

ECAT Physics Chapter 14 Electromagnetism

Sr	Questions	Answers Choice
1	The pointer of a magnetic compass:	<p>A. Is affected only by permanent magnets</p> <p>B. Align itself parallel to the applied magnetic field</p> <p>C. Vibrates in the magnetic field of the current</p> <p>D. Aligns itself perpendicular to the magnetic field</p> <p>E. Both (C) and (D)</p>
2	When the waveform of one voltage is increasing and that of second is decreasing and vice versa, then phase difference between these voltage is	<p>A. 90°</p> <p>B. 75°</p> <p>C. 0°</p> <p>D. 180°</p>
3	In the formula $B = \mu_0 n I$, the symbol n denotes:	<p>A. Total number of turns of solenoid</p> <p>B. Number of turns per unit length</p> <p>C. Number of turns per unit volume</p> <p>D. Numbers of turns per unit area</p> <p>E. Number of moles</p>

4	Electron gun consist of	A. three anodes B. heating cathode C. three anodes D. three anodes , heating cathode, grid
5	When charged particle is projected perpendicular to a uniform magnetic field its trajectory is	A. circular B. elliptical C. cycloid D. straight line
6	Total number of turns on 0.15 m length solenoid is 300. the value of n is:	A. Greater than 300 B. Smaller than 300 C. Equal to 300 D. Any of (A) or (B) E. Any of (A) or(C)
7	The working of galvanometer depends upon torque exerted on a current carrying coil in	A. magnetic field B. electric field C. gravitational field D. nuclear field
8	The total number of lines of magnetic induction passing through a surface perpendicular to the magnetic field is called	A. magnetic flux B. magnetic flux density C. magnetic induction D. magnetic field intensity
9	The unit of flux density is also given by	A. Weber/m ² or Wb . m ⁻² B. Weber/mor Wb . m C. Weber/mor Wb . m ⁻¹ D. Weber or Wb
10	The SI unit of flux density is	A. Newton/Amp-meter B. Newton-m/Ampere C. Newton-m/Amp ² D. Newton-Amp/meter
11	The straight current carrying conductor experiences maximum force in a uniform magnetic field when it is placed	A. parallel to the field B. Perpendicular to the field C. At an angle of 45 to the field D. None of the above
12	The force acting on a charge moving in a magnetic field	A. is perpendicular to the both magnetic field and direction of motion B. is proportional to the magnetic of charges C. vanishes when the motion is directly opposite to the direction of field D. all of the above
13	A current carrying conductor sets up its own:	A. <p class="MsoNormal" style="text-align:justify">Electric field</p> <p class="MsoNormal" style="text-align:justify">Nuclear field</p> <p class="MsoNormal" style="text-align:justify">Magnetic field</p> <p class="MsoNormal" style="text-align:justify">Both (A) and (C)</p> <p>E. All of these</p>
14	To convert galvanometer into ammeter we connect	A. small resistance in parallel with galvanometer B. small resistance in series with galvanometer C. high resistance in series with galvanometer D. high resistance in parallel with galvanometer
15	Magnetic flux passing through the an element of area A placed perpendicular to a uniform magnetic field B is:	A. Maximum B. Minimum C. Zero

- D. Very small
E. None of these

16 Ammeter is used to measure

- A. voltage
B. resistance
C. voltage and current
D. current

17 When some compass needles are placed on a card board along a circle with the center at the wire, they will

- A. **Point the direction of N-S**
- B. Set themselves tangential to the circle
- C. Point in the direction of E-W
- D. None of these
- E. Point in direction of S-E

18 A beam of electrons is provided by an

- A. electron gun
B. Suppray
C. Injection
D. None of these

19 magnetic field is a:

- A. **Vector quantity**
- B. Scalar quantity
- C. Scalar as well as scalar quantity
- D. Any of (A) or (B)
- E. Neither (A) nor (B)

20 Tesla is the unit of

- A. **Magnetic induction or flux density**
B. Magnetic flux
C. Self inductance
D. None of these