Physics ICS Part 2 Chapter 15 Online MCQ's Test

Sr	Questions	Answers Choice
1	The magnitude of motional emf is given by	
2	Michael Faraday and Joseph Henry belongs to	A. England and USA B. France and USA C. China and USA D. None of these
3	The unit of induced emf is	A. Ampere B. Volt C. Joule/coulomb D. Both (b) and (c)
4	The direction of induced current is always so as to oppose the change which causes the current, this is the statement of	A. Lenz's law B. Faraday's law C. Ampere's law D. Coulomb's law
5	Lenz's law presented in	A. 1834 B. 1934 C. 1826 D. 1836
6	Question Image	A. Lenz's law B. Faraday's law C. Ampere's law D. None of these
7	One henry is equal to	A. 1 ohm x 1 sec B. 1 ohm x 1 hertz C. 1 ohm x 1 metre D. All of above
8	Self inductance of a long solenoid is given by	D. None of the above
9	A.C is converted into D.C by	A. Dynamo B. Rectifier C. Motor D. Transformer
10	Commutator was invented in	A. 1834 B. 1820 C. 1840 D. 1835
11	If the north pole of a magnet moves away from a metallic ring	A. Clockwise B. Anticlockwise C. First clockwise and then anticlockwise D. None of above
12	Question Image	
13	When the back emf in a current is zero, it draws	A. Zero current B. Maximum current C. Minimum current D. Steady average current
14	1 Henry =	A. VSA⁻¹ B. VS⁻¹A⁻¹ C. V⁻¹SA D. VSA⁻²
15	Electric current produces magnetic field, was suggested by.	A. Faraday B. Oersted C. Henry D. Lenz
16	The current induced can be increased by:	A. Using a stronger magnetic field B. Moving the loop faster C. Replacing the loop bay coi of many turns D. All of above
17	The movement of conductor in magnetic field produces electrical current was discovered	A. 1931 B. 1731

17	in:	C. 1842 D. 1831
18	The emf induced by the motion of a conductor across a magnetic field is called:	A. Motional emf B. Rotational emf C. Induced emf D. All of above
19	Lenz's law was given by Heinrich lenz in:	A. 1894 B. 1904 C. 1854 D. 1834
20	The Lenz's law is also statement of:	A. Law of conservation of mass B. Law of conservation of charge C. Law of conservation of energy D. Law of conservation of momentum
21	The direction of induced current is always so as to oppose the change which causes the current is:	A. Faraday's law B. Lenz's law C. Ohm's law D. Kirchhoff's 1st rule
22	The Direction of induced current is always so as to oppose the change which causes the current, is:	A. Faraday's law B. Lenz's law C. Ohm's law D. Kirchhoff' s1ast rule
23	Electromagnetic induction is exactly according to law of:	A. Momentum B. Charge C. Energy D. Mass
24	If force in the direction of velocity of conductor, then induced current is directed,	A. Anti clockwise B. Clock wise C. At equilibrium D. None of above
25	The Si unit of Mutual inductance is:	A. VA⁻¹S⁻¹ B. VAS⁻¹ C. VSA⁻¹ D. ASV⁻¹
26	In self induction A coil is connected in_____ with battery and a rheostat.	A. Parallel B. Series C. Both A and B D. None of above
27	Energy stored in an inductor is:	A. 1/2L²I B. 1/2L²/I C. _{1/2LI}² D. 1/2LI
28	Energy density of an inductor is:	A. UM=1/2μ_◦/B² B. Um = 2μ_◦/B C. UM = 1/2B²/μ_◦ D. Um = 2B²/μ_◦
29	A current generator device converts:	A. Mechanical energy into chemical energy B. Chemical energy into electrical energy C. Mechanical energy into electrical energy D. Both b and c
30	DC generator by william Sturgeon in:	A. 1894 B. 1961 C. 1834 D. 1961
31	Commutator was invented by:	A. William bills B. William Gates C. William tells D. William Sturgeon
32	The magnitude of back emf:	A. Increases with sped of motor B. Decreases with speed of motor C. Remains same D. None of above
33	For inducing emf in a coil the basic requirement is that:	A. Flux should link the coil B. Change in flux should link the coil C. Coil should form a closed loop D. Both (b) and (c) are true

34	The device in which induced emf is statically induced emf is:	A. Transforms B. AC generator C. Alevator D. Dynamo
35	The north pole of a magnet is brought near a metallic ring. The direction of induced current in the ring will be:	A. Antoclockwise B. Clockwise C. First Clockwise and then Antoclockwise D. First anticlockwise and then Clockwise
36	What is the co-efficient of mutual inductance, when the magnetic flux changes by 2 x 10^{-2} Wb, and change in current is 0.01 A?	A. 2 H B. 3 H C. 1/2 H D. Zero
37	The induced emf in a coil is proportional to:	A. Magnetic flux through the coil B. Rate of change of Magnetic flux through the coil C. Area of the coil D. Product of magnetic flux flux and area of the coil
38	In a coil current change from 2 to 4 A in .05 s . If the average induced emf is 8 V then coefficient of self-inductance is:	A. 0.2 henry B. 0.1 henry C. 0.8 henry D. 0.04 henry
39	Which of the following quantities remain constant in step up transformer?	A. Current B. Voltage C. Power D. Heat
40	Step up transfer has a transformation ratio of 3:2. What is the voltage in secondary , If voltage in primary is 30 V?	A. 45 V B. 15 V C. 90 V D. 300 V
41	Eddy current is produced when:	A. A metal is light in varying magnetic field B. A metal is kept in steady magnetic field C. A circular coil is placed in a steady magnetic field D. A current is passed through a circualr coil
42	If we make magnetic field stronger the value of induced current is.	A. Decreased B. Increased C. Vanishes D. Remain constant
43	Electromagnetic induction obeys law of conservation	A. Charge B. Energy C. Momentum D. Mass
44	When a conductor moves across a magnetic field an emf is set up this emf is called.	A. Variable emf B. Constant emf C. Back emf D. Induced emf
45	The motional emf developed in a conduction depends upon.	A. Length B. Orientation C. Magnetic field D. All of the above
46	The motional emf is give by	A. qvB B. IBL C. eBL D. vBL
47	The rod of unit length is moving at 30 o through a magnetic field of 1 T. If the velocity of rod is 1 m/s, then induced emf in the rod will be given by	A. I V B. 0.25 V C. 0.5 V D. 0.6 V
48	A metal rod of 1 m is moving at a speed of 1 ms-1 in a direction making an angle 30 ^{o} with 0.5 T magnetic field . The emf produced is.	A. 0.25 N B. 2.5 N C. 0.25 V D. 2.5 V
49	The motional emf depends upon the	A. Length of conductor B. Speed of conductor C. Strength of magnet D. All of these
		A. Lenz's law

50	The negative sign with induced emf in Faraday's law is in accordance with	A. Lenz's law B. Amperes law C. Boyle's law D. Gauss law
51	When a coil is moved in a uniform magnetic field, an induced emf is produced due of change in	A. Flux density B. Electric flux C. Magnetic flux D. Magnetic field strength
52	EMF is induced due to change in	A. Charge B. Current C. Magnetic flux D. Electric field
53	Lenz's law is a consequence of the law of conservation of	A. Charge B. Momentum C. Energy D. Angular momentum
54	The Lenz's law fulfils.	A. Law of conservation of energy B. Law of conservation of charge C. Law of conservation of momentum D. Kirchhoff's law
55	Lenz's law deals with	A. Magnitude of emf B. Direction emf C. Direction of induced current D. Resistance
56	Energy density in an inductor is.	A. Directly proportional to magnetic field B. Directly proportional to square of magnetic field C. Inversely proportional to magnetic field D. Inversely proportional to square of magnetic field
57	Mutual induction play role in.	A. Generator B. D.C. motor C. Galvanometer D. Transformer
58	The mutual inductance of the coils depends upon.	A. Stiffness of the coils B. Density of coils C. Material of coils D. Geometry of the coils
59	SI unit of hennery which is.	A. VSA-1 B. VS-1 A C. VS-1A-1 D. VSA
60	Mutual induction has a practical role in the performance of the.	A. Radio choke B. Transformers C. A.C. Generator D. D.C. Generator
61	The mutual inductance between two coils depends upon their	A. Size B. Core material C. Size, core material and separation D. Separation
62	The self induction emf is some times called.	A. Motional emf B. Constant emf C. Back emf D. Variable emf
63	The induction can be increased by winding the wire around a core made of.	A. Copper B. Silicon C. Iron D. Aluminum
64	By winding the coil around a less magnetic core, self induction.	A. Will increase B. Will decrease C. Remain same D. First increase then decrease
65	Unit of self inductance is	A. Weber B. Tesla C. Henry D. Farad
66	Self induction does not depend on	A. Number of turns of the coil B. Area of cross section of the core C. Nature of material of the core D. Current through inductor

67	B2/2p is the expression of.	A. Lenz's law B. Magnetic energy C. Magnetic energy density D. Back emf
68	Energy stored in inductor is.	A. 1/2 L I² B. 1/2 LI C. 1/2 L2I D. 1/2 L2I2
69	If magnetic field is doubled then magnetic energy density becomes.	A. Four times B. Two times C. Three times D. Six times
70	In case of inductor , energy is stored in the	A. Electric field B. Magnetic field C. Potential field D. Gravitational field
71	If 10 A current passes through 100 mH inductor, then energy stored is.	A. 100 J B. 5 J C. 20 J D. Zero
72	A 50 mH coil carries a current of 2.0 a , then energy stored in tis magnetic field is.	A. 0.1 J B. 10 J C. 100 J D. 1000 J
73	A.C. Generator based upon the	A. Lenz's law B. Maxwell's relation C. Faradays law of electromagnet induction D. Mutual induction
74	Which one is not present in A.C. generator.	A. Armature B. Magnet C. Slip rings D. Commutator
75	If speed of rotation of a generator is doubled the output voltage will be.	A. Remain same B. Double C. Four time D. One half
76	Induced emf in A.C. generator can be increased by	A. Decreasing area of coil B. Decreasing magnetic field C. Increasing area of coil D. Slowing down speed of coil
77	In A.C. inductor behaves as	A. Capacitor B. Resistor C. Commutator D. Transistor
78	In A.C. generator , when plane of coil is perpendicular to magnetic field, then output of generator is.	A. NwAB B. 2pi f C. Maximum D. Zero
79	Commentator was invented by	A. Henry B. Ousted C. Maxwell D. William sturgeon
80	In D.C. generator, split rings act as.	A. Capacitor B. Commutator C. Resistor D. Inductor
81	A simple device that prevents the direction of current from changing is called.	A. Commutator B. Rotor C. Armature D. Detector
82	The only difference between the construction of D.C and A.C is.	A. Carbon burshes B. Coil C. Commutator D. Magnetic field
83	If the coil is wound on iron core, the flux through it.	A. Decreases B. Becomes zero C. Increases D. Remains constant
84	The device in the circuit that consume electrical energy are known as	A. Dissipaters B. Generator

84	The device in the circuit that consume electrical energy are known as.	C. Load D. Motors
85	Which of the following converts electrical energy into mechanical energy.	A. Transformer B. A.C. generator C. D.C. generator D. D.C. motor
86	The winding of the electromagnet in motor are usually called.	A. Magnetic coils B. Field coils C. Electric coils D. electric o electric coils
87	split rings are used in	A. A.C. generator B. A.C. motor C. Transformer D. D.C. motor
88	The jerks in D.C. motor are created by the use of.	A. Armature B. Commutators C. Split rings D. Source of emf
89	Output of D.C. motor is	A. A.C. energy B. Mechanical energy C. Chemical energy D. D.C. energy
90	When a motor is over loaded then the magnitude of back emf.	A. Increases B. Decreases C. Remain constant D. Zero
91	When the back emf is zero, its draws.	A. Zero current B. Minimum current C. Maximum current D. Steady current
92	With the speed of motor, magnitude of back emf	A. Remain same B. Increase C. Decrease D. First increases then decreases
93	When motor is just started, back emf is almost.	A. Maximum B. Zero C. Minimum D. Infinite
94	When back emf in motor is zero, it draws.	A. Zero current B. Minimum current C. Maximum current D. Steady current
95	The working principle of transformer is.	A. Self induction B. Faraday's law C. Mutual induction D. Electromagnetic induction
96	the core of transformer is laminated so reduce.	A. Magnetic loss B. Hysteresis loss C. Eddy current loss D. Electric loss
97	The application of mutual induction is a.	A. D.C. motor B. Radio C. Television D. Transformer
98	Transformer is used to change	A. Electric power B. Magnetic field C. Alternating voltage D. Phase of A.C.
99	Step up transformer is used.	A. Step up D.C. voltage B. Step up A.C. voltage C. Step up both A.C and D.C. D. Step up A.C. current
100	For step down transformer	A. Ns>Np B. Np > Ns C. Ns = Np D. Ns > > > Np
101	Eddy current is one cause energy loss in	A. A.C. generator B. Transformer C. D.C. motor D. D.C. generator
		A. Voltage level

102	A real transformer does not change.	A. Voltage level B. Current level C. Power level D. Frequency
103	Efficiency of transformer does not affected by	A. Input voltage B. Core of transformer C. Insulation between sheet D. Resistance of coils
104	A step up transformer is used 120 V line to provide 240 V. If primary coil has 100 turns the number of turns is secondary is.	A. 50 B. 100 C. 150 D. 200
105	If D.C. input for step up transformer, the output is	A. Zero B. High C. Low D. May be high or low
106	If a step up transformer were 100% efficient the primary and secondary winging's would have the same.	A. Current B. Power C. Voltage D. Direction of winding
107	The illustration of the phenomenon of mutual induction is in the device of	A. Transformer B. Inductor C. A.C. Generator D. Ammeter