

Physics ECAT Pre Engineering Chapter 15 Electromagnetic Induction

Sr	Questions	Answers Choice
1	Self induced e.m.f. is also called	A. Motional e.m.f. B. Thermistor C. Electrostatic induction D. Back e.m.f
2	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
3	Transformer is used to	A. Increase alternating current B. Increase d.c voltage C. Increase & Decrease emf D. All answers are right
4	Referring to above figure, due to change in current in the coil P, the change in magnetic flux	A. Is associated with coil P B. Is associated with coil S C. Causes an induced current in coil S D. All of these E. None of these
5	The ratio of average e.m.f in the coil to the time rate of change of current in the same coil is called	A. Mutual induction B. Mutual inductance C. Capacitance D. Self inductance
6	An induced current can be produced by:	A. Constant magnetic field B. Changing magnetic field C. Varying magnetic field D. Constant electric field E. None of these
7	An emf is set up in a conductor when it	A. Is kept in a magnetic field B. Is kept in an electric field C. Moves across a magnetic field D. Both A and B E. None of these
8	A metal rod of length 1m is moving at a speed of 1 ms^{-1} in a direction making an angle of 30° with 0.5 T magnetic field. The emf produced in the rod is:	A. 0.25 N B. 0.25 V C. 2.5 V D. 2.5 N E. 25 V
9	The induced current in a conductor depends upon:	A. Resistance of the loop B. Speed with which the conductor moves C. Any of these D. Both (A) and (B) E. None of these
10	A device which converts Electrical energy into mechanical energy is called as	A. Transformer B. Generator C. Motor D. All of these
11	Referring to above figure, due to change in current in the coil P, the change in magnetic flux	A. Is associated with coil P B. Is associated with coil S C. Causes an induced current in coil S D. All of these E. None of these
12	Instead of moving the coil towards a magnet, the magnet is moved towards the coil with the same speed. The galvanometer shows current:	A. Of same magnitude in the same direction B. Of different magnitude in the same direction C. Of same magnitude but in opposite direction D. Of different magnitude in the opposite direction E. None of these

13	The induced emf in a coil is proportional to:	<p>A. Magnetic flux through a coil</p> <p>B. Rate of change of magnetic flux through the coil</p> <p>C. Area of the coil</p> <p>D. Product of magnetic flux and area of the coil</p>
14	In magnet-coil experiment, emf can be produced by:	<p>A. Keeping the coil stationary and moving the magnet</p> <p>B. Keeping the magnet stationary and moving the coil</p> <p>C. Relative motion of the loop and magnet</p> <p>D. Any one of above</p> <p>E. All above</p>
15	In a coil current change from 2 to 4 A in .05 s. If the average induced emf is 8V then coefficient of self-inductance is:	<p>A. 0.2 henry</p> <p>B. 0.1 henry</p> <p>C. 0.8 henry</p> <p>D. 0.04 henry</p>
16	When a conductor is moved across a magnetic field, the redistribution of charge sets up:	<p>A. Magnetic field</p> <p>B. Electrostatic field</p> <p>C. Electromagnetic field</p> <p>D. All of these</p> <p>E. None of these</p>
17	Michael Faraday and Joseph Henry belong respectively to	<p>A. USA and England</p> <p>B. England and France</p> <p>C. England and USA</p> <p>D. USA and France</p> <p>E. None of these</p>
18	Instead of moving the coil towards a magnet, the magnet is moved towards the coil with the same speed. The galvanometer shows current	<p>A. Of same magnitude in the same direction</p> <p>B. Of different magnitude in the same direction</p> <p>C. Of same magnitude but in opposite direction</p> <p>D. Of different magnitude in the opposite direction</p> <p>E. None of these</p>
19	A square loop of wire is moving through a uniform magnetic field. The normal to the loop is oriented parallel to the magnetic field. The emf induced in the loop is:	<p>A. Zero</p> <p>B. Of smaller magnitude</p> <p>C. Of larger magnitude</p> <p>D. Sometimes B, sometimes C</p> <p>E. Neither of these</p>
20	Lens's law deals with the	<p>A. Magnitude of induced current</p> <p>B. Magnitude of induced e.m.f</p> <p>C. Direction of induced e.m.f</p> <p>D. Direction of induced current</p>