Physics 10th Class English Medium Online Test

Sr	Questions	Answers Choice
1	Mathematical formula of spring constant is:	A. F/x B. X/F C. F/t D. F/m
2	When a body moves to and fro about a point its motion is called:	A. Random motion B. Linear motion C. Vibratory motion D. Rotatory motion
3	The S.I unit of Spring constant is:	A. Nm B. N C. Nm-1 D. Ns
4	Formula for time period of spring mass system is represented by:	A. T = 2π√m/k B. T = 2π √k/m C. T = 1/2π√k/m D. T = 1/2π√m/k
5	If the mass of a spring mass system is doubled, its time period becomes:	A. √2 T B. T/2 C. √T/2 D. T/√2
6	The formula of time period of simple pendulum is:	A. T = 2π √L/g B. T = 2π (L/g) C. T = 2π√1/g D. T = 1/2π √L/g
7	If the length of a simple pendulum is halved its time period will become:	A. T/2 B. T = T/√2 C. √2T D. 2T
8	During S.H.M acceleration of the body is maximum at:	A. Mean position B. Extreme positions C. Between mean & Extereme D. None of these
9	The waves in which particles of the medium vibrate perpendicular to the direction of propagation of waves are called:	A. Transverse waves B. Longitudinal waves C. Electromagnetic waves D. None of these
10	Wave equation is defined as:	A. f = Tλ B. f = V λ C. V = 2fλ D. V = fλ
11	If a wave moves in a slinky spring with frequency of 4Hz and wave length of 0.4m, the speed of the wave will be:	A. 1.0 ms-1 B. 1.2 ms-1 C. 1.4 ms-1 D. 1.6 ms-1
12	The product of frequency (f) and wavelengthλ is equal to:	A. Time period B. Amplitude C. Wave speed D. Wave energy / frequency
13	Sound waves are an example of:	A. Transverse waves B. Electromagnetic waves C. Longitudinal waves D. All of these
14	The distance between two consecutive compressions or rarefactions in longitudinal waves is called:	A. Amplitude B. Wavelength C. Half wavelength D. 1/4 wavelength
15	The character by which lound and faint sound can be distinguished is called:	A. Pitch B. Quality C. Loudness D. Intensity
16	Pitch of sound depends upon:	A. Frequency B. Amplitude C. Intensity D. Time period

17	High pitch means:	A. High wavelength B. High frequency C. High time period D. High energy
18	The S.I unit of intensity of sound is:	A. Wm B. Wm2 C. Wm-2 D. Wm-1
19	The difference between the loudness of faintest audible sound and loudness of another sound is called:	A. Pitch of sound B. Quality of sound C. Sound level D. Intensity of sound
20	If the intensity of faintest audible sound is Io and of another sound is I then sound level will be:	A. K log Io/I B. Log Io/I 2K C. K log Io/I2 D. K log I/Io
21	Mathematical formula of sound level (in bel) is:	A. S.L = 10 log I/Io (bel) B. S.L = K log I/Io (bel) C. S.L = Log I/Io (bel) D. S.L = 10 log Io/I (bel)
22	After how much time the echo must be heard?	A. 0.1 s B. 0.10 s C. 0.20 s D. 0.50 s
23	To hear echo, the distance between the observer and the obstacle is 17m then how much distance will the sound travel?	A. 60m B. 54m C. 17m D. 34m
24	The speed of sound in the air at one atmospheric pressure at room temperature is:	A. 343 ms-1 B. 346 ms-1 C. 349 ms-1 D. 339 ms-1
25	In a convex mirror the size of the image:	A. Is smaller than the size of the object B. Is greater than the size of the object C. Depends upon the position of the object D. Is equal to the size of the object
26	The principal focus of a concave mirror is:	A. Virtual B. Real C. Imaginary D. Dual aspect
27	The focal length is related to radius of curvature by the formula:	A. f = 2R B. f = 4R C. f = R/2 D. R = f/2
28	An object is placed 6 cm away in front of a concave mirror that has 10 cm focal length. Determine the location of the image:	A. -5 cm B. -10 cm C. -15 cm D. -20 cm
29	Snell's law is stated as:	A. Sin i / sin r = n1/n2 B. sin i / sin r = n2/n1 C. sin r / sin i = n2/n1 D. sin r / sin i = 2n2/n1
30	Mathematical relationship between critical angle "C" and refractive index "n" is:	A. N = C B. N = 1 / sin c C. N = 1 / cos c D. N = 1 / sin2 c
31	When light passes through a prism it deviates from its original path due to:	A. Reflection B. Diffraction C. Interference D. Refraction
32	After refraction from a convex lens, rays of light parallel to the principal axis converge at a point, this point of convex lens is called:	A. Principal focus B. Pole C. Focal length D. Optical center
33	The S.I unit of power of a lens is:	A. Dioptre B. Volt C. Ampere D. Watt
34	If focal length of a lens is 1m, then its power will be:	A. 1 D B. 0.5 D C. 1.5 D D. 1 D
35	When the object is placed beyond 2F of a convex lens, the image formed will	A. Real, inverted and smaller than the object B. Real, inverted and of the same size as the object

35	of a convex lens, the image formed will be:	C. Real, inverted and larger in size than the object D. Virtual, erect and larger in size than the object
36	Optical fibers work on the principle of:	A. Refraction B. Reflection C. Total internal reflection D. Diffraction
37	Unlike charges always:	A. Repel each other B. Attract each other C. Sometimes repel and attract each other D. Both A and B
38	If we double the distance between two charges, what will be the change in the force between them?	A. Half B. Double C. One fourth D. Four times
39	In the presence of a charged body, an insulated conductor develops positive charge at one end and negative charge at the other end, this i- called:	A. Electrostatics B. Electrostatic induction C. Magnetism D. Electromagnetic induction
40	Which device is used to store charge:	A. Resister B. Capacitor C. Dielectric D. Fuse
41	Electric field lines of force were first introduced by:	A. Ampere B. Farady C. Fleming D. Coulomb
42	If a charged body is brought near a negatively charged electroscope and the leaves of electroscope diverge, then the body is:	A. Positively charged B. Negatively charged C. Neutral D. None of these
43	Coulomb's law is mathematically stated as:	A. F = k q1 q2/r3 B. F = k q2 q2 / r2 C. F = k q1 q2 / r D. F = k q1 q2 / r2
44	A positive electric charge:	A. Attracts other positive charge B. Repels other positive charge C. Attracts a neutral particle D. Repels a neutral particle
45	Field around a charge in which that charge exerts a force on a point charge brought in that field is called:	A. Electric field B. Magnetic field C. Neutral zone D. Point charge
46	The SI unit of electric field intensity is:	A. NC-2 B. NC-1 C. Ns D. Nm-1
47	The S.I unit of electric potential is:	A. Watt B. Joule C. Coulomb D. Volt
48	Mathematical formula of capacitance of a capacitor is:	A. C = QV B. C = Q/V C. C = V/Q D. C = V2/Q
49	The S.I unit of electric current is:	A. Volt B. Ampere C. Coulomb D. Watt
50	The S.I unit of potential difference is:	A. Ampere B. Coulomb C. Volt D. Watt
51	Mathematical formula of electromotive force (e.m.f) is:	A. E = W/Q B. E = Q/W C. E = WQ D. E = W2Q
52	Which instrument measures the potential difference:	A. Voltmeter B. Barometer C. Galvanometer D. Ammeter
53	Electric current in conductors is due to the flow of:	A. Positive ions B. Negative ions C. Positive charge D. Free electrons

54	In mathematical form of Ohm's law, "R" is:	A. Resistance B. Specific resistance C. Resistor D. Resistivity
55	Which wire has lowest resistance?	A. Thick wire B. Thin wire C. Very thin wire D. All
56	A conductor of electric current is:	A. Wood B. Rubber C. Plastic D. Copper
57	The S.I unit of electric power is:	A. Volt B. Watt C. Ampere D. Joule
58	What is the voltage across a 6Ω resister when 3A current passes through it?	A. 2V B. 9V C. 18V D. 36V
59	Mathematical form of Ohm's law is:	A. V = IR B. V = I2R C. V = Qt D. V = IR2
60	Which one is a safety device?	A. Switch B. Fuse C. Circuit breaker D. Both B and C
61	Magnetic effect of electric current was first discovered by:	A. Faraday B. Ampere C. Volta D. Lenz
62	When an electric current passes through a conductor, which field is produced around it?	A. Electric field B. Magnetic field C. Gravitational field D. Electrostatic field
63	A.C generator works on the principle of:	A. Electrostatic induction B. Electromagnetic induction C. Law of gravitation D. Third law of motion
64	Number of poles in a magnet is:	A. One B. Two C. Three D. Unlimited
65	Electric motor converts electrical energy into:	A. Chemical energy B. Solar energy C. Heat energy D. Mechanical energy
66	In electric motor, the brushes are made of:	A. Lead B. Graphite C. Iron D. Wood
67	The true ratio of a transformer is 10. It means:	A. Vs = 10Vp B. Ns = Np/10 C. Ns = 10NP D. VS= Vp/10
68	Changing magnetic field in a closed circuit can induce:	A. e.m.f B. Electric current C. Force D. Both A and B
69	Which device is used to increases / decreases A.C Voltage?	A. Electric motor B. Transformer C. A.C Generator D. Solenoid
70	The coil of a transformer which is connected to A.C is called:	A. Primary coil B. Secondary coil C. Field coil D. Armature coil
71	A transformer has 100 turns in its primary and 500 turns in secondary coil. If 6 volts D.C is applied across its primary, the voltage induced across its secondary coil will be:	A. 0 volt B. 30 volts C. 45 volts D. 60 volts
72	Transformer works on _____ supply.	A. A.C B. D.C C. Battery

		D. Both Á and B
73	In 1950, physicists observed that in cathode ray tube a special type of rays produced from cathode, these rays were called:	A. Cathode rays B. X-rays C. Alpha rays D. Gamma rays
74	The emission of electron from the surface of hot metal is called:	A. Ionization B. Conduction C. Thermionic emission D. Convection
75	For the emission of electrons from the tungsten filament the values of current and voltage are taken as:	A. 0.1 A and 2V B. 0.2 A and 4V C. 0.3A and 6V D. 0.4A and 8V
76	Which device is used to show the change in the value of current or electrical potential as a graph?	A. Cathode ray tube B. Electron gun C. Oscilloscope D. Transformer
77	Those quantities whose values change gradually or stay constant are called:	A. Physical quantities B. Digital quantities C. Log quantities D. Analog quantities
78	Those quantities whose values do not remain constant are called:	A. physical quantities B. Digital quantites C. Log quantities D. Analog quantities
79	The base of computer operation are:	A. 1,2 B. 0, 1 C. 0, 2 D. 1, 10
80	The device which converts digital quantities into analog quantities is called:	A. ADC B. DAC C. ACD D. CAD
81	If Current flowing through switch then the output is expressed as:	A. 0 B. 1 C. -1 D. 2
82	The symbol of AND operation is:	A. + B. - C. . D. *
83	Boolean expression for AND operation is:	A. $X = \overline{A}$ B. X = A + B C. X = A . B D. $X = \overline{AB}$
84	Two switches attached in series work on which operation?	A. AND operation B. OR operation C. NOT operation D. NOR operation
85	In computer terminology, proceed data is called:	A. Software B. Program C. Information D. Digital data
86	Short form of information Technology is:	A. IT B. ITS C. CBIS D. IS
87	Which is not a hardware device?	A. CPU B. Windows C. Keyboard D. Mouse
88	It is used in satellite communication:	A. Radio waves B. Micro waves C. Light waves D. Electrical waves
89	The device which is used to convert sound waves into electrical signal is called:	A. Ear piece B. Microphone C. Transmission channel D. Receiver
90	Which waves of the following has highest frequency?	A. Radio waves B. Micro waves C. Light wave D. Sound wave
		A. Hardware

91	The parts of computer which can be seen and touched are called:	A. Hardware B. Software C. Modem D. CPU
92	A group of instructions or a program which guides hardware to do work is called:	A. Hardware B. Micro processor C. Memory D. Software
93	Which memory consists of integrated circuits?	A. Primary memory B. Audio cassette C. Video cassette D. Compact cassette
94	Which statement of the following is false for primary memory?	A. The base of primary memory is electronics B. This is a random access memory C. It gets lost when computer switches off D. It is built on laser technology
95	The example of magnetic disk is:	A. Compact disk B. Floppy disk C. Audio cassette D. Video cassette
96	Electronic message is called:	A. Internet B. Browser C. E-mail D. Computer
97	Which particles are nucleons?	A. Electrons and protons B. Protons and neutrons C. Electrons and neutrons D. Electrons and positrons
98	The symbol of atomic mass number is:	A. A B. X C. N D. Z
99	The number of neutrons in the nucleus of tritium is:	A. 1 B. 2 C. 3 D. 4
100	Who discovered the phenomenon of natural radioactivity?	A. Henry Becurial B. Merry Curi C. Perry D. Rutherford
101	Which radiations are free of effect of electric and magnetic field?	A. Alpha B. Beta C. Gamma D. Alpha and beta
102	Radiations present in atmosphere due to the presence of different radioactive elements are:	A. Cosmic radiations B. Background radiations C. secondary radiations D. Electromagnetic radiations
103	The symbol of alpha particles is:	A. 4AHe B. 42He C. 0-1B D. 00Y
104	The phenomenon in which radiations convert the matter into positive and negative ions is called:	A. Radio activity B. Excitation C. Ionization D. Electrolysis
105	The half life of radium - 226 is 1620 years. If N is its total amount then after the four half lives, its left amount will be:	A. 1/2 N B. 1/4 N C. 1/8 N D. 1/16 N
106	Which element is used for the monitoring of thyroid glands?	A. Iodine- 131 B. Phosphorus-32 C. Carbon-14 D. Potassium-40
107	Which element is used to locate the ulcer in brain?	A. Iodine-131 B. Phosphorus-32 C. Carbon-14 D. Potassium-40
108	The process of breaking a heavy nucleus after the bombardment of neutrons into two small nuclei is called:	A. Nuclear fission reaction B. Nuclear fusion reaction C. Nuclear Radiation D. Nuclear chain reaction
109	Which of the following is an example of simple harmonic motion ?	A. Motion of the simple pendulum B. The motion of ceiling fan C. The spining of the Earth on its axis D. A bouncing ball on a floor

110	If the mass of the bob of a pendulum is increased by a factor of 3. The period of the pendulum's motion will:	A. Be increased by a factor 2 B. Remain the same C. Be decreased by a factor of 2 D. Be decresaed by a facro of 4
111	Which of the following devices can be used to produce both a transverse and longitudinal waves?	A. A string B. A ripple tank C. A helical spring D. A tuning fork
112	Wave transfer	A. Energy B. Frequency C. Wavelength D. Velocity
113	Which of the following is a method of energy transfer.	A. Conduction B. Reatiation C. wave motion D. all of these
114	The vacuum all electromagnetic wave have the same	A. speed B. frequency C. amplitude D. wavelength
115	A large ripple tank with a vibrator working at a frequency of 30 Hz produces 25 complete wae in distance of 50 cm. The velocity of the wave is:	A. 54 cms⁻¹ B. 60 cms⁻¹ C. 750 cms⁻¹ D. 1500 cms⁻¹
116	Which of the following characteristic of a wave is independent of the others .	A. speed B. frequency C. amplitude D. wavelength
117	The relation between v,f andλ of a wave is:	A. vf=λ B. fλ = v C. vλ =f D. v=λ/f
118	The disturbance travelling in a medium is called:	A. Wave motion B. Simple harmonic motion C. Motion D. both a ,b
119	The waves, which are used to detect the broken bones, are called:	A. Light waves B. x-rays C. Sound waves D. both b,c,
120	The force applied on the mass attached with a spring is represented by:	A. F_a B. F_c C. F_{ext} D. F_s
121	In there is no extension in the spring then this positon is called	A. Equilibrium position B. Unequilibrium C. Nautral equilibrium D. Stable equilibrium
122	The unit of spring constnat is:	A. m B. kg C. Nm² D. Nm⁻¹
123	If the distance is nspring is 'x' of mass 'm' attached with a spring then restoring force is:	A. F =ma B. F =kx C. F = mx D. F= m/a
124	The ratio of external force applied on the spring to displacement is called:	A. Hook's law B. Constant C. Spring constant
125	The time required to complete one round trip (vibration) abut mena position is called:	A. Time period B. Freqency C. Amplitude D. None of these
126	The time period of mass attached with a spring can be calculated by:	A. T = 2π√L/g B. T = 1/T C. T =2π√g/L D. T = 2π√m/k
127	The time period of simple pendulum can be calculated by:	A. T = 2π√L/g B. T = 2 π √m/k C. T = 2 π √g/L D. T = 2 π √K/m
128	The maximum displacement from mean position is called:	A. Maximum height B. Time period C. Amplitude D. Interval

		D. Interval
129	The displacement produced in the spring directly proportional to force is called:	A. Hook's law B. Boyle's law C. Newton's law D. both 'b' and 'c'
130	At mean position of pendulum, the potential energy of the pendulum is:	A. Maximum B. Minimum C. Much more D. Both a and c
131	It mean position kinetic energy of the ball is:	A. Minimum B. Zero C. Maximum D. None of these
132	At extreme position potential energy of the pendulum is	A. Maximum B. Miimum C. a and b D. zero
133	In simple Harmonic motion, the acceleration of the body is _____ proportional to the displacement.	A. Inversely B. Directly C. Equally D. None of these
134	The value of acceleration in simple harmonic motion at mean position is	A. Maximum B. Zero C. 10 N D. Both a , b
135	The waves in which particle of the medium vibrate parallel to the direction of waves are called	A. Longitudinal waves B. Transverse waves C. Electromagnetic waves D. both b and c
136	The waves in which particles of the medium vibrate perpendicular to the directions waves are:	A. Electromagnetic waves B. Sound waves C. bothe a and b D. Transverse waves
137	The energy is transferred from one place to another:	A. Through matter B. Thouth waves C. both a and b D. None of these
138	The wave properties	A. Reflection B. Refraction C. Diffraction D. All of these
139	The instrument used to study the properties of waves is called:	A. Ripple tank B. Stroboscope C. Pendulum D. None of these
140	The part of waves at which particles of the medium are below the normal position are called:	A. Extreme positon B. Crest C. Trough D. None of these
141	The distance between two consecutive troughs or crests is called:	A. wavelength B. Frequency C. Time period D. None of these
142	The number of wavelength of waves passing through a point in one secnd is called:	A. Time period B. Cycle C. Frequency D. None of these
143	The unit of frequency is:	A. Heartz B. Vibration per second C. Cycle per second D. all a, b, c
144	The speed of waves can be calculated by:	A. Vt B. d x t C. f λ D. Tf
145	The water waves after striking the hurdle will:	A. Reflect B. Refract C. Diffract D. All a , b, c
146	The motion in which the friction reduces the mechanical energy of the system as times passes and the amplitude of motion reduces is called:	A. SHM B. Randum motion C. Damped motion D. None of these
	The oscillations of a system in the	A. Resistive force B. Attractive force

147	presence of _____ force are called amp oscillations:	B. Attractive force C. Both of these D. None of these
148	Shock absorbers in automobiles are one practical application of:	A. SHM B. Random motion C. Damped motion D. None of these
149	Time period is reciprocal of:	A. Frequency B. Cycle C. Wavelength D. Amplitude
150	Thye Water waves obey the laws of	A. Reflection B. Refraction C. Diffraction D. All of these
151	The time period of frequency and time period is equal to:	A. v B. 1 C. 0 D. λ
152	It mass of bob o a simple pendulum is doubled, its time period.	A. is doubled B. become four times C. remains same D. none of the above
153	Diffraction of wave can be observed clearly only when the size of slit or obstacle is nearly_____ to the wavelength of the wave:	A. Two times B. Equal C. Four times D. None of these
154	Which is an example of a longitudinal wave?	A. Sound wave B. Light wave C. Radio wave D. Water wave
155	How does sound travel from its source to your ear?	A. Byc changes in air pressure B. By vibration in wires or strings C. By electromagnetic waves D. By infrared waves
156	Which form of energy is sound?	A. Electrical B. Mechanical C. Thermal D. Chemical
157	Astronauts is space need to communicate with each other by radio links because:	A. Sound waves travel very slowly in space. B. Sound waves travel very fast in speace C. Sound waves cannot travel in space D. Sound waves have low frequency in space
158	The loudness of sound is most closely related to its:	A. Freqeucy B. Period C. Wavelength D. Amplitude
159	For normal person audible frequency range for sound wave lies between.	A. 10 Hz and 10KHz B. 20 Hz and 20KHz C. 25 Hz and 25KHz D. 30 Hz and 30KHz
160	When frequency of sound wave is increased, which of the following decreases? i) Wavelength ii) Period iii) Amplitude	A. i only B. (iii) only C. i and ii only D. i and iii only
161	The speed of sound was accurately measured in:	A. 1736 B. 1737 C. 1738 D. 1739
162	The speed of sound is air at 21 ^{o}C is:	A. 336 ms⁻¹ B. 343 ms⁻¹ C. 430 ms⁻¹ D. 470 ms⁻¹
163	Bets can hear sound of frequency up to:	A. 100,000 Hz B. 25000 Hz C. 120,000 Hz D. 1000 Hz
164	The unit of intensity of sound:	A. wm⁻¹ B. wm C. wm⁻² D. wm⁻³
165	The intensity of lawn mover is:	A. 10⁻¹ wm⁻² B. 10⁻²wm⁻²

	The intensity of lawn mover is:	C. 10⁻¹wm⁻³ D. 10⁻³wm⁻²
166	The speed of sound in air at 0 ^{O}C is:	A. 331 ms⁻¹ B. 332 ms⁻¹ C. 333 ms⁻¹ D. 336 ms⁻¹
167	The speed of sound of water at 25 ^{O}C is:	A. 1530 ms⁻¹ B. 1531 ms⁻¹ C. 1560 ms⁻¹ D. 1570 ms⁻¹
168	The speed of sound in iron at 25 ^{O}C is ms^{-1}	A. 5950 B. 5900 C. 6950 D. 6940
169	The frequency of silent whistle is:	A. 20,000 Hz - 25000 Hz B. 2000 Hz - 25000 Hz C. 200 Hz - 2000 Hz D. 25000 Hz
170	The sound level of rustling of leave is:	A. 1 dB B. 20 dB C. 30 dB D. 10 dB
171	To hear echoes, the minimum distance of the obstacle from source of sound should be:	A. 10 m B. 15 m C. 17 m D. 20 m
172	Old people can not hear sound above then _____ Hz	A. 1000 B. 15000 C. 20000 D. 10000
173	Which of the following quantities is not change during refraction of light?	A. Its direction B. Its speed C. its frequency D. Its wavelength
174	A converging mirror with a radius of 20 cm creates a real image 30 cm from the mirror. What is the object distance?	A. 5.0 cm B. 7.5 cm C. 15 cm D. 20 cm
175	An object of placed at he centre of curvature of a concave mirror. The image produced by the mirror is located:	A. out beyond the centre of curvature. B. at the centre of curvature C. between the centre of curvature and the focal point D. at the focal point
176	An object is 14 cm is front of a convex mirror. The image is 5.8 cm behind the mirror. What is the focal length of the mirror?	A. 4.1 cm B. 8.2 cm C. 9.9 cm D. 20 cm
177	The index of refraction depends on:	A. The focal length B. The speed of light C. the image distance D. The object distance
178	Which types of image is formed by a concave lens on a screen?	A. Inverted and real B. Inverted and virtual C. upright and real D. Upright and virtual
179	Which types of image is produced by the converging lens of human eye if it view a distant object?	A. Real , erect, same size B. Real, inverted, diminshed C. Virtual, erect,diminshed D. Virtual, inverted, magnified
180	Image formed on a camera is:	A. real,invertred, and diminished B. virtual, upright and diminshed C. virtual, upright and magnified D. real, inverted and magnified
181	If a ray of light is glass is incident on an air surface at an angle greater than the critical angle, the ray will.	A. refract only B. reflect only C. partially refract and partially reflect D. Diffract only
182	The critical angle for a beam of light passing from water into air is 48.8 degrees. This mean that all light rays with an angle of incidence greater than this angle will be:	A. Absorbed B. Totallly reflected C. Partially reflected and partially transmitted D. Totally transmitted
183	The distance of spherical mirror is called:	A. Curvature B. Aperture C. Sphere D. a,b

184	The centre of spherical mirror is called:	A. Focus B. Axis C. Centre D. Pole
185	Half of radius of curvature is called:	A. Focal length B. Principal focus C. Axis D. None of these
186	The point through which rays of light pass after reflection from concave mirror is called principal:	A. Focus B. Circle C. Axis D. Radius
187	The distance between principal focus and pole of mirror is called:	A. Princpal focus B. Focal length C. P D. Image
188	The mirror whose inner surface is reflecting is called:	A. Concave mirror B. Convex mirror C. Miroor D. Lens
189	The mirror whose outer surface is reflecting is called:	A. Concave mirror B. Convex mirror C. Lens D. Mirror
190	The line which passes through pole of the mirror and center of curvature is called principal:	A. axis B. Focus C. Line D. None of these
191	The ray of the light after reflection from concave mirror passes through:	A. Centre B. Principal focus C. Pole D. None of these
192	Spherical mirrors are used in:	A. Medical B. Search light C. Microscope D. All of these
193	Magnification of mirror is given by:	A. m=p/q B. m=q/p C. m=pxq D. m=1/p+q
194	The distance of the object from the mirror is represented by :	A. q B. p C. m D. F
195	The distance of image from mirror is represented by:	A. q B. p C. F D. m
196	Snell' law is:	A. n = sin<x/sin <r B. n=sin <i/sin<r C. n = sin <r/sin<i D. <i/<r
197	Concave mirror formula is given by:	A. R = 2r B. sin<i/sin<r C. 1/f=1/p+1/q D. 1/f=1/p-1/q
198	Focal length for concave mirror is :	A. -ve B. +ve C. same D. none of these
199	Bouncing back of light after striking the surface is called:	A. Refraction B. Reflection C. Diffraction D. Interference
200	The ratio of image height to object height is called:	A. Linear magnification B. Power C. Refraction D. Radius of curative
201	When a ray of light enters from denser medium to rare medium, the angle of incidence for which angle of refraction is 90^{o} is called:	A. angle of incidence B. critical angle C. angle of refrection D. None of these
		A. 24^o B. 48^o

202	The critical angle for glass to:	B. 46^o C. 42^o D. 50^o
203	Critical angle for diamond is:	A. 60^o B. 24^o C. 26^o D. 49^o
204	Angle opposite to the base of triangle of prism is called:	A. angle of incidence B. angle of refraction C. angle of prism D. emerging angle
205	The ray of light striking to the side of prism is called:	A. refraction ray B. incident ray C. reflected ray D. emergent ray
206	The minimum value of angle of deviation is called:	A. Minimum angle B. incident angle C. angle of minimum deviation D. None of these
207	The angle of which prism deviates the incident ray is called:	A. angle of incident B. angle of reflection C. angle of deviation D. angle of minimum deviation
208	To see from submarine the ship at the surface of water , we use:	A. Telescope B. Microscope C. Peri scope D. Prism
209	The totally reflectiing prism one angle is of:	A. 45^o B. 90^o C. 180^o D. 120^o
210	In totally reflecting prism one angle is of 90^{o}, and other two angles are of:	A. 30^o,30^o B. 45^o,90^o C. 45^o,45^o D. 40^o,40^o
211	Totally reflecting prism is used in:	A. periscope B. binoculars C. periscope and binocular D. telescope
212	Totally reflecting prism turns the incident ray at an angle of:	A. 90^o B. 60^o C. 75^o D. 45^o
213	The refractive index of internal coating of optical fibre is:	A. 1.56 B. 1.51 C. 1.53 D. 1.58
214	Optical fibre are:	A. Cheap B. Flexible C. Lighter D. All of these
215	To see stomach problems we use:	A. Gastroscope B. Bronchoscope C. Cystoscope D. All of these
216	Sun light consist of _____ colour	A. 6 B. 7 C. 5 D. 2
217	The refractive index of air is:	A. 6 B. 7 C. 2 D. 1,0003
218	Power of lens is:	A. q/p B. 1/q C. 1/p D. 1/f
219	Speed of light in air is ms^{-1}	A. 3 x 10⁸ B. 3 x 10¹¹ C. 3 x 10⁵ D. 340
220	A normal eye can see near objects clearly at a distance of:	A. 20 cm B. 25 cm C. 30 cm D. 35 cm

221	Power of convex lens is 10 D. Its focal length is:	A. 100 m B. 10 m C. 1 m D. 0.1 m
222	_____ is always virtual in case of convex mirror.	A. p B. image C. object D. all of these
223	A positive electric charge:	A. Attracts other positive charge B. Repels other positive charge C. Attracts a neutral charge D. Repels a neutral chage
224	An object gains excess negative charge after being rubbed against another object, which is:	A. Neutral B. Negatively charged C. Charged D. Either, a,b,and c
225	Two uncharged objects A and B are rubbed against each other. When object B is placed near a negatively charged object C, the two objects repel each other. Which of these statements is true about object A.	A. Remains uncharged B. Becomes positively charged C. Becomes negatively charged D. Unpredicatable
226	When you rub a plastic rod against your hair several times and put it near some bits of paper, the pieces of papers are attracted towards it. What does this observation indicate?	A. the rod and the paper are oppositely charged B. the rod acquires a positive charge C. the reod and the paper have the same charges D. the rod acquires a negative charge
227	According to Coulomb's law , what happens to the attraction of two oppositely charged objects as their distance of separation increases?	A. Increase B. Decreased C. remain unchanged D. can not be determined
228	The coulomb's law is valid for the charges which are:	A. moving and point charges B. moving and non-point charges C. stationary and pont charges D. stationary and large size charges
229	A positive and negative charges are initially 4 cm apart. When they are moved closer together so that they are now only 1 cm apart, the force between them is:	A. 4 times smaller than before B. 4 times larger than before C. 8 times larger than before D. 16 times larger than before.
230	Five joules of work is needed to shift 10 C of charge from one place to another. The potential difference between the places is:	A. 0.5 V B. 2 V C. 5 V D. 10 V
231	Two charged spheres are separated by 2 mm. Which of the following would produced the greatest attractive force?	A. +1 q and +4q B. -1 q and -4q C. +2 q and +2q D. +2 q and -2q
232	Electric field lines:	A. always cross each other B. never cross each other C. cross each other inthe region of strong field D. cross each other in the region of weak field
233	Capacitance is defined as:	A. VC B. Q/V C. QV D. V/Q
234	One micro coulomb charge is equal to:	A. 10⁻³ C B. 10³C C. 10⁶C D. 10⁻⁶C
235	The SI the unit of charge is:	A. Jpi;e B. Volt C. Coulomb D. Watt
236	One coulomb is equal to charge of _____ electrons.	A. 6.25 x 10⁻¹⁹ B. 6.25 x 10¹⁹ C. 6.25 x 10¹⁸ D. 6.25 x 10⁻¹⁸
237	If we double the distance between two charges, then force becomes	A. 4-times B. 1/4th C. Double D. Half
238	The electrostatic force acting on two charges each of 1 C separated by 1m is about .	A. 9 x 10⁹ N B. 9 x 10⁻⁹N C. 9 x 10⁸N D. 9 x 10⁻⁸N

239	Volt is named after the Italian physicist:	A. Faraday B. Alessandro volta C. Newton D. Coulomb
240	Who developed the 1st practical electric battery:	A. Alessandro volta B. Faraday C. Newton D. None of these
241	The 1st practical electric battery is known as:	A. Voltaic B. Pile C. Voltaic pile D. Voltaic cell
242	The unit of electrical energy is:	A. Joule B. Watt C. Volt D. Electron volt
243	Big unit of capacitance is:	A. Farad B. Volt C. watt D. coulomb
244	1 nano farad is equal to:	A. 1 x 10⁻¹² F B. 1 x 10⁹F C. 1 x 10⁻⁹F D. 1 x 10⁻⁶F
245	1 Pico Farad is equal to:	A. 10⁻⁹F B. 10⁻¹²F C. 10¹²F D. 10⁻⁶F
246	SI unit of electric intensity is:	A. NC B. NC⁻¹ C. NC⁻² D. NC⁻³
247	Electric intensity is a quantity.	A. Scalar B. Vector C. Base D. None of these
248	Electric potential is a quantity:	A. Scalar B. Vector C. Base D. All
249	SI unit of electric potential is:	A. Watt B. Volt C. Coulomb D. Joule
250	1 volt is equal to:	A. JC B. JC⁻¹ C. JC⁻² D. JC⁻³
251	SI unit of capacitance is:	A. Joule B. Volt C. Watt D. Farad
252	An electric current in conductors is due to the flow of:	A. Positive ions B. Negtive ions C. Positive charge D. free electron
253	What is the voltage across a 6Ω resistor when 3 A of current passes through it?	A. 2 V B. 9 V C. 18 V D. 36 V
254	What happens to the intensity of the brightness of the lamps connected in series as more and more lamps are added?	A. Increases B. Decreases C. Remains the same D. Can not be predicted
255	What should household appliances be connected in parallel with the voltage source?	A. to increase the resistance of the circuit B. to decrease the resistance of the circuit C. to provide each appliance the same voltage as the power source D. to provide each appliance the same current as the power source
256	Electric potential and e.m.f.	A. are the same terms B. are the different terms C. have different units D. both b and c
257	Which we double the voltage in a	A. Current B. Power

257	simple electric circuit. We double the	C. Resistance D. both a and b
258	If we double both the current and the voltage in a circuit while keeping its resistance constant, the power.	A. remains unchanged B. halves C. doubles D. four time
259	What is the power rating of a lamp connected to a 12 v source when it carries 2.5 A?	A. 4.8 W B. 14.5 W C. 30 W D. 60 W
260	The combined resistance of two identical resistors, connected in series is 8Ω. Their combined resistance in a parallel arrangement will be:	A. 2Ω <!--[endif]--><o:p></o:p> B. 4Ω C. 8Ω D. 12Ω
261	The ampere is a unit of:	A. Energy B. Potential differrence C. Electric potential D. Electric current
262	The rate of flow of charge through any cross-sectional area is called:	A. potential difference B. Energy C. Coulomb D. Electric current
263	Battery converts chemical energy into which energy:	A. Mechanical B. Electrical C. Thermal D. None of these
264	The resistance of conductors is due to:	A. Protons B. Fixed atoms C. Molecules D. Neutrons
265	The unit of potential difference is:	A. Volt B. Coulomb C. Ampere D. Joule
266	According to Ohm's law V =_____	A. I²R B. IR² C. IR D. I/R
267	What type of graph is in between V and I?	A. Curved B. Parabola C. Straight line D. None of these
268	The unit of (ρ) in formula R=ρ.L/a is_____.	A. Ω B. Ω-m C. Ω-m² D. Ω-m⁻²
269	The unit of resistance is:	A. Ω-m B. Ω C. V D. C
270	Resistance of conductor is directly proportional to:	A. Length B. Pressure C. Area D. All of these
271	The equivalent resistance in parallel combination is:	A. R_c=R₁+R₂+R₃ +.....+R_n B. R_c=1/R₁+1/R₂+1/R₃+.....+1/R_n C. a and b D. None of these
272	Which instrument is used to detect current?	A. Galvanometer B. Voltmeter C. Ammeter D. Electroscope
273	How Galvanometer is connected in circuit to detect current?	A. In Series B. In Parallel C. Fixed D. Variable
274	Joule's law is W = _____	A. IR/t B. IRt² C. IR²t D. I²Rt
275	The unit of power is _____	A. Volt B. Watt C. Joule

		D. Coulomb
276	The A.C. used in our houses has frequency _____ cycle/sec	A. 60 B. 30 C. 50 D. 130
277	The current used in houses is:	A. A.C. B. Conventiona current C. Current D. D.C
278	The current which changes its direction is called:	A. Current B. A.C. C. Conventional current D. D.C.
279	That period in which voltage repeats its value in equal intervals is called:	A. cycle B. Time period C. Frequency D. Amplitude
280	The resistance of voltmeter is:	A. zero B. low C. Very high D. 10Ω
281	Specific resistance of silver = _____ x 10^{-8}Ohm-meter	A. 5.25 B. 2.75 C. 1.69 D. 1.62
282	Specific resistance of copper is _____ x 10^{-8}Ohm-meter	A. 1.62 B. 1.69 C. 5.25 D. 2.75
283	Current is equal to:	A. IR² B. CV C. Q/t D. IR
284	As the temperature of a conductor rises, its resistance.	A. Increase B. Decrease C. Does not change D. None of these
285	The property of substance, which opposes the flow of current through it is called.	A. Resistance B. Reactance C. Resistivity D. None of these
286	When resistance are connected in series the current passing through them is .	A. Different B. Zero C. The same D. None of these
287	The equivalent resistance of a parallel combination is	A. equal to sum of all resistance B. is greater than the largest resistance of combination C. is smaller than the smallest resistance of combination D. All of these
288	Which statement is true about the magnetic poles?	A. Unlike poles repel B. Like poles attract C. Magnetic poles do not effect each other D. A single magnetic pole does not exist
289	What is the direction of the magnetic field lines inside a bar magnet?	A. From north pole to south pole B. From south pole to north pole C. From side to side D. There are no magnetic field lines.
290	The presence of a magnetic field can be detected by a	A. small mass B. Stationary positive charge C. Stationary negative charge D. Magnetic compass
291	If the current in a wire which is placed perpendicular to a magnetic field increases, the force on the wire.	A. Increases B. Decreases C. Remains the same D. Will be zero
292	D.C. motor converts.	A. Mechanical energy into electrical energy B. Mechanical energy into chemical energy C. Electrical energy into mechanical energy D. Electrical energy into chemical energy
293	Which part of a D.C. motor reverses the direction of current through the coil every half-cycle.	A. The armature B. The commutator C. The burshes D. The slip rings
	The direction of induced e.m.f. in a	A. Mass B. Charge

294	circuit is in accordance with conservation of.	B. Charge C. Momentum D. Energy
295	The step-up transformer	A. Increases the input current B. Increase the input voltage C. Has more turns in the primary D. Has less turns in hte secondary coil
296	The turn ratios of a transformer is 10. It means.	A. I_s = 10I_p B. N_s = N_p C. N_s = 10 N_p D. V_s =V_p /10
297	A transformer has Np =100 and Ns =500 , if 6 volt D.C is applied across its primary, the induced voltage.	A. 0 V B. 30 V C. 45 V D. 60 V
298	Iron core is used in tranformer to:	A. Enhance the flux B. Decrease the flux C. Keep flux the same D. botha a and b
299	Transformer Works on the principle of:	A. Self induction B. Mutual induction C. Electro statatic D. Induction
300	The number of lines of force in a magnetic field depends upon.	A. Shape of coil B. Sixe of coil C. Magnet D. Strength of field
301	If current is flowing from bottom end to the top end in a wire, according to right hand rule the direction of line of forces would be:	A. Anti-clock wise B. Clock wise C. Left and Right D. Along the conductor.
302	The lines will be in the form of concentric circles, if conductor is:	A. Circular B. Straight C. Solenoid D. None of these
303	The end of solenoid from which lines of force emerge out is called:	A. North pole B. South pole C. North and south pole D. None of these
304	The magnetic field of a solenoid resembles as:	A. Iron wire B. U-shape magnet C. Bar magnet D. Point charge.
305	A current carrying conductor produces a field around it is called:	A. Electric field B. Magnetic field C. Both a and b D. None of these
306	According to Fleming's left hand rule the direction of magnetic field is indicated by:	A. Thumb B. Forefinger C. Middle finger D. Right hand rule
307	According to Fleming's left hand rule the direction of force on the conductor is given by:	A. Thumb B. Fore finger C. Middle finger D. None of these
308	The force on a current carrying conductor is maximum if angle between field and conductor is:	A. 0^o B. 90^o C. 180^o D. 45^o
309	In D.C.motor split rings are made of:	A. Steel B. Carbon C. Copper D. Iron
310	Who discovered Electromagnetic induction?	A. Michael Faraday B. Flemiing C. Ohm D. Coulomb
311	When did Michael Faraday discover Electromagnetic induction?	A. 1841 B. 1831 C. 1821 D. 1811
312	Which type of energy is converted into mechanical energy in the D.C. Motor.	A. Magnetic energy B. Heat energy C. Electrical energy D. Chemical energy

313	Which device has two coils, primary and secondary?	A. D.C. Motor B. Transformer C. A.C. genrator D. a and b
314	The voltage is decreased by:	A. Step-up transformer B. Step-down transformer C. A.C. generator D. D.C. Motor
315	Transformer which increase voltage is called.	A. Step-up transformer B. Step down transformer C. D.C.Moter D. A.C.genrator
316	In A.C. generator flux will be zero if coil is to the field.	A. 90^o B. 45^o C. Parallel D. Inclined
317	If the change of current in a circuit induces a current in another circuit, this phenomena is known as:	A. Self induction B. Mutual induction C. Electromagnetic induction D. None mutual induction
318	The shape of magnetic lines of force in case of a straight current carrying conductor is:	A. Eliptical B. Trangular C. Rectangular D. Circular
319	When a current carrying conductor is placed in magnetic field at right angle to it. The direction of force acting upon it is:	A. The same as direction of field B. Opposite the direction of field C. Makes an angle of 45^owith the current D. At right angle to both the field and the current.
320	The process by which electrons are emitted by a hot metal surface is known as:	A. Boiling B. Evaportion C. Conduction D. Thermionic emission
321	The particles emitted from a hot cathode surface are:	A. Positive ions B. Negative ions C. Proton D. Electron
322	The logical operation performed by this gate is:	A. AND B. NOR C. NAND D. OR
323	AND gate can be formed by using two:	A. NOT gates B. OR gates C. NOR gates D. Nand gates
324	The output of a two input NOR gate is 1 when:	A. A is 1 and B is 0 B. A is 0 and B IS 1 C. Both A and B are 0 D. Both A and B are 1
325	If X = A,B, then X is 1 when:	A. A and B are 1 B. A or B is 0 C. A is 0 and B is 1 D. A is 1 and B is 0
326	The output of a NAND gate is 0 when	A. Both of its inputs are 0 B. Both of its inputs are 1 C. any of its inputs is 0 D. any of its inputs is 1
327	Electronics is a branch of:	A. Mass B. Applied Physics C. Mechanics D. Nuclear Physics
328	Electronics is the study of principles by means of which we control the:	A. Flow of electrons. B. Nuclear fission C. Fusion reaction D. Radiations
329	The quantities, whose values remain constant or vary continuously are called.	A. Analogue quantities B. Digital quantities C. Maximum quantities D. Minimum quantities.
330	Analogue quantity is:	A. Time B. Pressure C. Distance D. All of these
331	Public address system is the example of :	A. Analogue electronics B. Digital electonics C. Binary system

		D. None of these
332	The digits used in electronics are:	A. 1 B. 0 C. 0 and 1 D. 1 and 2
333	Digital technology is used in:	A. Bulb B. Radar C. Electric motor D. All of these
334	The converter of analogue to digital signal is:	A. ADC B. DAC C. ATDC D. None of these
335	The converter of digital to analogue signal is:	A. ADC B. DAC C. DATC D. DTC
336	The closed switch in Boolean expression is represented by:	A. 0 B. 1 C. 10 D. 2
337	The open switch Boolean expression is represented by:	A. 0 B. 1 C. 10 D. 2
338	If A input is 1 and B is zero, then in AND operation output will be:	A. 0 B. 0.1 C. 1 D. None of these
339	The output of OR gate would be '0' When:	A. Both of its inputs are zero B. One of its two inputs is zero C. Both of its inputs ar 1 D. Any one of its inputs is 1
340	The output of an AND gate is only 1, when:	A. Both of its inputs are zero B. Anyone of the two inputs is zero C. Both of its inputs are 1 D. Anyone of the two inputs is 1
341	The two inputs of a NAND gate are A and B. Its output would be zero when:	A. A = 0, B = 0 B. A = 1, B= 0 C. A = 1 , B = 1 D. A = 0 , B = 1
342	A and B are the two inputs of a NOR gate. Its output would be 1 when:	A. A = 1, B = 1 B. A = 0 , B = 1 C. A = 1, B = 0 D. A = 0 , B = 0
343	In computer terminology information means.	A. any data B. raw data C. processed data D. large data
344	Which is the most suitable means of reliable continuous communication between an orbiting satellite and Earth?	A. Microwaves B. Radio waves C. Sound wave D. any light waves
345	The basic operations performed by a computer are.	A. arithmetic operations B. non arithmetic operations C. logical operation D. both a and c
346	The brain of any computer system is:	A. CUP B. Monitor C. Memory D. C.U
347	Which of the following is not Processing?	A. arranging B. manipulation C. calculating D. gathering
348	From which of the following you can get information almost about everything?	A. Book B. Teacher C. Computer D. Internet
349	What does the term e-mail stand for?	A. Emergency mail B. Electronic mail C. extra mail D. external mail
		A. Electric waves B. Electromagnetic waves

350	Radio waves are:	B. Electromagnetic waves C. X-rays D. Radio active ways.
351	The data stored in C.D. is.	A. 680 MB B. 650 MB C. 700 MB D. 750 MB
352	Hard disk is made of:	A. Aluminium B. Copper C. Iron D. Plastic
353	CD which is made of soft material is called:	A. Hard disk B. Floppy disk C. Iron disk D. Copper disk
354	A device which has two way communication is:	A. Television B. Radio C. Hard disk D. Mobile phone.
355	An example of input device of computer is.	A. Key board B. Printer C. Monitor D. RAM
356	A data storage device is.	A. Printer B. Hard disk C. Monitor D. CPU
357	What is fitted in telephone receiver?	A. Electromagnet B. Diaphragm C. Both a and b D. None of these
358	Information storage devices work on the principles of	A. Heat B. Sound C. Light D. Magnetism
359	Which component is output device of computer?	A. CPU B. C.D C. Keyboard D. Monitor
360	Which technology is used in mobile phone:	A. Heat B. Radio C. Light D. Laser
361	Which of the following reasons increase the importance of computer?	A. Speedy B. Long time storage of memory C. Quick decision D. All of these
362	The speed of sound in air is kmh^{-1}	A. 1243 B. 1244 C. 1245 D. 1246
363	1 KB =_____	A. 1022 bytes B. 1023 bytes C. 1024 bytes D. 1025 bytes
364	1 MB = _____ Kilobytes	A. 1022 B. 1023 C. 1024 D. 1025
365	1 GB = _____ Megabytes.	A. 1022 B. 1023 C. 1024 D. 1025
366	isotopes are atom of same element with different.	A. Atomic mass B. Atomic number C. Number of proton D. Number of electron
367	One of the isotopes of uranium is $^{238}U_{92}$the number of neutrons in the isotopes is.	A. 92 B. 146 C. 238 D. 330
368	What happen to the atomic number of an element which emits one alpha particle and a beta particles.	A. Increases by 1 B. Stay the same C. Decrease by 2 D. Decrease by 1

369	When a uranium (92 protons) ejects a beta particle, how many protons are left in the remaining nucleus?	A. 92 protons B. 91 protons C. 93 protons D. 89 protons
370	Release of energy by the sun is due to	A. Nuclear fission B. Nuclear fusion C. Burning of gases D. Chemical reaction
371	When a heavy nucleus splits into, lighter nuclei, the process would .	A. Release nuclear energy B. Absorb nuclear energy C. Release chemical energy D. Absorb chemical energy
372	The reason carbon dating work is that.	A. Plants and animals are such strong emitters of carbon 14 B. After a plant or animal dies, it stops in fresh carbon C. There is so much non radioactive carbon dioxide in the air D. When a plant or animal dies.
373	The temperature at the centre of sun is.	A. 10 million k B. 20 million k C. 30 million k D. 35 million k
374	The half life of Lead Pb is	A. 10 hour B. 10.10 hours C. 10.6 hours D. 1 year
375	The half -life of carbon is	A. 5730 years B. 5700 years C. 5720 years D. 572 years
376	When 1 kg of Uranium -235 is fused then energy released is	A. 67 x 10¹⁰ J B. 67 x 10⁷J C. 67 J D. 7 J
377	When 1 tonne of coal is burnt then amount of energy is released .	A. 36 x 10⁸ J B. 36 x 10⁹J C. 36 J D. 36 x 10¹⁰J
378	Nuclear fission was first observed in	A. 1936 B. 1937 C. 1938 D. 1939
379	Radioactive isotopes present in atmosphere is	A. Cobalt -60 B. Ph-32 C. Carbon -14 D. Carbon -20
380	The half of carbon 14 is	A. 5720 years B. 5730 years C. 5740 years D. 5750 years
381	For observing how fast plants are absorbing phosphate fertilizer we use.	A. I.131 B. Ph -32 C. Co-60 D. Ar-40
382	The half life of radium 226 is	A. 1600 year B. 1610 years C. 1620 years D. 1630 years
383	BASIC is a:	A. High level language B. Low level language C. Assembly language D. Machine Language
384	How many possible solutions are there for a prblem?	A. One B. Two C. Three D. Multiple
385	Program up gradation refers to:	A. Program enhancement B. Program identification C. Program development D. Program implementation
386	Which of the following tasks are performed by most of the algorithms?	A. Input B. Out put C. Processing D. All of these
387	Typographical errors in BASIC	A. Runtime errors B. Logical Errors

	statements are:	C. Syntax errors D. Execution errros
388	Which of the following is an example of simple harmonic motion:	A. Motion of a simple pendulum<o:p></o:p> B. The motion of ceiling fan<o:p></o:p> C. The spinning of the earth on its axis<o:p></o:p> D. A bouncing ball on a floor<o:p></o:p>
389	If the mass of the bob of a pendulum is increased by a factor of 3, the period of the pendulum's motion will:	A. Be increased by a factor of 2<o:p></o:p> B. Remain the same<o:p></o:p> C. Be decreased by a factor of 2<o:p></o:p> D. Be decreased by factor of 4<o:p></o:p>
390	Which of the following devices can be used to produce both a transverse and longitudinal waves:	A. A string<o:p></o:p> B. A ripple tank<o:p></o:p> C. A helical spring (slinky)<o:p></o:p> D. A tuning fork<o:p></o:p>
391	Waves transfer:	A. Energy<o:p></o:p> B. Wavelength<o:p></o:p> C. Velocity<o:p></o:p> D. frequency
392	Which of the following is a method of energy transfer:	A. Conduction<o:p></o:p> B. Radiation<o:p></o:p> C. Wave motion<o:p></o:p> D. All of these<o:p></o:p>
393	In a vacuum all electromagnetic waves have the same:	A. Speed<o:p></o:p> B. frequency C. amplitude D. wavelength
394	A large ripple tank with a vibrator working at a frequency of 30 Hz produces 25 complete waves in a distance of 50 cm. The velocity of the wave is:	A. 53 cms^{-1<o:p></o:p>} B. 60 cms⁻¹<o:p></o:p> C. 750 cms⁻¹<o:p></o:p> D. 1500cms⁻¹<o:p></o:p>
395	Which of the following characteristics of a wave is independent of the others:	A. speed B. frequency C. amplitude D. wavelength
396	The disturbance travelling in a medium is called:	A. Wave motion<o:p></o:p> B. Simple harmonic motion<o:p></o:p> C. Motion D. both a and b
397	The waves, which are used to detect the broken bones are called:	A. Light waves<o:p></o:p> B. x-rays<o:p></o:p> C. sound waves<o:p></o:p> D. both b and c<o:p></o:p>
398	The force applied on the mass attached with a spring is represented by:	A. f_a<o:p></o:p> B. f_c<o:p></o:p> C. f_{ext<o:p></o:p>} D. f_s<o:p></o:p>
399	If there is no extension in the spring then the position is called:	A. Equilibrium position<o:p></o:p> B. unequilibrium<o:p></o:p> C. neutral equilibrium<o:p></o:p> D. stable equilibrium<o:p></o:p>
400	The unit of spring constant is:	A. m B. kg C. Nm^{2<o:p></o:p>} D. Nm^{-1<o:p></o:p>}
401	If the displacement in spring is 'x' of mass "m" attached with a spring then restoring force is:	A. F=ma<o:p></o:p> B. F=kx<o:p></o:p> C. F=-kx<o:p></o:p> D. F= m/a<o:p></o:p>
402	The ration of external force applied on the spring to displacement is	A. Hooke's law<o:p></o:p> B. Constant<o:p></o:p> C. Spring constant<o:p></o:p>

	called:	D. Force<o:p></o:p>
403	The maximum displacement from mean position is called:	A. Maximum height<o:p></o:p> B. Time period<o:p></o:p> C. Amplitude<o:p></o:p> D. Interval<o:p></o:p>
404	The displacement produced in the spring is directly proportional to force is called:	A. Hook's law<o:p></o:p> B. Boyle's law<o:p></o:p> C. Newton's law<o:p></o:p> D. Joule's law<o:p></o:p>
405	At mean position of pendulum, the potential energy of the pendulum is:	A. Maximum<o:p></o:p> B. Minimum<o:p></o:p> C. Much more<o:p></o:p> D. Both a and c<o:p></o:p>
406	At mean position kinetic energy of the ball is:	A. Minimum<o:p></o:p> B. Zero<o:p></o:p> C. Maximum<o:p></o:p> D. 10 J<o:p></o:p>
407	At extreme position potential energy of the pendulum is:	A. Maximum<o:p></o:p> B. Minimum<o:p></o:p> C. Both a and b<o:p></o:p> D. Zero<o:p></o:p>
408	In simple harmonic motion, the acceleration of the body is……. Proportional to the displacement.	A. Inversely<o:p></o:p> B. Directly<o:p></o:p> C. Equally<o:p></o:p> D. Ration<o:p></o:p>
409	The value of acceleration is simple harmonic motion at mean position is:	A. Maximum<o:p></o:p> B. Zero<o:p></o:p> C. 10 N<o:p></o:p> D. Both a and b<o:p></o:p>
410	The waves in which particles of the medium vibrate parallel to the direction of waves are called:	A. Longitudinal waves<o:p></o:p> B. Transverse waves<o:p></o:p> C. Electromagnetic waves<o:p></o:p> D. Both a and c<o:p></o:p>
411	The waves in which particles of the medium vibrate perpendicular to the direction of waves are:	A. Electromagnetic waves<o:p></o:p> B. Sound waves<o:p></o:p> C. Both a and b<o:p></o:p> D. Transverse waves<o:p></o:p>
412	The sound waves are the example of:	A. Longitudinal waves<o:p></o:p> B. Transverse waves<o:p></o:p> C. Electromagnetic waves<o:p></o:p> D. x-rays<o:p></o:p>
413	The energy is transferred from one place of another:	A. through matter<o:p></o:p> B. through waves<o:p></o:p> C. both a and b<o:p></o:p> D. through vacuum<o:p></o:p>
414	the waves have properties:	A. reflection<o:p></o:p> B. refraction<o:p></o:p> C. diffraction<o:p></o:p> D. all of these<o:p></o:p>
415	the time period of body attached to spring depend on:	A. mass<o:p></o:p> B. gravitational constant<o:p></o:p> C. length<o:p></o:p> D. amplitude<o:p></o:p>
416	the part of waves at which particles of the medium are below the normal position are called:	A. extreme position<o:p></o:p> B. crest<o:p></o:p> C. trough<o:p></o:p> D. compression<o:p></o:p>
417	the distance between two consecutive trough or crest is called:	A. wavelength<o:p></o:p> B. frequency<o:p></o:p> C. time period<o:p></o:p> D. amplitude<o:p></o:p>

418	the number of waves passing through a point in one second is called:	A. time period<o:p></o:p> B. cycle<o:p></o:p> C. frequency<o:p></o:p> D. amplitude<o:p></o:p>
419	the unit of frequency is:	A. hertz<o:p></o:p> B. vibration per second<o:p></o:p> C. cycle per second<o:p></o:p> D. all a, b and c<o:p></o:p>
420	the water waves after striking the hurdle will:	A. reflect<o:p></o:p> B. refract<o:p></o:p> C. diffract<o:p></o:p> D. all a b and c<o:p></o:p>
421	the motion in which the friction reduces the mechanical energy of the system as time passes and the amplitude of motion reduces is called:	A. SHM<o:p></o:p> B. Random motion<o:p></o:p> C. Damped motion<o:p></o:p> D. Circulatory motion<o:p></o:p>
422	The oscillations of a system in the presence of which force are called damp oscillations:	A. Resistive force<o:p></o:p> B. Attractive force<o:p></o:p> C. Coulomb force<o:p></o:p> D. Both a and b<o:p></o:p>
423	The example of shock absorber of the vehicles are:	A. Simple harmonic motion B. Vibratory motion<o:p></o:p> C. Damped motion<o:p></o:p> D. Linear motion<o:p></o:p>
424	Time period is reciprocal of:	A. Frequency<o:p></o:p> B. Cycle<o:p></o:p> C. Wave-length<o:p></o:p> D. Amplitude<o:p></o:p>
425	The water waves obey the laws of:	A. Reflection<o:p></o:p> B. Refraction<o:p></o:p> C. Diffraction<o:p></o:p> D. All of these<o:p></o:p>
426	The product of frequency and time period is equal to:	A. v B. 0 C. 1 D. L
427	If the mass of bob of a simple pendulum is doubled, its time period:	A. Is doubled<o:p></o:p> B. Becomes four times<o:p></o:p> C. Remains same<o:p></o:p> D. Becomes half<o:p></o:p>
428	Diffraction of wave can be observed clearly only when the size of slit or obstacle is nearly ……. To the wavelength of the wave:	A. Two times<o:p></o:p> B. Equal<o:p></o:p> C. Four times<o:p></o:p> D. Half<o:p></o:p>
429	In simple pendulum motion, restoring force is provided by:	A. Air resistance<o:p></o:p> B. Tension in the string<o:p></o:p> C. Inertia<o:p></o:p> D. Weight of the body<o:p></o:p>
430	Ripple tank is an instrument which is used to study the characteristics of:	A. Mechanical waves<o:p></o:p> B. Light waves<o:p></o:p> C. Radio waves<o:p></o:p> D. Electro-magnet waves<o:p></o:p>
431	Radio waves are:	A. Longitudinal waves<o:p></o:p> B. Transverse waves<o:p></o:p> C. Electromagnetic waves<o:p></o:p> D. All of these<o:p></o:p>
432	The product of frequency and wavelength is equal to:	A. Time period<o:p></o:p> B. Amplitude<o:p></o:p> C. Wave speed<o:p></o:p> D. Wave energy<o:p></o:p>
433	When a body moves to and fro about a point, its motion is called:	A. Random motion<o:p></o:p> B. Vibratory motion<o:p></o:p> C. Linear motion<o:p></o:p> D. Rotatory motion<o:p></o:p>

434	The distance between two consecutive waves compressions or rarefactions is called:	A. Focal length<o:p></o:p> B. Wave length<o:p></o:p> C. Frequency<o:p></o:p> D. Time period<o:p></o:p>
435	Which is an example of a longitudinal wave:	A. Sound wave<o:p></o:p> B. Light wave<o:p></o:p> C. Radio wave<o:p></o:p> D. Water wave<o:p></o:p>
436	How does sound travel from its source to your ear:	A. By changes in air pressure<o:p></o:p> B. By vibration in wires or strings<o:p></o:p> C. By electromagnetic waves<o:p></o:p> D. By infrared waves<o:p></o:p>
437	Which form of energy is sound:	A. <span style="font-size:11.0pt;line-height:107%; font-family:"Calibri",sans-serif;mso-ascii-theme-font:minor-latin;mso-fareast-font-family: Calibri;mso-fareast-theme-font:minor-latin;mso-hansi-theme-font:minor-latin; mso-bidi-font-family:Arial;mso-bidi-theme-font:minor-bidi;mso-ansi-language: EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">Electrical B. <span style="font-size:11.0pt;line-height:107%; font-family:"Calibri",sans-serif;mso-ascii-theme-font:minor-latin;mso-fareast-font-family: Calibri;mso-fareast-theme-font:minor-latin;mso-hansi-theme-font:minor-latin; mso-bidi-font-family:Arial;mso-bidi-theme-font:minor-bidi;mso-ansi-language: EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">mechanical C. <span style="font-size:11.0pt;line-height:107%; font-family:"Calibri",sans-serif;mso-ascii-theme-font:minor-latin;mso-fareast-font-family: Calibri;mso-fareast-theme-font:minor-latin;mso-hansi-theme-font:minor-latin; mso-bidi-font-family:Arial;mso-bidi-theme-font:minor-bidi;mso-ansi-language: EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">Thermal D. <span style="font-size:11.0pt;line-height:107%; font-family:"Calibri",sans-serif;mso-ascii-theme-font:minor-latin;mso-fareast-font-family: Calibri;mso-fareast-theme-font:minor-latin;mso-hansi-theme-font:minor-latin; mso-bidi-font-family:Arial;mso-bidi-theme-font:minor-bidi;mso-ansi-language: EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">Chemical
438	Astronauts in space need to communicate with each other by radio links because:	A. Sound waves travel very slowly in space<o:p></o:p> B. Sound waves travel very fast in space<o:p></o:p> C. Sound waves cannot travel in space<o:p></o:p> D. Sound waves have low frequency in space<o:p></o:p>
439	The loudness of a sound is most closely related to its:	A. Frequency<o:p></o:p> B. Period<o:p></o:p> C. Wavelength<o:p></o:p> D. Amplitude<o:p></o:p>
440	For a normal person audible frequency range for sound wave lies between:	A. 10 Hz and 10kHz<o:p></o:p> B. 20Hz and 20 kHz<o:p></o:p> C. 25 Hz and 25 kHz<o:p></o:p> D. 30Hz and 30 kHz<o:p></o:p>
441	When frequency of sound wave is increased, which of the following decreases:WavelengthPeriodAmplitude	A. (i) Only B. (iii) Only C. (i) And (ii) only D. (i) And (iii) only
442	The speed of sound was accurately measured in:	A. 1736 B. 1737 C. 1738 D. 1739
443	The speed of sound in air at 21 °C is:	A. 336ms⁻¹<o:p></o:p> B. 343ms⁻¹<o:p></o:p> C. 430ms⁻¹<o:p></o:p> D. 470ms^{-1<o:p></o:p>}
444	Bats can hear sound of frequency up to:	A. 100,000Hz<o:p></o:p> B. 25000Hz<o:p></o:p> C. 120, 000Hz<o:p></o:p> D. 1000Hz<o:p></o:p>
445	The unit of intensity of sound:	A. Wm⁻¹<o:p></o:p> B. Wm⁻²<o:p></o:p> C. Wm<o:p></o:p> D. Wm²<o:p></o:p>
446	The intensity of lawn mover is:	A. 10-1 wm⁻²<o:p></o:p> B. 10-2 wm⁻²<o:p></o:p> C. 10-3 wm⁻²<o:p></o:p> D. 10-4 wm⁻²<o:p></o:p>
447	Frequency of tuning fork depends upon its ……. of prongs:	A. <span style="font-size:11.0pt;line-height:107%; font-family:"Calibri",sans-serif;mso-ascii-theme-font:minor-latin;mso-fareast-font-family: Calibri;mso-fareast-theme-font:minor-latin;mso-hansi-theme-font:minor-latin; mso-bidi-font-family:Arial;mso-bidi-theme-font:minor-bidi;mso-ansi-language: EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">Weight B. <span style="font-size:11.0pt;line-height:107%; font-family:"Calibri",sans-serif;mso-ascii-theme-font:minor-latin;mso-fareast-font-family: Calibri;mso-fareast-theme-font:minor-latin;mso-hansi-theme-font:minor-latin; mso-bidi-font-family:Arial;mso-bidi-theme-font:minor-bidi;mso-ansi-language: EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">Speed C. <span style="font-size:11.0pt;line-height:107%; font-family:"Calibri",sans-serif;mso-ascii-theme-font:minor-latin;mso-fareast-font-family: Calibri;mso-fareast-theme-font:minor-latin;mso-hansi-

		theme-font:minor-latin; mso-bidi-font-family:Arial;mso-bidi-theme-font:minor-bidi;mso-ansi-language: EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">Mass D. <span style="font-size:11.0pt;line-height:107%; font-family:"Calibri",sans-serif;mso-ascii-theme-font:minor-latin;mso-fareast-font-family: Calibri;mso-fareast-theme-font:minor-latin;mso-hansi-theme-font:minor-latin; mso-bidi-font-family:Arial;mso-bidi-theme-font:minor-bidi;mso-ansi-language: EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">Distance
448	The speed of sound in air at 0°C is:	A. 331ms⁻¹<o:p></o:p> B. 376ms⁻¹<o:p></o:p> C. 231ms⁻¹<o:p></o:p> D. 386ms⁻¹<o:p></o:p>
449	The speed of sound in are water at 25°C is:	A. 1530ms-1 B. 1531ms-1 C. 1560ms-1 D. 1570ms-1
450	The speed of sound in iron at 25°C is:	A. 5950 m/sec<o:p></o:p> B. 5900 m/sec<o:p></o:p> C. 6950 m/sec<o:p></o:p> D. 6940 m/sec<o:p></o:p>
451	The frequency of silent whistle is:	A. 20,000 Hz – 25000Hz<o:p></o:p> B. 2000 Hz – 2500Hz<o:p></o:p> C. 200 KHz – 2000 Hz<o:p></o:p> D. 25000 KHz<o:p></o:p>
452	The sound level of rustling of leave is:	A. 1 dB<o:p></o:p> B. 20 dB<o:p></o:p> C. 30 dB<o:p></o:p> D. 10 dB<o:p></o:p>
453	To hear echoes, the minimum distance of the obstacle from source of sound should be:	A. 10m B. 15m C. 17m D. 20m
454	Old people cannot hear sound above than:	A. 1000 Hz<o:p></o:p> B. 15000 Hz<o:p></o:p> C. 20000 Hz<o:p></o:p>
455	Intensity level of the sound produced by mosquito buzzing is:	A. 70 dB<o:p></o:p> B. 40 dB<o:p></o:p> C. 10 dB<o:p></o:p> D. 120 dB<o:p></o:p>
456	The speed of sound in air at 100°C is:	A. 380ms-1 B. 382ms-1 C. 386ms-1 D. 300ms-1
457	The intensity level of whispering is:	A. 20 dB<o:p></o:p> B. 30 dB<o:p></o:p> C. 40 dB<o:p></o:p> D. 50 dB<o:p></o:p>
458	Which frequency is used by elephants to communicate with each other:	A. Zero frequency<o:p></o:p> B. Low frequency<o:p></o:p> C. Medium frequency<o:p></o:p> D. High frequency<o:p></o:p>
459	The intensity level of train siren is:	A. 150 dB<o:p></o:p> B. 100 dB<o:p></o:p> C. 130 dB<o:p></o:p> D. 120 dB<o:p></o:p>
460	The pitch of a sound is most closely related to its:	A. Wave form<o:p></o:p> B. Period<o:p></o:p> C. Amplitude<o:p></o:p> D. Frequency<o:p></o:p>
461	Safe level of noise depends on factors:	A. One<o:p></o:p> B. Two<o:p></o:p> C. Three<o:p></o:p> D. Four<o:p></o:p>
462	The technique or method used to absorb undesirable sounds by soft and porous surface is called:	A. Ultrasonic<o:p></o:p> B. Acoustic protection<o:p></o:p> C. Infrasonics<o:p></o:p> D. Echo<o:p></o:p>
463	Mice can hear frequencies upto:	A. 100, 000 Hz<o:p></o:p> B. 25.000 Hz<o:p></o:p> C. 120,000 Hz<o:p></o:p> D. 1,000 Hz<o:p></o:p>
		A. Ultrasonic<o:p></o:p>

464	Sound waves having frequency lower than 20 Hz are called:	A. Ultrasonic<o:p></o:p> B. Infrasonic<o:p></o:p> C. Audible<o:p></o:p> D. Echo<o:p></o:p>
465	Sound waves having frequency higher than 20,000 Hz are called:	A. Ultrasonic<o:p></o:p> B. Infrasonic<o:p></o:p> C. Audible<o:p></o:p> D. Echo<o:p></o:p>
466	1 bel=	A. 0.1 dB<o:p></o:p> B. 10 dB<o:p></o:p> C. 100 dB<o:p></o:p> D. 0.01 dB<o:p></o:p>
467	Ultrasound waves carry energy:	A. Less<o:p></o:p> B. More<o:p></o:p> C. Equal<o:p></o:p> D. None of these<o:p></o:p>
468	Level of noise recommended in eight, hour work day:	A. 80-90 dB<o:p></o:p> B. 80-85- dB<o:p></o:p> C. 85-90 dB<o:p></o:p> D. 90-95 dB<o:p></o:p>
469	The sensation of sound persists in our brain for:	A. 0.1 sec<o:p></o:p> B. 0.01 sec<o:p></o:p> C. 1 sec<o:p></o:p> D. 10 sec<o:p></o:p>
470	The speed of sound in a liquid is ……..than that in gases:	A. Ten times<o:p></o:p> B. Fifteen times<o:p></o:p> C. Five times<o:p></o:p> D. Two times<o:p></o:p>
471	We can distinguish between the notes of a piano and flute due to …… of sound.	A. Loudness<o:p></o:p> B. Pitch<o:p></o:p> C. Quality<o:p></o:p> D. Intensity<o:p></o:p>
472	The characteristics of sound by which we can distinguish between two sounds of same loudness and pitch is called.	A. Intensity<o:p></o:p> B. Quality<o:p></o:p> C. Loudness<o:p></o:p> D. Pitch<o:p></o:p>
473	Example of mechanical waves is:	A. Radio waves<o:p></o:p> B. X-rays<o:p></o:p> C. Light waves<o:p></o:p> D. Sound waves<o:p></o:p>
474	Which of the following quantities is not change during refraction of light:	A. Its direction<o:p></o:p> B. Its speed<o:p></o:p> C. Its frequency<o:p></o:p> D. Its wavelength<o:p></o:p>
475	A converging mirror with a radius of 20cm creates a real image 30 cm from the mirror. What is the object distance:	A. 5.0 cm<o:p></o:p> B. 7.5 cm<o:p></o:p> C. 15 cm<o:p></o:p> D. 20 cm<o:p></o:p>
476	An object is placed at the Centre of curvature of a concave mirror. The image produced by the mirror is located:	A. Out beyond the centre of curvature<o:p></o:p> B. At the centre of curvature<o:p></o:p> C. Between the centre of curvature and the focal point<o:p></o:p> D. At the focal point<o:p></o:p>
477	An object is 14 cm in front of a convex mirror. The image is 5.8 cm behind the mirror. What is the focal length of the mirror:	A. -4.1 cm<o:p></o:p> B. -8.2 cm<o:p></o:p> C. -9.9 cm<o:p></o:p> D. -20 cm<o:p></o:p>
478	The index of refraction depends on:	A. The focal length<o:p></o:p> B. The speed of light<o:p></o:p> C. The image distance<o:p></o:p> D. The object distance<o:p></o:p>
479	Which type of image is formed by a convex lens on a screen:	A. Inverted and real<o:p></o:p> B. Inverted and virtual<o:p></o:p> C. Upright and real<o:p></o:p> D. Upright and virtual<o:p></o:p>

		D. Upright and virtual<o:p></o:p>
480	Which type of image is produced by the converging lens of human eye if it views a distant object:	A. Real, erect, same size<o:p></o:p> B. Real, inverted, diminished<o:p></o:p> C. Virtual, erect, diminished<o:p></o:p> D. Virtual, inverted, magnified<o:p></o:p>
481	Image formed on a camera is:	A. Real, inverted, and diminished<o:p></o:p> B. Virtual, upright and diminished<o:p></o:p> C. Virtual, upright and magnified<o:p></o:p> D. Real, inverted and magnified<o:p></o:p>
482	If a ray of light in glass is incident on an air surface at an angle greater than the critical angle, the ray will:	A. Refract only<o:p></o:p> B. Reflect only<o:p></o:p> C. Partially refract and partially reflect<o:p></o:p> D. Diffract only<o:p></o:p>
483	The critical angle for a beam of light passing from water into air is 48.8 degrees. This mean that all light rays with an angle of incidence greater than this angle will be:	A. Absorbed<o:p></o:p> B. Totally reflected<o:p></o:p> C. Partially reflected and partially transmitted<o:p></o:p> D. Totally transmitted<o:p></o:p>
484	The diameter of spherical mirror is called:	A. Curvature<o:p></o:p> B. Aperture<o:p></o:p> C. Sphere<o:p></o:p> D. Both a and b<o:p></o:p>
485	The center of curved surface of spherical mirror is called:	A. Focus<o:p></o:p> B. Axis<o:p></o:p> C. Centre<o:p></o:p> D. Pole<o:p></o:p>
486	Half of radius of curvature is called:	A. Focal length<o:p></o:p> B. Principal focus<o:p></o:p> C. Axis<o:p></o:p> D. Aperture<o:p></o:p>
487	The point through which rays of light pass after reflection from concave mirror is called principal:	A. Focus<o:p></o:p> B. Circle<o:p></o:p> C. Axis<o:p></o:p> D. Radius<o:p></o:p>
488	The distance between principal focus and pole of mirror is called:	A. Principal focus<o:p></o:p> B. Focal length<o:p></o:p> C. Aperture<o:p></o:p> D. Image<o:p></o:p>
489	The mirror whose inner surface is reflecting is called:	A. Concave mirror<o:p></o:p> B. Convex mirror<o:p></o:p> C. Mirror<o:p></o:p> D. Lens<o:p></o:p>
490	The mirror whose outer surface is reflecting is called:	A. Concave mirror<o:p></o:p> B. Convex mirror<o:p></o:p> C. Mirror<o:p></o:p> D. Lens<o:p></o:p>
491	The line which passes through pole of the mirror and center of curvature is called principal:	A. Axis<o:p></o:p> B. Focus<o:p></o:p> C. Line<o:p></o:p> D. None of these<o:p></o:p>
492	The ray of light after reflection from concave mirror passes through:	A. Centre<o:p></o:p> B. Principal focus<o:p></o:p> C. Pole<o:p></o:p> D. Radius<o:p></o:p>
493	Spherical mirrors are used in:	A. Medical<o:p></o:p> B. Search light<o:p></o:p> C. Microscope<o:p></o:p> D. All of these<o:p></o:p>
494	Bouncing back of light after striking the surface is called:	A. <span style="font-size:11.0pt;line-height:107%; font-family:"Calibri",sans-serif;mso-ascii-theme-font:minor-latin;mso-fareast-font-family: Calibri;mso-fareast-theme-font:minor-latin;mso-hansi-theme-font:minor-latin; mso-bidi-font-family:Arial;mso-bidi-theme-font:minor-bidi;mso-ansi-language: EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">Refraction B. Reflection<o:p></o:p> C. Diffraction<o:p></o:p> D. Interference<o:p></o:p>
	When a ray of light enters from	A. Angle of incidence<o:p></o:p>

495	denser medium to rare medium, the angle of incidence for which angle of refraction is 90° is called:	B. Critical angle<o:p></o:p> C. Angle of refraction<o:p></o:p> D. Angle of deviation<o:p></o:p>
496	The refracted light striking to the side of prism is called:	A. Refracted ray<o:p></o:p> B. Incident ray<o:p></o:p> C. Reflected ray<o:p></o:p> D. Emergent ray<o:p></o:p>
497	The minimum value of angle of deviation is called:	A. Minimum angle<o:p></o:p> B. Incident angle<o:p></o:p> C. Angle of minimum deviation<o:p></o:p> D. None of these<o:p></o:p>
498	The angle at which prism deviates the incident ray is called:	A. Angle of incident<o:p></o:p> B. Angle of reflection<o:p></o:p> C. Angle of deviation<o:p></o:p> D. Angle of minimum deviation<o:p></o:p>
499	To see from submarine and the ship at the surface of water, we use:	A. Telescope<o:p></o:p> B. Microscope<o:p></o:p> C. Periscope<o:p></o:p> D. Prism<o:p></o:p>
500	In totally reflecting prism one angle is of:	A. 45°<o:p></o:p> B. 90°<o:p></o:p> C. 180°<o:p></o:p> D. 120°<o:p></o:p>
501	In totally reflecting prism one angle is of 90°, and other two angles are of:	A. 30°,30°<o:p></o:p> B. 45°,90°<o:p></o:p> C. 45°,45°<o:p></o:p> D. 40°,40°<o:p></o:p>
502	Totally reflecting prism is used in:	A. Periscope<o:p></o:p> B. Binoculars<o:p></o:p> C. Periscope and binocular<o:p></o:p> D. Telescope<o:p></o:p>
503	The speed of light in water is:	A. 2.0x10³ ms⁻¹<o:p></o:p> B. 2.5x10³ ms⁻¹<o:p></o:p> C. 2.3x10⁸ ms⁻¹<o:p></o:p> D. 2.3x10⁻⁸ ms⁻¹<o:p></o:p>
504	A converging lens becomes a magnifying glass when an object is placed:	A. Outside of focal length<o:p></o:p> B. Inside the focal length<o:p></o:p> C. Equal of focal length<o:p></o:p> D. At double of focal length<o:p></o:p>
505	In compound microscope, the objective have focal length than eye-piece:	A. Smaller<o:p></o:p> B. Larger<o:p></o:p> C. Equal<o:p></o:p> D. Equal and larger<o:p></o:p>
506	Which animal have ability to move his eye lens:	A. Snake<o:p></o:p> B. Fish<o:p></o:p> C. Ant<o:p></o:p> D. Tiger<o:p></o:p>
507	The value of refractive index of water is:	A. 2.33<o:p></o:p> B. 1.36<o:p></o:p> C. 1.33<o:p></o:p> D. 1.39<o:p></o:p>
508	Optical fibres works on the principle of:	A. Reflection<o:p></o:p> B. Refraction<o:p></o:p> C. Total internal reflection<o:p></o:p> D. Diffraction<o:p></o:p>
509	The refractive index of ice is:	A. 1.00<o:p></o:p> B. 1.33<o:p></o:p> C. 1.31<o:p></o:p> D. 2.42<o:p></o:p>
510	A positive electric charge:	A. Attracts other positive charge<o:p></o:p> B. Repels other positive charge<o:p></o:p> C. Attract a neutral charge<o:p></o:p> D. Repels a neutral charge<o:p></o:p>
511	An object gains excess negative charge after being rubbed against another object, which is:	A. Neutral<o:p></o:p> B. Negatively charged<o:p></o:p> C. Positively charged<o:p></o:p> D. Either, a, b or c<o:p></o:p>

512	Two uncharged objects a and b are rubbed against each other. When object b is placed near a negatively charged object c, the two objects repel each other. Which of these statements is true about object a:	A. Remains uncharged<o:p></o:p> B. Becomes positively charged<o:p></o:p> C. Becomes negatively charged<o:p></o:p> D. Unpredictable<o:p></o:p>
513	When you rub a plastic rod against your hair several times and put it near some bits of paper, the pieces of papers are attracted towards it. What does this observation indicate:	A. The rod and the paper are oppositely charged<o:p></o:p> B. The rod acquires a positive charge<o:p></o:p> C. The rod and the paper have the same charges<o:p></o:p> D. The rod acquires a negative charge<o:p></o:p>
514	According to coulomb's law, what happens to the attraction of two oppositely charged objects as their distance of separation increases:	A. Increases<o:p></o:p> B. Decreases<o:p></o:p> C. Remains unchanged<o:p></o:p> D. Cannot be determined<o:p></o:p>
515	One micro coulomb charge is equal to:	A. 10⁻³c<o:p></o:p> B. 10³c<o:p></o:p> C. 10⁶c<o:p></o:p> D. 10⁻⁶c<o:p></o:p>
516	In SI the unit of charge is:	A. Joule<o:p></o:p> B. Volt<o:p></o:p> C. Coulomb<o:p></o:p> D. Watt<o:p></o:p>
517	One coulomb is equal to charge of electrons:	A. 6.25x10⁻¹⁹<o:p></o:p> B. 6.25x10¹⁹<o:p></o:p> C. 6.25x10¹⁸<o:p></o:p> D. 6.25x10⁻¹⁸<o:p></o:p>
518	If we double the distance between two charges, then force becomes:	A. 4-times<o:p></o:p> B. ¼ th<o:p></o:p> C. Double<o:p></o:p> D. Half<o:p></o:p>
519	The electrostatic force acting on two charges each of 1C separated by 1m is about:	A. 9X10⁹ N<o:p></o:p> B. 9X10⁻⁹ N<o:p></o:p> C. 9X10⁸ N<o:p></o:p> D. 9X10⁻⁸ N<o:p></o:p>
520	Value of 'k' depends upon:	A. System of unit<o:p></o:p> B. Nature of medium<o:p></o:p> C. Both a and b<o:p></o:p> D. None of these<o:p></o:p>
521	Electric field lines were introduced by:	A. Faraday<o:p></o:p> B. Newton<o:p></o:p> C. Coulomb<o:p></o:p> D. Joule<o:p></o:p>
522	Positive charge in an electric field always tend to move:	A. Does not move<o:p></o:p> B. From lower to higher potential<o:p></o:p> C. From higher to lower potential<o:p></o:p> D. All of these<o:p></o:p>
523	The unit of electrical energy is:	A. Joule<o:p></o:p> B. Watt<o:p></o:p> C. Volt<o:p></o:p> D. Electron volt(eV)<o:p></o:p>
524	Big unit of capacitance is:	A. Farad<o:p></o:p> B. Volt<o:p></o:p> C. Watt<o:p></o:p> D. Coulomb<o:p></o:p>
525	1 Nano farad is equal to:	A. 1X10⁻¹²F<o:p></o:p> B. 1X10⁹F<o:p></o:p> C. 1X10⁻⁹F<o:p></o:p> D. 1X10⁻⁶F<o:p></o:p>
526	1 Pico farad is equal to:	A. 10⁻⁹F<o:p></o:p> B. 10¹²F<o:p></o:p> C. 10⁻¹²F<o:p></o:p> D. 10⁻⁶F<o:p></o:p>
		A. Watt<o:p></o:p>

527	SI unit of electric intensity is:	B. NC⁻¹<o:p></o:p> C. NS⁻¹<o:p></o:p> D. Nm<o:p></o:p>
528	electric intensity is a quantity:	A. scalar<o:p></o:p> B. vector<o:p></o:p> C. base<o:p></o:p> D. none of these<o:p></o:p>
529	SI unit of electric potential is:	A. watt<o:p></o:p> B. volt<o:p></o:p> C. coulomb<o:p></o:p> D. joule<o:p></o:p>
530	1 volt is equal to:	A. JC<o:p></o:p> B. JC⁻¹<o:p></o:p> C. JC⁻²<o:p></o:p> D. JC⁻³<o:p></o:p>
531	SI unit of capacitance is:	A. Joule<o:p></o:p> B. Volt<o:p></o:p> C. Watt<o:p></o:p> D. Farad<o:p></o:p>
532	In variable capacitor, dielectric medium is:	A. Paper<o:p></o:p> B. Air<o:p></o:p> C. Mica<o:p></o:p> D. Ceramic<o:p></o:p>
533	Static electricity can be generated by:	A. Lubrication<o:p></o:p> B. Friction<o:p></o:p> C. Motion<o:p></o:p> D. Smaller the objects<o:p></o:p>
534	Give the number of factors which affect the ability of a capacitor to store charge.	A. 2 B. 3 C. 4 D. 5
535	The value of K in SI unit is:	A. 9X10²⁰ Nm²C²<o:p></o:p> B. 8X10⁹Nm²C²<o:p></o:p> C. 9X10⁹Nm²C²<o:p></o:p> D. 10X10⁻⁹ Nm²C⁻²<o:p></o:p>
536	To protect the gold leaves of electroscope from the external electric disturbances, the aluminum foil is grounded by a thin wire, which is made up of:	A. Aluminum<o:p></o:p> B. Silver<o:p></o:p> C. Copper<o:p></o:p> D. Brass<o:p></o:p>
537	Capacitors are used to store:	A. Current B. Voltage C. Charge D. Resistance
538	Electroscope is used for detecting:	A. Current<o:p></o:p> B. Charge<o:p></o:p> C. Voltage<o:p></o:p> D. Resistance<o:p></o:p>
539	If the distance between two point charges is reduced to half, the coulomb's force become:	A. Half<o:p></o:p> B. Two times<o:p></o:p> C. One fourth<o:p></o:p> D. Fourth times<o:p></o:p>
540	If the distance between the charged bodies is much greater as compared to their sizes then the bodies are considered is:	A. Positive charge<o:p></o:p> B. Negative charge<o:p></o:p> C. Point charge<o:p></o:p> D. Zero charge<o:p></o:p>
541	Positive charge can be produced by:	A. Combing in hair<o:p></o:p> B. Rubbing glass rod on silk<o:p></o:p> C. By rubbing ebonite rod on wool<o:p></o:p> D. By rubbing glass rod wool<o:p></o:p>
542	If a neutral body is brought near to the electroscope its leaves:	A. Diverge<o:p></o:p> B. Contract<o:p></o:p> C. Shut<o:p></o:p> D. Remain in normal position<o:p></o:p>
543	If the field is stronger than lines of force are to each other:	A. Far away<o:p></o:p> B. Separated<o:p></o:p> C. Closer<o:p></o:p> D. No effect<o:p></o:p>

		D. No effect<o:p></o:p>
544	If the potential energy of none coulomb charge is one joule then its potential will be:	A. 5 volt<o:p></o:p> B. 2 volt<o:p></o:p> C. 3 volt<o:p></o:p> D. 1 volt<o:p></o:p>
545	The product of charge 'q' and potential difference is equal to:	A. Power<o:p></o:p> B. Force<o:p></o:p> C. Capacitance<o:p></o:p> D. Energy<o:p></o:p>
546	What will be the capacitance of capacitor by joining them in parallel:	A. Increased<o:p></o:p> B. Much less<o:p></o:p> C. Decrease<o:p></o:p> D. No change<o:p></o:p>
547	When a positive charge of 2 coulombs is placed at a point in an electric field, it experiences a force of 6N. The intensity of electric field at this point is:	A. 6 NC⁻¹<o:p></o:p> B. 3 NC⁻¹<o:p></o:p> C. 12 NC⁻¹<o:p></o:p> D. 1.5 NC⁻¹<o:p></o:p>
548	In electrostatic all charges are in:	A. The same direction<o:p></o:p> B. Opposite direction<o:p></o:p> C. Motion<o:p></o:p> D. Static state<o:p></o:p>
549	Which type of capacitor is cylindrical in shape:	A. Paper capacitor<o:p></o:p> B. Mica capacitor<o:p></o:p> C. Variable capacitor<o:p></o:p> D. Plates capacitor<o:p></o:p>
550	Each volt of lightening contains energy:	A. 4x10⁶ joules<o:p></o:p> B. 1000 joules<o:p></o:p> C. 1000 million joules<o:p></o:p> D. 10 joules<o:p></o:p>
551	Capacitors that are used in resonant circuits that tune radios to particular frequencies, such circuits are called:	A. Series circuits<o:p></o:p> B. Filter circuits<o:p></o:p> C. Parallel circuits<o:p></o:p> D. AC circuits<o:p></o:p>
552	The capacitance of a parallel plate capacitor is 100 pF and the potential difference between its plate is 50 volts. What is the quantity of charge on its plates:	A. 5000c<o:p></o:p> B. 50c<o:p></o:p> C. 5nC<o:p></o:p> D. 5NC<o:p></o:p>
553	If there is divergence of leaves by touching a body with electroscope then the body is:	A. Semi conductor<o:p></o:p> B. Neutral<o:p></o:p> C. charge body<o:p></o:p> D. Insulator<o:p></o:p>
554	In fixed capacitor dielectric used is:	A. Paper<o:p></o:p> B. Metal<o:p></o:p> C. Mica<o:p></o:p> D. Paper & mica<o:p></o:p>
555	Instrument used for detecting and testing the nature of charge on a body is called:	A. Incubator<o:p></o:p> B. Spectroscope<o:p></o:p> C. voltmeter<o:p></o:p> D. electroscope<o:p></o:p>
556	The phenomena used in capacitor is:	A. electrostatic induction<o:p></o:p> B. induced current<o:p></o:p> C. electric field<o:p></o:p> D. electroscope<o:p></o:p>
557	the phenomena which is used in applying paints on the surface of different articles is called:	A. electroplating<o:p></o:p> B. electroscope<o:p></o:p> C. electrostatic induction<o:p></o:p> D. electrolytes<o:p></o:p>
558	the substance in which electric	A. transistor<o:p></o:p> B. semi conductor<o:p></o:p>

	current flows easily is called:	C. insulator<o:p></o:p> D. conductor<o:p></o:p>
559	study of charges at rest is called:	A. acoustics<o:p></o:p> B. electrostatics<o:p></o:p> C. electronics<o:p></o:p> D. electricity<o:p></o:p>
560	electroscope can also be charges by the process of:	A. electrostatics<o:p></o:p> B. electricity<o:p></o:p> C. convection<o:p></o:p> D. conduction<o:p></o:p>
561	F=	A. qE<o:p></o:p> B. q-E<o:p></o:p> C. q/E<o:p></o:p> D. q+E<o:p></o:p>
562	electric field is weak when:	A. lines are far apart<o:p></o:p> B. lines are close together<o:p></o:p> C. no lines are present<o:p></o:p> D. lines are directed outside<o:p></o:p>
563	which is a major cause of fires and explosions at many places:	A. match sticks<o:p></o:p> B. bombs<o:p></o:p> C. static electricity<o:p></o:p> D. magnetism<o:p></o:p>
564	which can be used to distinguish between insulators and conductors:	A. electricity<o:p></o:p> B. telescope<o:p></o:p> C. temperature<o:p></o:p> D. electroscope<o:p></o:p>
565	an electrolytic capacitor is used to store large amounts of charge at:	A. low voltage<o:p></o:p> B. high voltage<o:p></o:p> C. neutral<o:p></o:p> D. positive<o:p></o:p>
566	parallel plate consists of 2 metal plates separated by:	A. conductor<o:p></o:p> B. insulator<o:p></o:p> C. wooden plate<o:p></o:p> D. plastic foam<o:p></o:p>
567	the insulator between the plates of capacitor is called:	A. dielectric<o:p></o:p> B. capacitance<o:p></o:p> C. resistivity<o:p></o:p> D. permittivity<o:p></o:p>
568	In series combination of capacitors, each capacitor will have same:	A. Voltage<o:p></o:p> B. Charge<o:p></o:p> C. Capacitance<o:p></o:p> D. Charge and voltage<o:p></o:p>
569	One joule per coulomb is called:	A. Volt<o:p></o:p> B. Farad<o:p></o:p> C. Ampere<o:p></o:p> D. Tesla<o:p></o:p>
570	Which is the unit of energy:	A. KWh<o:p></o:p> B. Electron volt<o:p></o:p> C. Joule<o:p></o:p> D. All of above<o:p></o:p>
571	Application of electrostatic is:	A. Car painting<o:p></o:p> B. Photocopying<o:p></o:p> C. Extracting of dust<o:p></o:p> D. All of these<o:p></o:p>
572	Which process is involved to store charge in capacitors:	A. Rubbing<o:p></o:p> B. Electrostatic induction<o:p></o:p> C. Conduction<o:p></o:p> D. Electromagnetic induction<o:p></o:p>
573	The presence of fish by the other fish can be detected by:	A. Magnetic field<o:p></o:p> B. Electric field<o:p></o:p> C. Gravitational field<o:p></o:p> D. All of above<o:p></o:p>
574	$1.6x10^{-19}$ J= :	A. 1F<o:p></o:p> B. 1F<o:p></o:p> C. 1N<o:p></o:p> D. 1eV<o:p></o:p>
575	The direction of electric field lines due to positive charge is:	A. A way from the charge<o:p></o:p> B. Towards the charge<o:p></o:p> C. Both a and b<o:p></o:p> D. None of these<o:p></o:p>
		A. 0.024F<o:p></o:p>

576	A capacitor stores 0.24 coulombs at 10 volts. It capacitance is:	B. 0.12F<o:p></o:p> C. 0.6F<o:p></o:p> D. 0.8F<o:p></o:p>
577	A dielectric must be:	A. Resistor<o:p></o:p> B. Insulator<o:p></o:p> C. Good conductor<o:p></o:p> D. Semi conductor<o:p></o:p>
578	A paper capacitor is usually available in the form of:	A. Tubes<o:p></o:p> B. Rolled foil<o:p></o:p> C. Disc<o:p></o:p> D. Plates<o:p></o:p>
579	Capacitors are mainly used for radio frequency tuning:	A. Paper capacitor<o:p></o:p> B. Air capacitor<o:p></o:p> C. Mica capacitor<o:p></o:p> D. Electrolytic capacitor<o:p></o:p>
580	A unit of electric charge, equal to the charge of $6.25x10^{18}$ electrons is:	A. Electricity<o:p></o:p> B. Coulomb<o:p></o:p> C. Electric potential<o:p></o:p> D. Volt<o:p></o:p>
581	The electric potential energy per unit charge is called:	A. Electric field<o:p></o:p> B. Electric potential<o:p></o:p> C. Electric intensity<o:p></o:p> D. All of above<o:p></o:p>
582	The substances which do not have free electrons are called:	A. Insulators<o:p></o:p> B. Conductors<o:p></o:p> C. Semiconductors<o:p></o:p> D. None of these<o:p></o:p>
583	If a dielectric medium is present between two point charges them electrostatic force will be:	A. Increased<o:p></o:p> B. Decreased<o:p></o:p> C. Vanishes<o:p></o:p> D. Remain same<o:p></o:p>
584	What is the voltage across a 6 Ω resistor when 3 A of current passes through it:	A. 2 V<o:p></o:p> B. 9V C. 18 V D. 36 V
585	What happens to the intensity or the brightness of the lamps connected in series as more and more lamps are added:	A. Increases<o:p></o:p> B. Decreases<o:p></o:p> C. Remains the same<o:p></o:p> D. Cannot be predicted<o:p></o:p>
586	Why household appliances should be connected in parallel with the voltage source:	A. To increase the resistance of the circuit<o:p></o:p> B. To decrease the resistance of the circuit<o:p></o:p> C. To provide each appliance the same voltage as the power source<o:p></o:p> D. To provide each appliance the same current as the power source<o:p></o:p>
587	Electric potential and e.m.f.:	A. Are the same terms<o:p></o:p> B. Are the different terms<o:p></o:p> C. Have different units<o:p></o:p> D. Both b and c<o:p></o:p>
588	When we double the voltage in a simple electric circuit, we double the:	A. Current<o:p></o:p> B. Power<o:p></o:p> C. Resistance<o:p></o:p> D. Both a and b<o:p></o:p>
589	If we double both the current and the voltage in a circuit while keeping its resistance constant, the power:	A. Remains unchanged<o:p></o:p> B. Halves<o:p></o:p> C. Doubles<o:p></o:p> D. Four time<o:p></o:p>
590	What is the power rating of a lamp connector to a 12 V source when it carries 2.5 A:	A. 4.8W<o:p></o:p> B. 14.5W<o:p></o:p> C. 30W<o:p></o:p> D. 60W<o:p></o:p>
	The combined resistance of two identical resistors connected in	A. 2 Ω<o:p></o:p>

591	identical resistors, connected in series is 8Ω. Their combined resistance in a parallel arrangement will be:	B. 4 Ω<o:p></o:p> C. 8 Ω<o:p></o:p> D. 12 Ω<o:p></o:p>
592	According to ohm's law V= :	A. I²R<o:p></o:p> B. IR²<o:p></o:p> C. IR<o:p></o:p> D. I/R<o:p></o:p>
593	What type of graph is in between V and I, if metal obeys ohm's law:	A. Curved<o:p></o:p> B. Parabola<o:p></o:p> C. Straight line<o:p></o:p> D. None of these<o:p></o:p>
594	Which instrument is used to detect current:	A. Galvanometer<o:p></o:p> B. Voltmeter<o:p></o:p> C. Ammeter<o:p></o:p> D. Electroscope<o:p></o:p>
595	How Galvanometer is connected in circuit to detect current:	A. In series<o:p></o:p> B. In parallel<o:p></o:p> C. Fixed<o:p></o:p> D. Variable<o:p></o:p>
596	Joule's law is W=	A. IR/t<o:p></o:p> B. IRt²<o:p></o:p> C. IR²t<o:p></o:p> D. I²Rt<o:p></o:p>
597	The unit of electric power is:	A. Volt<o:p></o:p> B. Watt<o:p></o:p> C. Joule<o:p></o:p> D. Coulomb<o:p></o:p>
598	The A.C used in Pakistan has frequency:	A. 60 Hz<o:p></o:p> B. 30 Hz<o:p></o:p> C. 50 Hz<o:p></o:p> D. 130 Hz<o:p></o:p>
599	The current which does not change its direction is called:	A. A.C<o:p></o:p> B. D.C<o:p></o:p> C. Conventional<o:p></o:p> D. Transient current<o:p></o:p>
600	The colour of live wire is:	A. Black or blue<o:p></o:p> B. Green or yellow<o:p></o:p> C. White or grey<o:p></o:p> D. Red or brown<o:p></o:p>
601	As the temperature of a conductor rises, its resistance:	A. Increases<o:p></o:p> B. Increases<o:p></o:p> C. Decreases<o:p></o:p> D. Does not change<o:p></o:p> E. None of these<o:p></o:p>
602	The property of substance, which opposes the flow of current through it is called:	A. Resistance<o:p></o:p> B. Reactance<o:p></o:p> C. Resistivity<o:p></o:p> D. None<o:p></o:p>
603	When resistances are connected in series the current passing through them is:	A. Different<o:p></o:p> B. Zero<o:p></o:p> C. The same<o:p></o:p> D. None of these<o:p></o:p>
604	The equivalent resistance of a parallel combination is:	A. Equal to sum of all resistance<o:p></o:p> B. Is greater than the largest resistance of combination<o:p></o:p> C. Is smaller than the smallest resistance of combination<o:p></o:p> D. All of these<o:p></o:p>
605	A digital multimeter is used to measure:	A. Current<o:p></o:p> B. Resistance<o:p></o:p> C. Potential difference<o:p></o:p> D. All of above<o:p></o:p>
606	A thermistor is a dependent resistors:	A. Heat<o:p></o:p> B. temperature<o:p></o:p> C. energy<o:p></o:p> D. mass<o:p></o:p>
607	diamond des not conduct electricity, because it has no:	A. free electrons<o:p></o:p> B. free protons<o:p></o:p> C. free neutrons<o:p></o:p> D. free positive charge<o:p></o:p>

608	the power of washing machine is:	A. 700 W<o:p></o:p> B. 750 W<o:p></o:p> C. 650 W<o:p></o:p> D. 800 W<o:p></o:p>
609	The power of small fan is:	A. 40 W<o:p></o:p> B. 50 W<o:p></o:p> C. 60 W<o:p></o:p> D. 80 W<o:p></o:p>
610	What is the amount of current passing through an electric heater, if it takes 1800C charge pass through it in 3 minute:	A. 16 A<o:p></o:p> B. 10 A<o:p></o:p> C. 100 A<o:p></o:p> D. 0.1 A<o:p></o:p>
611	If 2 joules of energy is required to transfer one coulomb of charge from one point to another, the potential difference between these points will be:	A. 1V<o:p></o:p> B. 2V<o:p></o:p> C. 4V<o:p></o:p> D. <o:p></o:p>6V <o:p></o:p>
612	Watt is equal to:	A. Coulomb per second<o:p></o:p> B. Newton per second<o:p></o:p> C. Volt per second<o:p></o:p> D. Joule per second<o:p></o:p>
613	The commercial unit of electrical energy is:	A. Joule<o:p></o:p> B. Watt<o:p></o:p> C. Kilowatt hour<o:p></o:p> D. Electron volt<o:p></o:p>
614	Circuit breaker works on the principle of:	A. Electric current<o:p></o:p> B. Magnetism<o:p></o:p> C. Electromagnetism<o:p></o:p> D. Electrostatics<o:p></o:p>
615	The galvanometer has been named after the scientist:	A. Lewis<o:p></o:p> B. Lowry bronsted<o:p></o:p> C. Luigi Galvano<o:p></o:p> D. Galvano Einstein<o:p></o:p>
616	Human skin, in dry conditions, has a resistance of:	A. 20,000 ohm<o:p></o:p> B. 100,000 ohm<o:p></o:p> C. 30,000 ohm<o:p></o:p> D. 2000 ohm<o:p></o:p>
617	$100x10^3$ A= :	A. 10⁻³ A<o:p></o:p> B. 10⁻² A<o:p></o:p> C. 10 A<o:p></o:p> D. 10⁻¹A<o:p></o:p>
618	By keeping resistance constant if we double the voltage then current will be:	A. Double<o:p></o:p> B. 4 times<o:p></o:p> C. ¼ times<o:p></o:p> D. Half<o:p></o:p>
619	V^2/R=:	A. Power<o:p></o:p> B. Energy<o:p></o:p> C. Voltage<o:p></o:p> D. Resistance<o:p></o:p>
620	When resistances are connected in parallel, the current passing through them is:	A. Same<o:p></o:p> B. Zero<o:p></o:p> C. Different<o:p></o:p> D. Infinite<o:p></o:p>
621	When a potential of 10 volt is applied across a conductor, a current of 5 miliampere flows through it, the resistance of the conductor will be:	A. 200 ohm<o:p></o:p> B. 2000 ohm<o:p></o:p> C. 0.2 ohm<o:p></o:p> D. 0.002 ohm<o:p></o:p>
622	Total energy supplied in driving one coulomb of charge around a complete circuit is called:	A. Potential<o:p></o:p> B. Potential difference<o:p></o:p> C. Electromotive force<o:p></o:p> D. Potential energy<o:p></o:p>
	The value or current I passing	A. Temperature<o:p></o:p>

623	The value of current I passing through a conductor is inversely proportional to:	B. Potential difference<o:p></o:p> C. e.m.f.<o:p></o:p> D. resistance<o:p></o:p>
624	the range of galvanometer to measure current is:	A. few amperes<o:p></o:p> B. few micro amperes<o:p></o:p> C. few milli amperes<o:p></o:p> D. mega amperes<o:p></o:p>
625	by connecting suitable high resistance in series with galvanometer it will convert into:	A. voltmeter<o:p></o:p> B. galvanometer<o:p></o:p> C. ammeter<o:p></o:p> D. multimeter<o:p></o:p>
626	in a dry cell, chemical energy changes into:	A. mechanical energy<o:p></o:p> B. electrical energy<o:p></o:p> C. potential energy<o:p></o:p> D. kinetic energy<o:p></o:p>
627	battery is one of the source of:	A. heat<o:p></o:p> B. light<o:p></o:p> C. current<o:p></o:p> D. sound<o:p></o:p>
628	the resistance of an ammeter should be:	A. high<o:p></o:p> B. very high<o:p></o:p> C. low<o:p></o:p> D. constant<o:p></o:p>
629	an ideal voltmeter is that which draws:	A. small current<o:p></o:p> B. no current<o:p></o:p> C. high current<o:p></o:p> D. none of these<o:p></o:p>
630	an additional wire used along with live and neutral wire is:	A. cable wire<o:p></o:p> B. earth wire<o:p></o:p> C. grip wire<o:p></o:p> D. hot wire<o:p></o:p>
631	a fuse is connected in series with:	A. neutral wire<o:p></o:p> B. live wire<o:p></o:p> C. earth wire<o:p></o:p> D. cable wire<o:p></o:p>
632	earth wire is connected with those appliances whose casing is made of:	A. metals<o:p></o:p> B. wood<o:p></o:p> C. glass<o:p></o:p> D. plastic<o:p></o:p>
633	the resistance of conductor is inversely to:	A. temperature<o:p></o:p> B. length<o:p></o:p> C. area of cross section<o:p></o:p> D. pressure<o:p></o:p>
634	with the increase in temperature the resistance of pure metals:	A. increases<o:p></o:p> B. decreases<o:p></o:p> C. remains same<o:p></o:p> D. none of these<o:p></o:p>
635	for which of following ampere second could be the unit:	A. energy<o:p></o:p> B. current<o:p></o:p> C. charge<o:p></o:p> D. power<o:p></o:p>
636	The rating of a fuse wire is always expressed in:	A. ampere-hours<o:p></o:p> B. KWh<o:p></o:p> C. Volts<o:p></o:p> D. Amperes<o:p></o:p>
637	The filament of an electric bulb is made of:	A. Nickel<o:p></o:p> B. Aluminium<o:p></o:p> C. Tungsten<o:p></o:p> D. Carbon<o:p></o:p>
638	A 3Ω resistor having 2A current will dissipate the power of:	A. 12W<o:p></o:p> B. 4W<o:p></o:p> C. 6W<o:p></o:p> D. 8W<o:p></o:p>
639	Resistance of a wire of conductor of 2 Ω resistance is doubled:	A. 4 Ω<o:p></o:p> B. 6 Ω<o:p></o:p> C. 8 Ω<o:p></o:p> D. 10 Ω<o:p></o:p>
		A. Lead and zinc<o:p></o:p>

640	Nichrome wire is an alloy of:	B. Silver and copper<o:p></o:p> C. Nickel and chromium<o:p></o:p> D. Iron and copper<o:p></o:p>
641	Thermocouples convert:	A. Heat energy into electrical energy<o:p></o:p> B. Heat energy into light energy<o:p></o:p> C. Heat energy into mechanical energy<o:p></o:p> D. Chemical energy into electrical energy<o:p></o:p>
642	Which is the best material for making connecting wires:	A. Iron<o:p></o:p> B. Copper<o:p></o:p> C. Tungsten<o:p></o:p> D. Nickel<o:p></o:p>
643	In liquids and gases the current is due to the motion of:	A. Negative charges<o:p></o:p> B. Positive charges<o:p></o:p> C. Both positive and negative charges<o:p></o:p> D. None of these<o:p></o:p>
644	Which is not an e.m.f source:	A. Generator<o:p></o:p> B. Solar cell<o:p></o:p> C. Battery<o:p></o:p> D. Rheostat<o:p></o:p>
645	A parallel circuit is also used as a divider for:	A. Power<o:p></o:p> B. Resistance<o:p></o:p> C. Current<o:p></o:p> D. <span style="font-size:11.0pt;line-height:107%; font-family:"Calibri",sans-serif;mso-ascii-theme-font:minor-latin;mso-fareast-font-family: Calibri;mso-fareast-theme-font:minor-latin;mso-hansi-theme-font:minor-latin; mso-bidi-font-family:Arial;mso-bidi-theme-font:minor-bidi;mso-ansi-language: EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">Voltage
646	Specific resistance of silver is:	A. 1.7x10⁻⁸ Ω.m<o:p></o:p> B. 2.63x10⁻⁸ Ω.m<o:p></o:p> C. 2.75x10⁻⁸ Ω.m<o:p></o:p> D. 7.0x10⁻⁸ Ω.m<o:p></o:p>
647	Specific resistance of aluminium in (10^{-8} Ω.m) is:	A. 1.7<o:p></o:p> B. 2.75<o:p></o:p> C. 5.25<o:p></o:p> D. 1.69<o:p></o:p>
648	Which of the following is an insulator:	A. Copper<o:p></o:p> B. Iron<o:p></o:p> C. Silk<o:p></o:p> D. Silver<o:p></o:p>
649	Power of electric heater is:	A. 1500W<o:p></o:p> B. 4750W<o:p></o:p> C. 100W<o:p></o:p> D. 50W<o:p></o:p>
650	Power of hair dryer is:	A. 1000 W<o:p></o:p> B. 750 W<o:p></o:p> C. 10 W<o:p></o:p> D. 75 W<o:p></o:p>
651	The amount of current that can be felt is:	A. 1A<o:p></o:p> B. 0.1A<o:p></o:p> C. 0.001 A<o:p></o:p> D. 2A<o:p></o:p>
652	The amount of current that can be painful is:	A. 0.005A<o:p></o:p> B. 0.001A<o:p></o:p> C. 1A<o:p></o:p> D. 2A<o:p></o:p>
653	The amount of current that causes the loss of muscle control is:	A. 0.1A<o:p></o:p> B. 0.015A<o:p></o:p> C. 2A<o:p></o:p> D. 1A<o:p></o:p>
654	Which instrument is used to measure current, resistance and potential difference:	A. Galvanometer<o:p></o:p> B. Digital meter<o:p></o:p> C. Voltmeter<o:p></o:p> D. Ammeter<o:p></o:p>
655	Earth wire is connected to the:	A. Power house<o:p></o:p> B. Transformer<o:p></o:p> C. Ground<o:p></o:p> D. Generator<o:p></o:p>
656	Simplest electrical circuits use:	A. One wire<o:p></o:p> B. Two wires<o:p></o:p> C. Four wires<o:p></o:p> D. Five wires<o:p></o:p>
		A. Oppose the current<o:p></o:p>

657	What does a switch do:	B. Open and close the circuit<o:p></o:p> C. Store energy<o:p></o:p> D. Provide voltage<o:p></o:p>
658	If one of the resistors in a parallel circuit is removed, the total resistance will be:	A. Doubled<o:p></o:p> B. Decreased<o:p></o:p> C. Increased<o:p></o:p> D. Remain same<o:p></o:p>
659	The process by which electrons are emitted by a hot metal surface is known as:	A. Boiling<o:p></o:p> B. Evaporation<o:p></o:p> C. Conduction<o:p></o:p> D. Thermionic emission<o:p></o:p>
660	The particles emitted from a hot cathode surface are:	A. Positive ions<o:p></o:p> B. Negative ions<o:p></o:p> C. Protons<o:p></o:p> D. Electrons<o:p></o:p>
661	The output of a two input NOR gate is 1 when:	A. A is 1 and B is 0<o:p></o:p> B. A is 0 and B is 1<o:p></o:p> C. Both a and b are 0<o:p></o:p> D. Both a and b are 1<o:p></o:p>
662	The output of a NAND gate is 0 when:	A. Both of its inputs are 0<o:p></o:p> B. Both of its inputs are 1<o:p></o:p> C. Any of its inputs is 0<o:p></o:p> D. Any of its inputs is 1<o:p></o:p>
663	When we heat the metal at high temperature they emit:	A. Holes<o:p></o:p> B. Protons<o:p></o:p> C. Neutrons<o:p></o:p> D. Electrons<o:p></o:p>
664	In NOT gate number of input terminals is/are:	A. 1 B. 2 C. 3 D. 4
665	The cathode ray oscilloscope consists of main parts:	A. Two<o:p></o:p> B. Three<o:p></o:p> C. Four<o:p></o:p> D. Five<o:p></o:p>
666	George Boole invented:	A. Boolean algebra<o:p></o:p> B. Arithmetic algebra<o:p></o:p> C. Mean algebra<o:p></o:p> D. Geometry<o:p></o:p>
667	The standard group of bits in digital electronic is:	A. 5 bits<o:p></o:p> B. 6 bits<o:p></o:p> C. 7 bits<o:p></o:p> D. 8 bits<o:p></o:p>
668	Eight bits combine to form:	A. A byte<o:p></o:p> B. Megabyte<o:p></o:p> C. Kilobyte<o:p></o:p> D. Gigabyte<o:p></o:p>
669	In C.R.O grid is always connected with potential:	A. Negative<o:p></o:p> B. Positive<o:p></o:p> C. High positive<o:p></o:p> D. Zero positive<o:p></o:p>
670	The instrument which is used to display the magnitude of changing electric current is called:	A. Evacuated tube<o:p></o:p> B. Cathode rays oscilloscope<o:p></o:p> C. Television tube<o:p></o:p> D. Picture tube<o:p></o:p>
671	Electron gun has an electrode called for controlling the flow of electrons in the beam:	A. Plate<o:p></o:p> B. Grid<o:p></o:p> C. Screen<o:p></o:p> D. Filament<o:p></o:p>
672	The more negative potential of grid, the more electrons will be:	A. Attracted<o:p></o:p> B. Repelled<o:p></o:p> C. Attracted as well as repelled<o:p></o:p> D. Neither attracted nor repelled<o:p></o:p>
673	In medical field, C.R.O is used to display:	A. Heart beats<o:p></o:p> B. Pictures of organs<o:p></o:p> C. Pictures of bones<o:p></o:p> D. Blood pressure<o:p></o:p>

674	LDR can act as:	A. Diode<o:p></o:p> B. Switch<o:p></o:p> C. Transistor<o:p></o:p> D. Rectifier<o:p></o:p>
675	Which gate is used for safety alarm:	A. AND<o:p></o:p> B. NANAD<o:p></o:p> C. OR<o:p></o:p> D. NOR<o:p></o:p>
676	AND operation is represented by:	A. Dot (.)<o:p></o:p> B. Addition (+)<o:p></o:p> C. Division (<span style="font-family: Arial, sans-serif; color: rgb(34, 34, 34); background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">÷)<o:p></o:p> D. Minus (-)<o:p></o:p>
677	In OR operation inputs are connected as:	A. Series<o:p></o:p> B. Parallel<o:p></o:p> C. Both series or parallel<o:p></o:p> D. None of these<o:p></o:p>
678	Which combination forms NAND gate:	A. AND & OR<o:p></o:p> B. AND & NOT<o:p></o:p> C. NOT & OR<o:p></o:p> D. NAND & NOT<o:p></o:p>
679	J.J Thomson observed deflection of cathode rays in:	A. 1895<o:p></o:p> B. 1896<o:p></o:p> C. 1897<o:p></o:p> D. 1998<o:p></o:p>
680	The screen of a cathode ray tube consists of a thin layer of:	A. Sodium<o:p></o:p> B. Nitrogen<o:p></o:p> C. Oxygen<o:p></o:p> D. Phosphorus<o:p></o:p>
681	NOT gate is also called:	A. Converter<o:p></o:p> B. Inverter<o:p></o:p> C. Transmitter<o:p></o:p> D. Receiver<o:p></o:p>
682	At room temperature, electrons cannot escape the metal surface due to …….. of atomic nucleus:	A. Repulsive forces<o:p></o:p> B. Attractive forces<o:p></o:p> C. Gravitational forces<o:p></o:p> D. Electromagnetic forces<o:p></o:p>
683	Which is used to investigate the properties of electron beam:	A. LDR<o:p></o:p> B. Electroscope<o:p></o:p> C. Proton gun<o:p></o:p> D. Electron gun<o:p></o:p>
684	X=A.B. This equation is used for which operation:	A. AND<o:p></o:p> B. OR<o:p></o:p> C. NOT<o:p></o:p> D. NAND<o:p></o:p>
685	How many tubes or electron guns used in a colour television set:	A. Two<o:p></o:p> B. Four<o:p></o:p> C. Five<o:p></o:p> D. Three<o:p></o:p>
686	In case of OR and AND operation, if switches s_1 and s_2 both are open then lamp is:	A. On<o:p></o:p> B. Off<o:p></o:p> C. Sometimes on and sometimes off<o:p></o:p> D. Neither on nor off<o:p></o:p>
687	In computer terminology information means:	A. Any data<o:p></o:p> B. Raw data<o:p></o:p> C. Processed data<o:p></o:p> D. Large data<o:p></o:p>
688	Which is the most suitable means of reliable continuous communication between an orbiting satellite and earth:	A. Mecrowaves<o:p></o:p> B. Radio waves<o:p></o:p> C. Sound waves<o:p></o:p> D. Any light waves<o:p></o:p>
689	The basic operations performed by a computer are:	A. Arithmetic operations<o:p></o:p> B. Non-arithmetic operations<o:p></o:p> C. Logical operations<o:p></o:p> D. Both a and c<o:p></o:p>
	The brain of any computer system	A. Monitor<o:p></o:p>

690	The brain of any computer system is:	B. Memory<o:p></o:p> C. CPU<o:p></o:p> D. Control unit<o:p></o:p>
691	Which of the following is not processing:	A. Arranging<o:p></o:p> B. Manipulating<o:p></o:p> C. Calculating<o:p></o:p> D. Gathering<o:p></o:p>
692	From which of the following we can get information almost about everything:	A. Book<o:p></o:p> B. Teacher<o:p></o:p> C. Computer<o:p></o:p> D. Internet<o:p></o:p>
693	What does the term e-mail stand for:	A. Emergency mail<o:p></o:p> B. Electronic mail C. Extra mail<o:p></o:p> D. External mail<o:p></o:p>
694	The data stored in C.D is:	A. 680 MB<o:p></o:p> B. 650 MB<o:p></o:p> C. 700 MB<o:p></o:p> D. 750 MB<o:p></o:p>
695	Hard disk is made of:	A. Aluminium<o:p></o:p> B. Copper<o:p></o:p> C. Iron<o:p></o:p> D. Plastic<o:p></o:p>
696	CD which is made of soft material is called:	A. Hard disk<o:p></o:p> B. Floppy disk<o:p></o:p> C. Iron disk<o:p></o:p> D. Copper disk<o:p></o:p>
697	A device which has two ways communication is:	A. Television<o:p></o:p> B. Radio<o:p></o:p> C. Hard disk<o:p></o:p> D. Mobile phone<o:p></o:p>
698	An example of input device computer is:	A. Keyboard<o:p></o:p> B. printer<o:p></o:p> C. monitor<o:p></o:p> D. RAM<o:p></o:p>
699	A data storage device is:	A. Printer<o:p></o:p> B. Hard disk<o:p></o:p> C. Monitor<o:p></o:p> D. CPU<o:p></o:p>
700	What is fitted in telephone receiver:	A. Electromagnet<o:p></o:p> B. Diaphragm<o:p></o:p> C. Both a and b<o:p></o:p> D. None<o:p></o:p>
701	Information storage device work on the principles of:	A. Heat<o:p></o:p> B. Sound<o:p></o:p> C. Light<o:p></o:p> D. Magnetism<o:p></o:p>
702	Which component is output device of computer:	A. CPU<o:p></o:p> B. C.D<o:p></o:p> C. Keyboard<o:p></o:p> D. Monitor<o:p></o:p>
703	Which of the following reasons increase the importance of computer:	A. Speedy<o:p></o:p> B. Long time storage of memory<o:p></o:p> C. Quick decision<o:p></o:p> D. All of these<o:p></o:p>
704	1 KB = :	A. 1024 bytes<o:p></o:p> B. 1024 KB<o:p></o:p> C. 1024MB<o:p></o:p> D. None of these<o:p></o:p>
705	1 MB =	A. 1022KB<o:p></o:p> B. 1023KB<o:p></o:p> C. 1024KB<o:p></o:p> D. 1025KB<o:p></o:p>
706	1 GB =	A. 1022MB<o:p></o:p> B. 1023 MB<o:p></o:p> C. 1024MB<o:p></o:p> D. 1025MB<o:p></o:p>
707	Coaxial cable are used to transmit signals:	A. Magnet<o:p></o:p> B. Electric<o:p></o:p> C. Mechanical<o:p></o:p>

		D. Both mechanical and magnet<o:p></o:p>
708	The waves which travel in straight line through space and have strong signals are called:	A. Micro waves<o:p></o:p> B. Mechanical waves<o:p></o:p> C. Light waves<o:p></o:p> D. Magnet waves<o:p></o:p>
709	The advantages of electronic mail are:	A. Fast communication<o:p></o:p> B. Cost free service<o:p></o:p> C. More efficient<o:p></o:p> D. All of these<o:p></o:p>
710	Micro waves are used in:	A. Radio<o:p></o:p> B. Television<o:p></o:p> C. Mobile phone<o:p></o:p> D. All of these<o:p></o:p>
711	One byte is equal to:	A. 7 bits<o:p></o:p> B. 5 bits<o:p></o:p> C. 8 bits<o:p></o:p> D. 9 bits<o:p></o:p>
712	Which is not a hardware:	A. CPU<o:p></o:p> B. Window<o:p></o:p> C. Keyboard<o:p></o:p> D. Mouse<o:p></o:p>
713	With broadband information can be loaded:	A. In 1 min<o:p></o:p> B. In 1 sec<o:p></o:p> C. In 1 day<o:p></o:p> D. In 2 days<o:p></o:p>
714	First voice signal was transmitted in the form of electrical signal in:	A. 1870<o:p></o:p> B. 1875<o:p></o:p> C. 1876<o:p></o:p> D. 1880<o:p></o:p>
715	The way of doing business by using web is called:	A. Sources of entertainment<o:p></o:p> B. Web business<o:p></o:p> C. E-commerce<o:p></o:p> D. E-mail<o:p></o:p>
716	Floppy has a storage capacity	A. 4-5 MB B. 3-4 MB C. 1-3 MB D. 3-6 MB
717	In CD presence of pits is indicated by:	A. 0 B. 2 C. 3 D. 1
718	Which rays are used to send or receive digital information along aptical fibre:	A. infrared B. alpha rays C. beta rays D. mechanical
719	A device which has two ways of communication is:	A. television B. radio C. hard disk D. mobile phone
720	waves whose speed is equal to speed of light are:	A. X-rays B. sound rays C. electromagnetic waves D. shock waves
721	To get a design on the computer screen by moving a pointer with the help of mouse is called:	A. word processing B. graphic designing C. data managing D. telecommunication
722	Isotopes are atoms of same element with different :	A. Atomic mass B. Atomic Number C. Number of proton D. Number of Neutron
723	Which among the following radiation has more penetrating power?	A. A beta pareticle B. A gamma particle C. An alpha particle D. None of these
724	What happen to the atomic number of an element which emits one alpha particle?	A. Increase by 1 B. Stays the same C. Decrease by 2 D. Decrease by 1
725	The Half life of a certain isotopes is 1 day. What is the quantity of isotopes after 2 days?	A. One half B. One quarter C. One eight D. None of these

		D. None of these
726	When a Uranium (92 protons)ejects a beta particle, how many protons are left in the remaining nucleus?	A. 89 Protons B. 90 Protons C. 91 Protons D. 93 Protons
727	Release of the energy by the sun is due to:	A. Nuclear Fussion B. Nuclear Fission C. Burning of gases D. Chemical reaction
728	When a heavy nucleus splits into lighter nuclei,the process would.	A. Release nuclear energy B. absorb nuclear energy C. Release Chemical energy D. Absorb Chemical Energy
729	The half life of carbon -14 is:	A. 5730 years B. 5740 years C. 5750 years D. 5760 years
730	Radiation was found in:	A. 1896 B. 1895 C. 1897 D. 1898
731	Safe limit of radiations exposure in one year.	A. 4 rem B. 5 rem C. 3 rem D. 6 rem
732	The half life of argon nuclide Ar-40 is:	A. 2 x 10⁸years B. 2 .2x 10⁸years C. 2.4x 10⁸years D. 2.8x 10⁸years
733	The half life of plutonium $^{236}Pu_{94}$ is:	A. 2.00 years B. 2.35 years C. 2.79 years D. 2.85 years