

ECAT Pre General Science Physics Chapter 15 Electromagnetic Induction

Sr	Questions	Answers Choice
1	The induced current in a conductor depends upon:	A. Resistance of the loop B. Speed with which the conductor moves C. Any of these <b style="color: green;">D. Both (A) and (B) E. None of these
2	The phenomenon of generation of induced emf is called:	A. Electrostatic induced B. Magnetic induced <b style="color: green;">C. Electromagnetic induced D. Electric induced E. Both A and C
3	Plan of a coil makes an angle of 20° with the lines of magnetic field. The angle between B and vector area of plane of coil is:	A. Also 20° B. 70° C. 90° D. 180° E. None of these
4	What is the coefficient of mutual inductance, when the magnetic flux changes by $2 \times 10^{-2} \text{ Wb}$, and change in current is 0.01 A?	<b style="color: green;">A. 2 H B. 3 H C. $1/2 \text{ H}$ D. Zero
5	An induced current can be produced by	A. Constant magnetic field <b style="color: green;">B. Changing magnetic field C. Varying electric field D. Constant electric field E. None of these
6	In the equilibrium state, the potential difference between two ends of the conductor moving across a magnetic field is called:	A. Motion emf B. Electrostatic emf C. Induced emf D. Both A and B <b style="color: green;">E. Both A and C

7	When the conductor moved across a magnetic field:	<p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">B. Emf induced gives rise to induced current</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">C. An emf induced across its ends</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">D. All are correct</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">E. None of these</p>
8	The induced current in the loop can be increased by	<p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">A. Using a stronger magnetic field</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">B. Moving the loop faster</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">C. Replacing the loop by a coil of many turns</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">D. All above</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">E. Both A and B</p>
9	In the equilibrium state, the potential difference between two ends of the conductor moving across a magnetic field is called:	<p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">A. Both A and C</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">B. Induced emf</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">C. Both A and B</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">D. Motion emf</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">E. Electrostatic emf</p>
10	Referring to above figure, current in coil P falls from its maximum value to zero	<p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">A. At the instant the switch is closed</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">B. At the instant the switch is opened</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">C. When switch is kept open</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">D. When switch is kept closed</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">E. None of these</p>
11	The direction of induced current is always so as to oppose the cause which produces it. This is	<p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">A. Lenz's law</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">B. Ampere's law</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">C. Faraday's law</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">D. Coulomb's law</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">E. None of these</p>
12	Faraday's law of electromagnetic induction has been used in the construction of:	<p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">A. Galvanometer</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">B. Voltmeter</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">C. Electric motor</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">D. Electric generator</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">E. Commutator</p>
13	When there is no relative motion between the magnet and coil, the galvanometer indicates:	<p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">A. No current in circuit</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">B. An increasing current</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">C. A decreasing current</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">D. Either B or C</p>
14	The ratio of average e.m.f in the coil to the time rate of change of current in the same coil is called	<p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">A. Mutual induction</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">B. Mutual inductance</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">C. Capacitance</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">D. Self inductance</p>
15	The rate change of area expressed is expressed in:	<p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">A. None of these</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">B. ms^{-1}</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">C. m^2s^{-2}</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">D. ms^{-2}</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">E. m^2s^{-1}</p>
16	A.C. can be measured with the help of	<p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">A. Nuclear effect</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">B. Magnetic effect</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">C. Chemical effect</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">D. Heating effect</p>
17	Which of the following quantities remain constant in step up transformer?	<p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">A. Current</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">B. Voltage</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">C. Power</p> <p style="font-size: 12.0pt; line-height: 107%; font-family: 'Times New Roman', serif;">D. Heat</p>

18	A coil of constant area is placed in a constant magnetic field. An induced current is produced in the coil when	A. The coil is distorted B. The coil is rotated C. The coil is neither distorted nor rotated D. Both A and B E. None of these
19	Micheal Faraday and Joseph Henry belong respectively to:	A. USA and England B. England and France C. England and USA D. USA and France E. None of these
20	Step up transformer has a transformation ratio of 3:2. What is the voltage in secondary, if voltage in primary is 30V:	A. 45 V B. 15 V C. 90 V D. 300 V