> D. Power E. Both (B) and(C)<o:p></o:p>
1970	Most practical application of electricity involve	A. Charges at the rest<o:p></o:p> B. Charges in the motion<o:p></o:p> C. Electrons at rest<o:p></o:p> D. Atoms in motion<o:p></o:p> E. Molecules in motion<o:p></o:p>
1971	The current that flows through the coil of a motor causes:	A. Its shaft to revolve<o:p></o:p> B. Its brushes to rotate<o:p></o:p> C. Motor to move<o:p> </o:p> D. Its

		family: "Times New Roman", serif; ">its shafts to rotate<o:p></o:p> E. None of these<o:p></o:p>
1972	In case of metallic conductors, the change carries are:	A. Protons<o:p></o:p> B. Electrons<o:p></o:p> C. Antiprotons<o:p></o:p> D. Positrons<o:p></o:p> E. Both (A) and (B) <o:p></o:p>
1973	The charge carries in the electrolyte are:	A. Positive ions<o:p></o:p> B. Negative ions<o:p></o:p> C. Either (A) or (B) <o:p></o:p> D. Both (A) and (B) <o:p></o:p> E. Neither (A) nor (B) <o:p></o:p>
1974	In gases, the charge carries are:	A. Electrons<o:p> </o:p> B. Positive ions<o:p></o:p> C. Negative ions<o:p></o:p> D. Both (A) and (C) <o:p></o:p> E. Both (A) and (B)<o:p></o:p>
		A. Positrons B. <span style="font-size: 12pt; line-height: 107%; font-family: "Times New Roman",

1975	The conventional current is the name given to current due to flow of:	serif;">Positive charges<o:p></o:p> C. Negative charges<o:p></o:p> D. Both (A) and (C)<o:p></o:p> E. None of these<o:p></o:p>
1976	The current of 1 ampere is passing through a conductor. The charge passing through it in half a minute is:	A. One coulomb<o:p></o:p> B. 0.5 coulomb<o:p></o:p> C. 30 coulomb<o:p></o:p> D. 2 coulombs<o:p></o:p> E. None of these<o:p></o:p>
1977	The positive charge moving in one direction is equivalent in all external affects to a:	A. Negative charge is moving in the same direction<o:p></o:p> B. Positive charge is moving in the opposite direction<o:p></o:p> C. Negative charge moving in the opposite direction<o:p></o:p> D. Positive charges moving in the same direction<o:p></o:p> E. None of these<o:p></o:p>
1978	In a metal, the valence electrons are:	A. Attach to individual atoms<o:p></o:p> B. Not attached to individual atoms<o:p></o:p> C. Free to move within the metal<o:p></o:p>

		D. Both (A) and (C)<o:p></o:p> E. Both (B) and (C)<o:p></o:p>
1979	The free electrons in metals:	A. Are in random motion and their speed depends upon temperature<o:p></o:p> B. Move in particular direction<o:p></o:p> C. Move with speed of light<o:p></o:p> D. Move such that their speed does not depend on their temperature<o:p></o:p> E. None of these<o:p></o:p>
1980	The rate at which the free electrons pass through any section of a metallic wire from right to left is:	A. Greater than the speed at which they pass from left to right<o:p></o:p> B. Less than the speed at which they pass from left to right<o:p></o:p> C. The same speed at which they pass from left to right<o:p></o:p> D. Any of above<o:p></o:p> E. None of them<o:p></o:p>
1981	The rate at which the free electrons pass through any section of a metallic wire from right to left is:	A. Greater than the speed at which they pass from left to right<o:p></o:p> B. Less than the speed at which they pass from left to right<o:p></o:p> C. The same speed at which they pass from left to right<o:p></o:p> D. Any of above<o:p></o:p> E. <span style="font-size:12.0pt; line-height:107%;font-family:"Times New

		Roman","serif"">None of them<o:p></o:p>
1982	If the ends of a wire are connected to a battery an electric field E will be set up at:	A. The ends of the wire only<o:p></o:p> B. Mid points of the wire only<o:p></o:p> C. Every point within the wire<o:p></o:p> D. At nodes only<o:p></o:p> E. Both (B) and (D)<o:p></o:p>
1983	The term drift velocity is used when the ends of a wire are:	A. Connected to a laser source<o:p></o:p> B. Connected to a voltage source<o:p></o:p> C. Not connected to a voltage source<o:p></o:p> D. At different values of potential<o:p></o:p> E. Both (B) and (D)<o:p></o:p>
1984	When a constant potential difference is applied across the conductor, the drift velocity of electrons:	A. Increases<o:p></o:p> B. Decreases<o:p></o:p> C. Remains the constant<o:p></o:p> D. Either of these<o:p></o:p> E. None of these<o:p></o:p>
		A. Increases<o:p></o:p> B. Decreases<o:p></o:p>

1985	When a constant potential difference is applied across the conductor, the drift velocity of electrons:	C. Remains the constant<o:p></o:p> D. Either of these<o:p></o:p> E. None of these<o:p></o:p>
1986	When resistance of a current carrying wire increases due to rise in temperature, the drift velocity of electrons:	A. Decreases<o:p></o:p> B. Increases<o:p></o:p> C. Remains the constant<o:p></o:p> D. Either of these<o:p></o:p> E. None of these<o:p></o:p>
1987	The effects of bends in a wire on its electrical resistance are:	A. Zero<o:p></o:p> B. Much larger<o:p></o:p> C. Larger<o:p></o:p> D. Smaller<o:p></o:p> E. None of these<o:p></o:p>
1988	An electric field is generated along the wire when:	A. Its resistance is very high<o:p></o:p> B. A constant potential is maintained across the wire<o:p></o:p> C. Net current through the wire is zero<o:p></o:p> D. A constant potential difference is maintained across the wire<o:p></o:p> E. Either (A) or (D)

		<o:p></o:p>
1989	In order to have a constant current through wire, the potential difference across its end should:	A. Be zero<o:p></o:p> B. Be maintained constant<o:p></o:p> C. Goes on increasing<o:p></o:p> D. Go on decreasing<o:p></o:p> E. Both (A) and (B)<o:p></o:p>
1990	When two spherical conducting balls at different potentials are joined by a metallic wire, after some time:	A. Both the conductors are at the same potential<o:p></o:p> B. Potential difference across the conductors remain constant<o:p></o:p> C. Potential difference across the conductors becomes zero<o:p></o:p> D. Both (A) and (B)<o:p></o:p> E. Both (A) and (C)<o:p></o:p>
1991	When two spherical conducting balls at different potentials are joined by a metallic wire, after some time:	A. Both the conductors are at the same potential<o:p></o:p> B. Potential difference across the conductors remain constant<o:p></o:p> C. Potential difference across the conductors becomes zero<o:p></o:p> D. Both (A) and (B)<o:p></o:p> E. Both (A) and (C)<o:p></o:p>
		A. Chemical energy<o:p></o:p> B. <span style="font-size:12.0pt; line-height:107%;font-family:"Times New

1992	The example/s of non-electrical energy to electrical is/are:	Roman","serif"">Mechanical energy<o:p></o:p> C. Heat energy<o:p></o:p> D. Both (A) and (B)<o:p></o:p> E. All of these<o:p></o:p>
1993	Conversion of chemical energy to electrical energy can be achieved by:	A. Primary cell<o:p></o:p> B. Secondary cell<o:p></o:p> C. Both (A) and (B)<o:p></o:p> D. Photovoltaic cell<o:p></o:p> E. Solar cell<o:p></o:p>
1994	The device which can convert heat energy into electrical energy is called:	A. Thermistor<o:p></o:p> B. Thermometer<o:p></o:p> C. Thermostat<o:p></o:p> D. Thermocouple<o:p></o:p> E. Both (C) and (D)<o:p></o:p>
1995	When two spherical conducting balls at different potentials are joined by metallic wire, the current starts:	A. Decreasing from zero to maximum<o:p></o:p> B. Increasing from zero to maximum<o:p></o:p> C. Decreasing from maximum to zero<o:p></o:p> D. Increasing from maximum to zero<o:p></o:p> E. Both (A) and (D)<p

		class="MsoNormal" style="text-align:justify"><o:p></o:p>
1996	The obvious effect/s of current is/are:	A. Heating effect<o:p></o:p> B. Magnetic effect<o:p></o:p> C. Chemical effect<o:p></o:p> D. Both (C) and (B) <o:p></o:p> E. All of these
1997	As the current flow through the wire:	A. It generates heat in the wire<o:p></o:p> B. It produces sound in the wire<o:p></o:p> C. Resistance of the wire decreases<o:p></o:p> D. Voltage across the ends is increased<o:p></o:p> E. None of these
1998	Heating effect of current utilized in:	A. Electric motor<o:p></o:p> B. Electric toaster<o:p></o:p> C. Electroplating<o:p></o:p> D. Electric kettle<o:p></o:p> E. Both (B) and (D)<o:p></o:p>
		A. Always accompanied<o:p></o:p> B. Sometimes accompanied<o:p></o:p>

1999	The passage of current is accompanied by a magnetic field in the surrounding space:	C. Never accompanied<o:p></o:p> D. Any of above <o:p></o:p> E. None of these<o:p></o:p>
2000	The passage of current is accompanied by a magnetic field in the surrounding space:	A. Always accompanied<o:p></o:p> B. Sometimes accompanied<o:p></o:p> C. Never accompanied<o:p></o:p> D. Any of above <o:p></o:p> E. None of these<o:p></o:p>
2001	The strength of magnetic field at certain points around a wire depends upon:	A. Value of current passing<o:p></o:p> B. Distance from the current element<o:p></o:p> C. Color of the material<o:p></o:p> D. Both (A) and (B)<o:p></o:p> E. Both (B) and (C)<o:p></o:p>
2002	Magnetic effect of current is used:	A. In electric motor<o:p></o:p> B. To detect current<o:p></o:p> C. To measure current<o:p></o:p> D. All of these<o:p></o:p>

		E. None of these<o:p></o:p>
2003	The magnitude of chemical Effects depends upon:	A. Nature of liquid<o:p></o:p> B. Quantity of Electricity passed through the liquid<o:p></o:p> C. Color of the liquid<o:p></o:p> D. Both (A) and (C)<o:p></o:p> E. Both (A) and (B)<o:p></o:p>
2004	Two dissimilar metals joined at their ends kept at constant temperature constitute:	A. Cell<o:p></o:p> B. Voltmeter<o:p></o:p> C. Thermocouple<o:p></o:p> D. Potentiometer<o:p></o:p> E. None of these
2005	Electrolysis is the study of conduction of electricity through:	A. Solids B. Liquids C. Gases D. Plasma
2006	When some compass needles are placed on a card board along a circle with the center at the wire, they will	A. Point the direction of N-S<o:p></o:p> B. Set themselves tangential to the circle<o:p></o:p> C. Point in the direction of E-W<o:p></o:p> D. None of these<o:p></o:p> E. Point in direction of S-E
		A. A magnetic field is setup <o:p></o:p> B. <span style="font-size:12.0pt; line-height:107%;font-family:"Times New

2007	In the region surrounding a current carrying wire:	Roman","serif"">The lines of force are elliptical<o:p></o:p> C. Direction of lines of forces depends upon direction of current<o:p></o:p> D. Both (A) and (C)<o:p></o:p> E. All of these
2008	A current carrying conductor sets up its own:	A. Electric field<o:p></o:p> B. Nuclear field<o:p></o:p> C. Magnetic field<o:p></o:p> D. Both (A) and (C)<o:p></o:p> E. All of these
2009	It is customary represent a current flowing towards the reader by a symbol	A. (x) B. (+) C. (.) D. (-) E. (÷) <o:p></o:p>
2010	The pointer of a magnetic compass:	A. Is affected only by permanent magnets<o:p></o:p> B. Align itself parallel to the applied magnetic field<o:p></o:p> C. <span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Vibrates in the magnetic field of the current<o:p></o:p> D. Aligns itself perpendicular to the magnetic field<o:p></o:p> E. Both (C) and (D)
2011	magnetic field is a:	A. Vector quantity<o:p></o:p> B. Scalar quantity<o:p></o:p> C. Scalar as well as scalar quantity<o:p></o:p> D. Any of (A) or (B)<o:p></o:p>

		E. Neither (A) nor (B)
2012	Magnetic lines of force:	A. Cannot intersect at all<o:p></o:p> B. Intersect at infinity<o:p></o:p> C. Intersect within magnet<o:p></o:p> D. Intersect at Neutral Point<o:p></o:p> E. None of these
2013	the current is pass through the straight wire. The magnetic field established around it has its lines of force:	A. Circular and endless<o:p></o:p> B. Oval in shape and endless<o:p></o:p> C. Straight<o:p></o:p> D. Parabolic<o:p> </o:p> E. All are true
2014	if the field is directed along the normal to the area, then flux is:	A. Maximum<o:p> </o:p> B. Equal to zero<o:p> </o:p> C. Equal to BA<o:p> </o:p> D. Minimum<o:p> </o:p> E. Both (A) and (C)<o:p></o:p>
2015	Magnetic induction is also called as:	A. Ampere's law<o:p></o:p> B. Faraday's law<o:p> </o:p> C. Lenz's law<o:p> </o:p> D. <span style="font-size:12.0pt; line-height:107%;font-family:"Times New

		Roman","serif"">Newton’s law<o:p></o:p> E. Coulomb’s law<o:p></o:p>
2016	Amperean path is a:	A. Closed path<o:p></o:p> B. Rectangular path<o:p></o:p> C. Circular path<o:p></o:p> D. Any of above<o:p></o:p> E. Broken path<o:p></o:p>
2017	A solenoid is a coil of wire which is:	A. Short, loosely wound, cylindrical<o:p></o:p> B. Long, tightly wound, spherical<o:p></o:p> C. Long, loosely wound, cylindrical<o:p></o:p> D. Long, tightly wound, cylindrical<o:p></o:p> E. None of these<o:p></o:p>
2018	A field is uniform and much stronger:	A. Inside a long solenoid<o:p></o:p> B. Outside a long solenoid<o:p></o:p> C. At the end of a long solenoid<o:p></o:p> D. At the central point of long solenoid<o:p></o:p> E. None of these<o:p></o:p>
		A. Total number of turns of solenoid<o:p></o:p> B.

2019	In the formula B= $\mu_0$nl, the symbol n denotes:	Number of turns per unit length<o:p></o:p> C. Number of turns per unit volume<o:p></o:p> D. Numbers of turns per unit area<o:p></o:p> E. Number of moles<o:p></o:p>
2020	Hold the solenoid in the right hand with fingers curling in the direction of current. The direction of the field will be given by:	A. Thumb<o:p></o:p> B. Curled fingers<o:p></o:p> C. Middle finger<o:p></o:p> D. Arm of right hand<o:p></o:p> E. None of these<o:p></o:p>
2021	Total number of turns on 0.15 m length solenoid is 300. the value of n is:	A. Greater than 300 B. Smaller than 300 C. Equal to 300 D. Any of (A) or (B) E. Any of (A) or(C)
2022	The magnetic field inside a solenoid can be increased by:	A. Increasing n B. Decreasing I C. Increasing I D. By using iron core within solenoid E. All correct except (B)
2023	If the number of turns of a solenoid (carrying a steady current I) is doubled without changing the length of a solenoid, then magnetic field:	A. Becomes Half B. Becomes double C. Is not affected D. Becomes one fourth E. None of these
2024	The permeability of free space is measured in:	A. Wb/Am B. Wb A/m C. Am/Wb D. m/Web A E. None of these
2025	Strength of magnetic field is measured in SI units, in:	A. N B. N/Am C. Am/N D. Nm/A E. None of these
2026	NmA^{-1} is commonly called:	A. Weber B. Apmere C. Guass D. Coulomb E. None of these
2027	At a given instant, a photon moves in +x direction in a region where there magnetic field in -z direction. The magnetic force on the proton will be the:	A. -y direction B. +y direction C. +z direction D. -z direction E. None of these
		A. BA<span style="font-family: "Times New Roman", serif; font-size: 12pt; text-align:

2028	Magnetic flux passing through a element whose vector area makes an angle0º with lines of magnetic force is:	justify;">CosΘ <o:p></o:p> B. Zero C. BA D. BA sin<span style="font-size:12.0pt;line-height:107%; font-family:"Times New Roman","serif";mso-fareast-font-family:Calibri; mso-fareast-theme-font:minor-latin;mso-ansi-language:EN-US;mso-fareast-language: EN-US;mso-bidi-language:AR-SA">Θ E. None of these
2029	Magnetic flux passing through the an element of are A placed perpendicular to a uniform magnetic field Bis:	A. Maximum B. Minimum C. Zero D. Very small E. None of these
2030	A long wire wound tightly on a cylindrical core is called:	A. Potentiometer B. Solenoid C. Toroid D. Wheat and stone bridge E. None of these
2031	When the charged particle is projected at right angles to the field, then experienced by it will be:	A. Maximum B. Zero C. qvB D. Both (A) and (B) E. Both (A) and (C)
2032	The current produced by moving a loop of a wire across a magnetic field is called:	A. Direct current B. Magnetic current C. Alternating current D. Induced current E. None of these
2033	An emf is set up in a conductor when it:	A. is kept in a magnetic field B. is kept in a electric field C. Move across a magnetic field D. Both (A) and (B) E. None of these
2034	An induced current can be produced by:	A. Constant magnetic field B. Changing magnetic field C. Varying magnetic feild D. Constant electric field E. None of these
2035	The phenomenon of generation of induced emf is called	A. Electrostatic induction B. Magnetic induction C. Electromagnetic induction D. Electric induction E. Both (A) and (D)
2036	The induced current is a conductor depends upon:	A. Resistance of the loop B. Speed with which the conductor moves C. Any of these D. Both (A) and (B) E. None of these
2037	The induced current in the loop can be increased by:	A. Using a stronger magnetic field B. Moving the loop faster C. Replacing the loop by a coil of many turns D. All above E. Both (A) and (B)
2038	In magnet-coil experiment, emf can be produced by:	A. Keeping the coil stationary and moving the magnet B. Keeping the magnet stationary and moving the coil C. Relative motion of the loop and magnet D. Any one of above E. All above
2039	The magnitude of induced emf depends upon the:	A. Rate of decrease of magnetic field B. Rate of change of magnetic field C. Rate of increase of magnetic flux D. Constancy of magnetic field E. None of these
2040	A coil of constant area is placed in a constant magnetic field. An include current is produced in the coil when:	A. The coil is destroyed B. The coil is Rotated C. The coil is neither destroyed nor rotated D. Both (A) and (B) E. None of these
		A. Emf induced is similar to that of a battery <span

2041	When the conductor moved across a magnetic field:	class="MsoNormal" style="text-align:justify"><o:p></o:p> B. Emf induced gives rise to induced current <o:p></o:p> C. An emf induced across its ends <o:p></o:p> D. All are correct <span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif""><o:p></o:p> E. None of these <o:p></o:p>
2042	Motional emf is called motional:	A. Electromagnetic force and is measured in newtons B. Electromotive force and is measured in volt C. Electromotive force and is measured in newtons D. Electromagnetic force and is measured in volts E. None of these
2043	A metal road of length 1m is moving at a speed of 1 ms^{-1}In a direction making angle of 30° with 0.5 Y magnetic field. The emf produced in the rod is:	A. 0.25 N B. 0.25 V C. 2.5 V D. 2.5 N E. 25 V
2044	A square loop of wire is moving through a uniform magnetic field. The normal to the loop is oriented parallel to the magnetic field. The emf induced in the loop is:	A. Zero B. Of smaller magnitude C. Of larger magnitude D. Sometimes B, sometimes C E. Neither of these
2045	Plan of a coil makes an angle of 20° with the lines of magnetic field. The angle between B and vector area of plane of coil is:	A. Also 20° <o:p></o:p> B. 70° <o:p></o:p> C. 90° <o:p></o:p> D. 180° <o:p></o:p> E. None of these
2046	The rate change of area expressed is expressed in:	A. None of these B. ms⁻¹ C. m²s⁻² D. ms⁻² E. m²s⁻¹
2047	The law of electromagnetic induction is related to:	A. Coulomb B. Ampere C. Faraday D. Lenz E. None of these
		A. Galvanometer B. Voltmeter

2048	Faraday's law of electromagnetic induction has been used in the construction of:	D. Voltmeter C. Electric motor D. Electric genrator E. Commutator
2049	The direction of induced current is always so as to oppose the cause which produces it. This is	A. Lenz's law B. Ampere's law C. Faraday's law D. Coulomb's law E. None of these
2050	Alternating current can be transmitted:	A. To long distance B. At very high cost C. At very low cost D. Both (A) and (C) E. Both (A) and (B)
2051	Alternating current is produced by a voltage source which polarity:	A. Remains the same B. Reverse after period T C. Keeps on reversing with time D. Reverse after every time interval T/2 E. Both (C) and (D)
2052	Nowadays, Most of the electric energy is produced by the A.C. generators using:	A. Hydal water B. Geothermal energy C. Solar energy D. Biomass E. Both (B) and (D)
2053	The time interval during which the Voltage source changes its polarity once is known as:	A. Time period T B. Half the time period C. Quarter the time period D. Two third of the time period E. None of these
2054	The most common source of alternating voltage is:	A. Motor B. Transformer C. AC genrator D. Both (A) and (C) E. Both (A) and (B)
2055	The wave form of alternating voltage is the graph between:	A. Voltage across X-axis and time across y-axis B. Current and time C. Voltage along y-axis and time along x-axis D. Voltage and current E. Either (B) or (D)
2056	The waveform of alternating voltage is a:	A. Square B. Rectangular C. Saw-tooth D. Sinusoidal E. None of these
2057	The entire wave form of sinusoidal voltage is actually a set of all the:	A. Positive maximum value + V_oand negative maximum value -V_o B. Posiotive maximum value +V_oand zero C. Zero and negative maximum value -V_o D. Any of these E. None of these
2058	The highest value reached by the voltage or current:	A. In quarter cycle is called Instantaneous value B. In half cycle is called peak-to-peak value C. In one cycle is called peak value D. In half cycle is called Instantaneous value E. None of these
2059	The sum of positive and negative peak values is called:	A. Instantaneous value B. Peak value C. Rms valuie D. Peak-to peak-value E. None of these
2060	Peak value of alternative current is:	A. one of its Instantaneous value B. Equal to its RMS value C. The same as its peak-to-peak value D. Both (B) and (C) E. None of these
2061	The Instantaneous value of alternative current maybe:	A. The same as its RMS value B. Greater than its Rms value C. The same as its peak value D. Any of these E. None of these
2062	The RMS value of alternating current is:	A. 0.7 times at the peak value B. 0.5 times the peak value C. 0.7 times the Instantaneous value D. Equal to maximum voltage E. None of these

2063	If we connected the ordinary DC ammeter to measure alternating current, it would measure its:	A. Instantaneous value B. RMS value C. Value averaged over a cycle D. Either (B) or (C) E. Either (A) or (C)
2064	The magnitude of alternative voltage V:	A. Always increase B. Always decrease C. Remains constant D. Does not remain constant E. None of these
2065	The alternative voltage of current is actually measured by:	A. Its RMS value B. Square root of its mean square value C. Instantaneous value D. Peak value E. Both (A) and (B)
2066	The phase at the positive peak of an A.C. cycle is:	A. 0º <o:p></o:p> <o:p></o:p> B. 90º <o:p></o:p> C. 180º <o:p></o:p> D. 0 and<span style="font-size:12.0pt;line-height:107%; font-family:"Plantagenet Cherokee","serif";mso-fareast-font-family:Calibri; mso-fareast-theme-font:minor-latin;mso-bidi-font-family:"Times New Roman"; mso-ansi-language:EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">ﻝ E. <span style="font-size:12.0pt;line-height:107%; font-family:"Plantagenet Cherokee","serif";mso-fareast-font-family:Calibri; mso-fareast-theme-font:minor-latin;mso-bidi-font-family:"Times New Roman"; mso-ansi-language:EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">ﻝ/2 and 3 <span style="font-size:12.0pt;line-height:107%; font-family:"Plantagenet Cherokee","serif";mso-fareast-font-family:Calibri; mso-fareast-theme-font:minor-latin;mso-bidi-font-family:"Times New Roman"; mso-ansi-language:EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">ﻝ/2
2067	If we connect a A.C. volt meter to read A.C. voltage, It would read its:	A. RMS value B. Instantaneous value C. Valued average over a cycle D. Zero E. Both (B) and (C)
2068	If 250V is the RMS value of alternative voltage, then its peak value V_0will be:	A. 353.5V B. 250V C. 175V D. zero E. 400V
2069	A sinusoidally alternating voltage or current can be graphically represented by a:	A. Vector B. Rotating vector C. Clockwise vector D. Anticlockwise voltage vector E. None of these
2070	The length of rotating vector (on a certain scale) represents the:	A. Peak value of alternating quantity B. RMS value of alternating quantity C. Instantaneous value of alternating quantity D. Either (B) or (C) E. Either (A) or (B)

2071	Unless stated otherwise, when we speak of A.C. meter reading, we usualy mean:	A. Peak value B. RMS value C. Instantaneous value D. Peak-to-peak value E. Both (A) and (C0
2072	The basic circuit element in A.C. circuits are:	A. Resistor and capacitor B. Resistor and Inductor C. Capacitor only D. Both (B) and (C) E. None of these
2073	The basic circuit element in D.C. circuit is:	A. A capacitor B. A resistor C. An inductor D. Both (A) and (C) E. Both (A) and (B)
2074	Crystalline solids are in the form of:	A. Metals B. Ionic Compounds C. Ceramics D. Both (A) and (B) E. All of these
2075	The solids are classified as:	A. Metals B. Crystalline C. Amorphous D. Polymeric E. All except (A)
2076	Zirconia is classified as:	A. Ceramic solid B. Ionic compound C. Metal D. Either (A) or (B) E. Either (B) or (C)
2077	Each atom in a metal crystal vibrates about a fixed point with an amplitude that:	A. Decrease the rise in temprature B. Is not affected by rise in temprature C. Increase with rise in temprature D. Both (B) and (C) E. None of these
2078	The transition from solid to liquid is actually from:	A. Order to disorder B. Disorder to order C. Order to order D. Disorder to disorder E. None of these
2079	The transition from solid state to liquid state is:	A. Abrupt B. Slow C. Continous D. Discontinous E. Both (A) and (D)
2080	The force which maintain the strict long-range order between atoms of a crystalline solid is the:	A. Nuclear force B. Cohesive force C. Adhesive force D. Coulomb force E. None of these
2081	The word amorphous means:	A. Without any structure B. With definite structure C. Regular arrangement of molecules D. Both (B) and (C) E. None of these
2082	Amorphous solids:	A. Have definite melting points B. Are called glassy solids C. Have no definite melting point D. Both (B) and (C) E. Both (A) and (C)
2083	The pattern of crystalline solid is:	A. One dimesional B. Two dimensional C. Three dimensional D. None of these E. Either (A) or (B)
2084	In a cubic crystal, All solids meet at:	A. 60^o B. 90^o C. 109^o D. 30^o E. 10^o
2085	An ordinary glass gradually softens into a 'paste -like' state before it becomes a very viscous liquid. It happens almost at:	A. 800^oC B. 500^oC C. 300^oC D. 100^oC E. None of these

		E. None of these
2086	The arrangement or molecules or atoms in a crystalline solid can be studied by using:	A. Chemical methods B. Neutrons C. X-ray techniques D. Copper atoms E. Both (A) and (B)
2087	A unit cell is smallest basic structure which is:	A. One dimensional B. Two dimensional C. Three dimensional D. Four dimensional E. None of these
2088	Tick the one which is not a crystalline solid:	A. Zirconia B. Glass C. Copper D. Ceramic solid E. An ionic compound
2089	The temperature at which the vibrations become so great that structure of the Crystal breaks up, is called:	A. Critical temparature B. Temperature of vaporization C. Melting point D. Both (A) and (C) E. Both (A) and (B)
2090	The whole structure obtained by the repetition of unit cells is called:	A. Crystal lattice B. Amorphous solid C. Polymeric solid D. Polysterne E. None of these
2091	The pattern of NaCl particles have a shape which is :	A. Cubic B. Body centred cubic C. Simple cubic D. face centred E. Both (A) and (C)
2092	In crystalline solids, atoms are held about their equilibrium positions depending upon the strength of:	A. Adhesive force B. Nuclear forces C. Inter atomic cohesive force D. Electromagnetic force E. None of these
2093	The smallest three dimensional basic structure is called as:	A. An atom B. Unit cell C. Crystal lattice D. Polymer E. None of these
2094	Each atom in metal crystal:	A. Remains fixed B. Vibrates about a fixed point C. Moves randomly D. Rotates about center of a crystal E. None of these
2095	When relatively simple molecules are chemically combined into massive molecules, the reaction is called:	A. Fission reaction B. Fusion reaction C. Polymerization D. Any of these E. None of these
2096	A structure of polymeric solid is:	A. An ordered structure B. A disordered structure C. Intermediate between order and disorder D. Any of these E. None of these
2097	Examples of polymeric substances are:	A. Plastic B. Synthetic rubbers C. Zirconia D. All of these E. Both (A) and (B)
2098	Examples of crystalline solids are:	A. Cooper B. NaCl C. Zirconia D. Both (A) and (B) E. All of these
2099	Polymers are the chemical combination of carbon with:	A. Nitrogen B. Oxygen C. Hydrogen D. All of these E. None of these
2100	Tick the one which is not polymer solid:	A. Zirconia B. Polythene C. Nylon D. Synthetic rubber

		D. Synthetic rubber E. None of these
2101	Silicon is one of the mot commonly used:	A. onductor B. Dielectric C. Insulator D. Semiconduction E. Both (B) and (C)
2102	The use of chips in electrons is described in the form of:	A. Yellow boxes B. Black boxes C. Red boxes D. White boxes E. Orange boxes
2103	Crystal of germanium or silicon in its pure form at absolute zero acts as:	A. A conductor B. A semiconductor C. an insulator D. Both (A) and (C) E. Both (A) and (B)
2104	All the valence electrons present in a crystal of silicon are bound in their orbits by	A. Ionic bond B. covalent bond C. Molecular bond D. Both (A) and (B) E. Both (B) and (C)
2105	Majority charge carriers in the p-region of p-n junction are:	A. electrons B. positrons C. Holes D. Neutrons E. None of these
2106	A hole in p-type my be due to:	A. Trivalent impurity B. Breking of some covalent bond C. Pentavalent impurity D. Germanium E. Either (A) or (B)
2107	A potential barrier of 0.7 V exists across p-n junction made from:	A. Germanium B. Silicon C. Arsenic D. Gallium E. Indium
2108	In the forward biases situation, the current flowing across the p-n junction is a few:	A. amperes B. Milli amperes C. Micro amperes D. Pico amperes E. None of these
2109	In reverse-biased p-n junction, the reverse current is due to flow of:	A. Minority charge carriers B. Majority charge carriers C. Free electrons from p to n-region D. Holes from n to p-region E. all are true except (B)
2110	In full wave rectification, simultaneous action is that:	A. Two diodes conduct and two do not. B. One diode conduct and three do not. C. Three diodes conduct and one does not. D. All the four diodes conduct E. None of these
2111	A diode which can turn its current ON and OFF in nono seconds is called:	A. LED B. Photodiode C. An ordinary diode. D. Both (A) and (B) E. Both (B) and (C)
2112	The number of LED'S needed to display all the digits is:	A. Four B. Five C. Nine D. Six E. Seven
2113	A transistor has:	A. One region B. Two regions C. Three regions D. Four regions E. None is correct
2114	In the text book, the transistor amplifier circuit is a:	A. Common emitter circuit B. Common collector circuit C. Common base circuit D. Any of these E. None of these
2115	To make an LED, it is impreacticable to use:	A. Silicon B. Gallium arsenide C. Gallium arsenide phosphide

	To make an LED, it is impracticable to use:	C. Gallium arsenide phosphide D. Iron E. Both (B) and (C)
2116	To display a digit of EIGHT, the number of ON LED'S are:	A. Two B. Three C. Five D. Seven E. Eight
2117	An electronic computer is basically a vast arrangement of electronic switches which are made from	A. Resistors B. Transistors C. N -type crystals D. P-Type crystals E. Capacitors
2118	The number of input terminals of an op-amp is:	A. One B. Two C. Three D. Four E. None of these
2119	A digital system deals with quantities which has discrete values:	A. Two in number B. One in number C. Three in number D. Four in number E. None of these
2120	In AND gate, the output is 1 if:	A. Both inputs are 0 B. Both inputs are 1 C. Only one input is 0 D. Both (A) and (B) E. Both (A) and (C)
2121	To turn the transistor OFF, the base current is set:	A. At maximum value B. At zero C. Either (A) or (B) D. All are correct E. None of correct
2122	Op-amp has been discussed as comparator of:	A. Distances B. Voltages C. Velocities D. Magnetic fields E. Both (A) and (C)
2123	To designate the voltage as low or 0 by a logic gate, the specified minimum value is:	A. 0.2 volt B. 0.8 volt C. 0 volt D. 2.0 volt E. 5.0 volt
2124	Truth table of logic function:	A. Summarizes its output values B. Tabulates all its input conditions only C. Display all its input/output possibilites D. Is not based on logic algebra E. None of these
2125	If both the inputs given to a gate ae 1 such that the output is 0, then it is:	A. AND gate B. NOR gate C. OR gate D. NOT gate E. Both (A) and (C)
2126	Conversion of A.C. into D.C. is called:	A. Reftification B. Amplification C. Electric induction D. Magnetic induction E. None of these
2127	The concept of direction is purely:	A. Absolute B. Relative C. Relative to stars always D. Relative to the sun always E. None of these
2128	Strictly speaking, the earth is:	A. An accelerated frame of reference B. A non-inertial frame of reference C. An inertial frame of reference D. ^{A non-accelerated frame of reference} E. Both (A) and (B)
2129	The special theory of relatively treats the problems involving:	A. Inertial frames of reference B. Non-inertial frames C. Non-accelerated frame D. Botha (A) and (C) E. Both (B) and (C)
		A. Four postulates B. Three postulates

2130	The special theory of relativity is based on:	C. Two postulates D. One postulate E. None of these
2131	There is no way to detect:	A. Absolute uniform motion B. Accelerated motion C. State rest D. State of motion E. None of these
2132	the symbol to be used in relativity problems denotes:	A. Dilated time B. Proper time C. Life time D. Half time E. None of these
2133	Practically the quantity v/c is always:	A. less than one B. Equal to one C. Greater then one D. all of these E. None of these
2134	Due to relative motion of observer and the frame of reference of events, time always:	A. Dilates itself B. Contracts itself C. Stretches itself D. Both (A) and (C) E. None of these
2135	the dilation of time applies to the timing processes which are:	A. Physical B. Chemical C. Biological D. All of these E. None of these
2136	As compared to the distance measured by an observer on Earth, the distance from Earth to a star measured by an observer in a moving spaceship would seem:	A. Smaller B. Lerger C. Same D. Much larger E. None of these
2137	When the atomic particle are moving with velocities approaching that of light:	A. Newton's laws become valid B. Relativistic effects become prominent C. Botha(A) and (B) are valid D. Neither (A)nor (B) E. There mass becomes zero.
2138	The nature of radiations emitted by a hot body depends upon its:	A. Metarial B. Temperature C. colour D. Volume E. Length
2139	When platinum wire is heated, then at the temperature of 500 ^{o}C, it becomes:	A. Yellow B. Orange red C. Dull red D. White E. Cherry red
2140	The intensity of emitted energy (with wavelength) radiated from a black body at different temperatures was initially measured by:	A. Lummer B. Planck C. Pringsheim D. Both (A) and (B) E. Both (A) and (C)
2141	Wien's constant is measured in:	A. Metre per kelviin B. Metre kelvin C. Kelvin per meter D. Joules E. Dynes
2142	The ratio of energy E to the corresponding frequency (f) of the radiation (emitted or absorbed) is called:	A. Wien's constant B. Stefen's constnat C. Planck's constant D. Boltzmann's constant E. None of these
2143	Max Planck received the Nobel Prize for his discovery of energy quants in:	A. 1718 AD B. 1918 AH C. 1818 AD D. 1918 AD E. None of these
2144	If A represents linear momentum and c, the velocity of light, then unit of pc in international system of units is:	A. Newton B. Joule C. Joule-Sec D. Joule-s⁻¹ E. Watt

2145	The way through which electromagnetic radiations or photons interact with matter depends upon their:	A. Wavelength B. Frequency C. Energy D. Temperature E. All of these
2146	Electromagnetic -radiation means:	A. Photons B. protons C. Electrons D. Mesons E. None of these
2147	Intensity of light determines the:	A. Energy of each photon B. Number of photons C. Speed of photons D. Size of photons E. None of these
2148	The idea of quantization of energy was proposed by:	A. Einstein B. Max.Planck C. Maxwell D. Bohr E. Rutherford
2149	The Nobel Prize on the explanation of photoelectric effect was awarded to:	A. Max. Planck B. Maxwell C. Bohr D. Rutherford E. None of these
2150	Photoelectrons are emitted when ultraviolet light falls on:	A. Casium B. Silver C. Potassium D. Any of these E. None of these
2151	The unit of work function is:	A. Joule B. Electron volt C. That of threshold frequency D. Both (A) and (B) E. None of these
2152	The threshold frequency of sodium is 6 x 10^6MHz. The cut-off wavelength for this metal will be	A. 500 m B. 500 nm C. 500 km D. 500 cm E. None of these
2153	Compton studied the scattering of x-rays by loosely bound electrons from:	A. NaCl crystal B. Graphite crystal C. Zirconia D. Copper crystal E. None of these
2154	Compton derived an expression to find compton shift by applying to the process, the law of conservation of:	A. Energy only B. Momentum only C. Mass only D. Charge only E. Both (A) and (B)
2155	The year when A.H. compton was awarded Nobel Prize is:	A. 1923 B. 1927 C. 1931 D. 1935 E. None of these
2156	Compton shift refers to:	A. Photon B. Meson C. Proton D. Positron E. Both (B) and (D)
2157	Photoelectric effect takes place with a photon of:	A. Very high energy B. Very low energy C. Low energy D. High energy E. None of these
2158	A particle having mass and charge equal to that of an electron is called:	A. Proton B. Positron C. Pion D. Pi-meson E. Both (C) and (D)
2159	The positron was discovered by:	A. In cosmic radiation B. In 1932 C. By Carl Anderson D. All above E. By direc

		E. By diffe
2160	The first series which was identified in the spectrum of hydrogen is called:	A. Lyman series B. Balmer series C. Paschen series D. Brackett series E. Pfund series
2161	Balmer series was identified in:	A. 1685 B. 1785 C. 1885 D. 1985 E. 1585
2162	Balmer series lies in that region of electromagnetic wave spectrum which is called:	A. Visible region B. Invisible region C. Infra-red region D. ultraviolet region E. None of these
2163	The natural arrangement of colours in the spectrum of white light spectrum is	A. VIBGYOR B. ROYBGIV C. ROYBIGV D. BIGROYV E. None of these
2164	The results of spectra obtained by Balmer were expressed in 1896 by:	A. Bohr B. Rydberg C. Planck D. Rutherford E. Coulomb
2165	The process of formation of spectrum is called:	A. Interference B. Spectroscopy C. Dispersion D. Reflection E. Botha (A) and (D)
2166	Spectrum represents the number of component colours present in certain light in terms of:	A. Wavelength B. Frequency C. Energy D. Both (A) and (B) E. All of these
2167	Tick the series which lies in the visible region:	A. Lyman series B. Balmer series C. Paschen series D. Brackett series E. P fund series
2168	Tick the series which lie/s in. the infra-red region.	A. Pfund series B. Brackett series C. Paschen series D. All of these E. None of these
2169	Lyman series in the spectrum of hydrogen exists in the :	A. Infra-red region B. Visible region C. Ultraviolet region D. Both(A) and (B) E. None of these
2170	The formula of Brackett series can be obtained by putting in the general formula, the value of n equal to:	A. one B. two C. three D. four E. five
2171	An electron of the hydrogen atom in the second orbit is called its:	A. Ground state B. Excited state C. Ionized state D. Any of these E. None of these
2172	Energy required by an electron revolving in certain orbit to jump to an excited state is called:	A. Ionization energy B. Ionization potential C. Excitation energy D. Excitation potential E. None of these
2173	The transitions of electrons in the hydrogen atom result in the emission of spectral lies in the:	A. Ultra red region B. Visible region C. Ultraviolet region D. Any of these E. None of these
2174	The holes created in the L and M shells are occupied by transitions of:	A. Electrons from lower states B. Electrons from higher state C. Positrons from higher states

		D. Electrons from K shell E. Both (A) and (B)
2175	Braking radiation causes:	A. Continuous spectrum B. Line Spectrum C. Band spectrum D. Discrete specturm E. All of these
2176	In case of braking radiations, when the rate of deceleration is very large, the emitted radiation corresponds to:	A. Short wavelength B. Large wavelength C. Very large wavelenth D. Low frequency E. Both (B) and (C)
2177	X-rays can penetrate in a solid matte through a distance of several:	A. Kilo metres B. Metres C. Centimeters D. A few angstroms E. One micrometer
2178	An compared to solid matter, a crack or an air bubble allows:	A. Great amount of X-rays to pass B. Smallast amount of X-rays to pass C. Very samall amount of X-rays to pass D. Any of these E. None of these
2179	The shell closer to the nucleus is called:	A. N shell B. L shell C. K shell D. M shell E. O shell
2180	By CAT scans, we can detect the density difference of the order of:	A. 1% B. 20% C. 30% D. 50% E. 70%
2181	Laser is a beam of:	A. Visible light B. Infra red light C. Ultra violet light D. Violet light only E. yellow light only
2182	A metastable stae:	A. Is an excited state B. Is that in which excited electron is stable C. Is that in which excited electron is usually unstable D. Means a time interval of 10⁻⁸second E. Both (A) and (C)
2183	The He-Ne laser discharge tube is filled with:	A. 85% He B. 15% He C. 50% He D. 60% He E. 85% Ne
2184	The spectrum emitted from hydrogen filled discharge tube is:	A. Line spectrum B. Discrete spectrum C. And spectrum D. Absorption spectrum E. Both (A) and (B)
2185	The lasing or active medium in He-Ne laser discharge tube is:	A. Nitrogen B. Helium C. Hydrogen D. Neon E. None of these
2186	Neutron was suggested to be in the nucleus by:	A. Rutherford in 1920 B. Bohar in 1913 C. Dirac in 1928 D. Anderson in 1932 E. None of these
2187	Neutron was disvovered by:	A. Rutherford in 1920 B. Chadwick in 1922 C. Bohr in 1913 D. Compton in 1927 E. None of these
2188	Nucleon means:	A. Only electrons B. Only neutrons C. Only protons D. Both (A) and (C) E. Both (B) and (C)
		A. Atom

2189	The figure 1.007276μ shows the mass of an:	B. Positron C. Electron D. Neutron E. Proton
2190	Nucleus of a hydrogen atom may contain:	A. One neutron only B. Two protons and one neutron C. Two protons and two neutrons D. Aany of above E. One proton only
2191	The nuclei of an element having the same charge number but different mass numbers are called:	A. Isobars B. Isotopes C. Isomers D. Isobaric E. Isothermal
2192	The isotope/s of hydrogen is /are:	A. Protium B. Deuterium C. Tritium D. Both (A) and (B) E. All of these
2193	The nucleus/nuclei of hydrogen is/are:	A. Proton B. Deuteron C. Triton D. All of these E. None of these
2194	For Protium, the mass defect is:	A. Infinite B. Zero C. Very large D. A few grams E. None of these
2195	Referring to the above figure, we can say that of all the elements, the most stable element is	A. Phosphours B. Iron C. uranium D. Lithium E. Bismuth
2196	Referring to the above figure, the binding energy per nucleon increases upto mass number equal to:	A. 50 B. 100 C. 150 D. 200 E. 250
2197	Radioactivity was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. All of them E. None of these
2198	Radium was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. Rutherford E. Both (B) and (C)
2199	Marie curie and Pierre curie discovered:	A. Uranium B. Polonium C. Radium D. Both (A) and (C) E. Plutonium
2200	The nucleus left after the emission of some radiation is called:	A. Parent nucleus B. Daughter necleus C. Mother necleus D. Any of these E. None of these
2201	During the nuclear changes, the law/s of conservation that hold/s are that of:	A. Charge B. energy C. Momentum D. Mass E. All of these
2202	When certain nucleus emits anα particle, its mass number:	A. Increases by one B. Decreases by one C. Remain same D. Decreases by four E. None of these
2203	When certain nucleus emits aβ-particles, is mass number:	A. Remain same B. Increases by one C. Decreases by one D. Decreases by four E. None of these

2204	When thorium nucleus emits aβ-particle, the daughter nucleus is called:	A. Protactinium B. Actinium C. Uranium D. Radium E. Redon
2205	Rate of decay is actually described by.	A. Half line B. Decay constant C. Mean life D. Total life E. None of these
2206	The reciprocal of decay constant λ of a radioactive material is:	A. Frequency B. Half life C. Year D. Mean life E. None of these
2207	The unit of decay constant is:	A. Second B. Metre C. Hour D. Year E. Second⁻¹
2208	In wilson cloud chamber, the air becomes saturated with:	A. Alcohol vapours B. Water C. Helium gas D. Nitrogen gas E. None of these
2209	The counter, which also provides the power to the G.M. tube is called:	A. Thin mica window B. thin glass window C. Airy window D. Wooden window E. None of these
2210	Rutherford performed an experiment on nuclear reactions in:	A. 1718 A.D B. 1818 A.D C. 1918 A.D D. 2001 A.D. E. 1701 A.D.
2211	In his experiment on nuclear reactions, Rutherford bombardedα particles on:	A. Nitrogen B. Hydrogen C. Lead D. Oxygen E. Krypton
2212	A mass difference of 0.0012 u is equivalent to and energy of:	A. 0.5 Me V B. 1.13 MeV C. 5.13 MeV D. 1.13 keV E. 1.13 eV
2213	There is present in paraffin a large amount of:	A. Nitrogen B. Hydrogen C. Carbon D. Baryllium E. Lithium
2214	Examples of moderators used in a fission reactor is/are:	A. Water B. Heavy water C. Carbon D. Hydrocarbon E. All of these
2215	Heavy water is made of one oxygen atom and two atoms of:	A. Protium B. Deuterium C. Tritium D. Any of these E. None of these
2216	U-238 present in the natural uranium is about:	A. 59% B. 0.007% C. 99% D. 39% E. 19%
2217	Which are not the elementary particles?	A. Photons B. Leptons C. Hadrons D. Quarks E. None of these
2218	A pair of quark and antiquark makes a:	A. Meson B. Baryon C. Proton D. Neutron E. None of these

2219	Three quarks make:	A. An electron B. A meson C. A baryon D. A photon E. None of these
2220	0.0001210 has _____ significant figures.	A. Four B. Three C. Seven D. Eight
2221	Significant figures in 0.2020 are:	A. Two B. Three C. Four D. Five
2222	The definite number of significant figures in 5000 is:	A. Four B. Three C. Two D. One
2223	If the absolute uncertainty of an instrument is 0.0a1 cm, then its least count will be :	A. 0.005 cm B. 0.01 cm C. 0.02 cm D. 0.001 cm
2224	The error may occur due to:	A. Negligence B. Faulty apparatus C. Inappropriate method D. all of these
2225	Uncertainty is of following type/types:	A. Absolute B. Fractional C. Percentage D. All of these
2226	For addition and subtraction purposes, absolute uncertainties are:	A. Added B. Subtracted C. Multipiled D. Divided
2227	For multiplication and division purposes, percentage uncertainties are:	A. Add B. subtracted C. Multiplied D. Divided
2228	The maximum possible error in the reading of an instrument is _____ its least count.	A. Half of B. Quarter of C. Equal to D. Double than
2229	The maximum possible error in the reading for a meter rod with least count 1 mm is:	A. 0.005 mm B. 0.05mm C. 0.5mm D. 5.0mm
2230	A dimension stands for the _____ nature of certain physical quantity.	A. super B. Quantitative C. Qualitative D. Both B and C
2231	Dimension of mass is written as:	A. M B. [M] C. (M) D. [m]
2232	dimensions are the same for:	A. Work and energy B. Force and weight C. None of these D. Both a and b
2233	Which quantity has different dimension?	A. Tension B. Work C. Energy D. Torque
2234	The distance covered by a body in unit time is called.	A. Displacement B. speed C. Velocity D. Both B and C
2235	The decrease in velocity per unit time is called:	A. Variable Acceleration B. Average Acceleration C. Retardation D. None of these
		A. Velocity B. Average speed

2236	When the total displacement is divided by total time taken, we get:	C. Average velocity D. None of these
2237	Distance covered by a freely failing body n the first second of its motion will be:	A. 4.9 m B. 9.8 m C. 19.6 m D. 29.4 m
2238	If the acceleration of a body is negative, then slope of the velocity-time graph will be:	A. Zero B. Positive C. Negative D. Infinity
2239	If the acceleration of a body is not uniform, then velocity-time graph will be:	A. Curve B. Straight line C. Sphere D. All of these
2240	Acceleration in a body is always produced in the direction of :	A. Velocity B. Weight C. Force D. Both B and C
2241	Newton's first law is also called:	A. Law of torque B. Law of force C. Law of inertia D. None of these
2242	The product of force and time is called change in:	A. Momentum B. Impulse C. Force D. Both a and b
2243	Which quantity has the same dimension as that of impulse?	A. KE B. Power C. Momentum D. Work
2244	Change in momentum is one second is called:	A. Impulse B. Force C. Energy D. Work
2245	During the upward motion of the projectile, the vertical component of velocity:	A. Decreases B. Increases C. Remains constant D. None of these
2246	The path followed by the projectile is known as:	A. Cycle B. Hyperbola C. Trajectory D. Route
2247	A train cover 90 km in half an hour. the time taken by it to travel 15 km will be:	A. 20 minutes B. 48 minutes C. 10 minutes D. 5 minutes
2248	Acceleration in a body is always produced in the directin of:	A. Velocity B. Weight C. Force D. Botha B and C
2249	If two bodies of equal masses moving in the same direction collide elastically, then their velocities.	A. Are added B. Are subtracted C. Do not change D. Are exchanged
2250	When the mass of the colliding body is much larger than the mass of the body at rest, its velocity after collision.	A. Becomes half B. Becomes zero C. Ramains same D. Becomes double
2251	The collision in which KE is conserved but momentum is not conserved is called:	A. Elastic collision B. Inelastic collision C. any these D. None of these
2252	Change in momentum is one second called.	A. Impulse B. Force C. Energy D. Work
2253	If m means mass of gases objected per second from a rocket and v shows the change in velocity, than mv is named as:	A. Force B. Energy C. work D. impulse

2254	During the upward motion of the projectile, the vertical component of velocity.	A. Decreases B. Increases C. Remains constant D. None of these
2255	Energy stored in the spring of a watch is called	A. Potential energy B. Kinetic energy C. Nuclear energy D. Elastic potential
2256	When velocity of moving body is doubled, the quantity which is also doubled is its:	A. K.E. B. Acceleration C. Momentum D. P.E.
2257	Work-energy principle states that work done on the body by applied force is equal to change in:	A. Potential energy B. Kinetic nergy C. Linear momentum D. None of these
2258	The energy stored int he water of the dam is:	A. Electric energy B. Kinetic energy C. Potential energy D. None of these
2259	When two protons are brought are brought closer potential energy of both of them:	A. Increases B. Decreases C. Remains same D. None of these
2260	Escape velocity from surface of Moon as compared to that from Earth surface is:	A. Greater B. Smaller C. Equal D. None of thes
2261	The types of mechanical energy is/are:	A. Kinetic energy B. Potential energy C. Both of these D. None of these
2262	The commercial unit of electrical energy is :	A. K Watt B. KWH C. Horse power D. Joule
2263	When a falling body hits ground, its KE changes to _____ energy.	A. Potential B. Chemical C. Mechanical D. sound and heat
2264	The value of escape velocity of Earth planet comes out to be:	A. 11 m/sec B. 11 km/sec C. 11 km/hour D. 11 cm/sec
2265	Which of the following is not a unit of power:	A. J-sec B. Watt C. N m/sec D. Horsepower
2266	Watt x second is unit of:	A. Force B. Work C. Power D. None of these
2267	Power is a :	A. Vector quantity B. Base quantity C. Scalar quantity D. None of these
2268	The power of an electric generating station is expressed in:	A. Kilo Jule B. Kilowatt-hour C. Kilo watt D. Watt
2269	The consumption of energy by a 60 W bulb in 2 minutes is:	A. 2 watt-hour B. 120 watt-hour C. 30 watt-hour D. None of these
2270	Teh consumption of energy by a 1000 watt heater in half an hour is:	A. 5 Kwh B. 0.5 Kwh C. 2.5 Kwh D. 3.2 Kwh
2271	If work is done at the rate of 2 k j per second, then total work done is half an hour will be:	A. 0.5 Kwn B. 2 Kwh C. 1 Kwh D. None of th

		D. None of these
2272	The ultimate source of money sources of energy is:	A. Sun B. Air C. Water D. Petroleum
2273	A solar cell converts energy of the Sun into:	A. Heat energy B. Magnetic energy C. Light energy D. Sound energy
2274	The tidal energy is due to gravitational pull of :	A. sun B. moon C. Mars D. None of these
2275	The amount of coal used since 1945 up till now as compared to that used in the whole of history before that is	A. Much more B. Very small C. No amount at all D. None of these
2276	A solar cell is made from:	A. Iron B. Silicon C. Germanium D. Copper
2277	Most of the geysers occur in:	A. Volcanic regions B. Magnetic regions C. Northern region D. None of these
2278	The tidal energy is produced due to rotation of Earth relative to:	A. Moon B. Sun C. Oceans D. Water
2279	Final velocity of a hoop is _____ the final velocity of a disc having same mass and radius on coming down an inclined plane.	A. Greater than B. smaller than C. Equal to D. None of these
2280	Formula for calculating moment of inertia of the bodies of one pair is same. Tick the answer.	A. Disc, sphere B. sphere, hoop C. Thin rod, hoop D. Hoop,disc
2281	Moment of linear momentum is called.	A. Moment arm B. Moment of inertia C. Inertia D. Angular momentum