

ECAT Pre General Science Physics Chapter 14 Electromagnetism

Sr	Questions	Answers Choice
1	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
2	Which one of the following relations is correct?	A. $1 \text{ Wb} \cdot \text{m}^2 = 1 \text{ Nm}$ B. $1 \text{ tesla} = 104 \text{ gauss}$ C. $1 \text{ Wb} \cdot \text{m}^2 = 1 \text{ tesla}$ D. All of the above
3	If current through conductor is 1 A and length of conductor is 1m placed at right angle to the magnetic field, then the strength of magnetic field is	A. $F = B^2$ B. $F = 0$ C. $F = B$ D. $F = B/2$
4	In the formula $B = \mu_0 n I$, the symbol n denotes:	A. Total number of turns of solenoid B. Number of turns per unit length C. Number of turns per unit volume D. Numbers of turns per unit area E. Number of moles
5	When an electron enters in a magnetic field right angle to its motion, the magnitude of	A. changed B. zero

	its velocity will be	C. unchanged D. none of these
6	The direction of lines of force depends upon the direction of	A. voltage B. current C. charges D. none of these
7	The SI unit of flux density is	A. Newton/Amp-meter B. Newton-m/Ampere C. Newton-m/Amp² D. Newton-Amp/meter
8	Electron gun consist of	A. three anodes B. heating cathode C. three anodes D. three anodes , heating cathode, grid
9	The unit of magnetic flux is	A. Weber-m² B. Weber-m³ C. Henry D. Weber
10	When a suitable small resistance is put in parallel with the galvanometer coil, it is converted into	A. Voltmeter B. Avometer C. Ammeter D. None of these
11	The magnetic force exerted on an electron moving with velocity 'v' at right angle to the magnetic field is given by	A. $F = eVB$ B. $F = e^2 v^2 / B$ C. $F = e / VB$ D. $F = B^2 v^2 / e$
12	When the charged particle is projected at right angles to the field, then experienced by it will be:	A. Maximum B. Zero C. qvB D. Both (A) and (B) E. Both (A) and (C)
13	A relationship between Gauss of magnetic induction and Tesla(T) is given by	A. $G = 10^{-3} T$ B. $G = 10^{-2} T$ C. $G = 10^{-4} T$ D. $G = 10^{-1} T$
14	The unit of flux density is also given by	A. Weber/m² or Wb . m⁻² B. Weber/mor Wb . m C. Weber/mor Wb . m⁻¹ D. Weber or Wb
15	A current carrying conductor is placed at right angle to the magnetic field. The magnetic force experienced by the conductor is	A. minimum B. maximum C. zero D. none of these
16	A galvanometer in which the coil comes to rest quickly after the current passed through it, or the current stopped from flowing through it, is called	A. dead beat galvanometer B. stable galvanometer C. shunt galvanometer D. sensitive galvanometer
17	The pointer of a magnetic compass:	A. affected only by permanent magnets B. Align itself parallel to the applied magnetic field C. Vibrates in the magnetic field of the current D. Aligns itself perpendicular to the magnetic field E. Both (C) and (D)

18 A beam of electrons is provided by an

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

19 The SI unit of magnetic induction is tesla which is equal to

- A. Newton/ampere-meter or $\text{N/A}\cdot\text{m}$
- B. $\text{Newton/ampere}^2\cdot\text{meter}$ or $\text{N/A}^2\cdot\text{m}$
- C. $\text{Newton/ampere}^2\cdot\text{meter}^2$ or $\text{N/A}^2\cdot\text{m}^2$
- D. $\text{Newton/ampere}^2\cdot\text{meter}^2$ or $\text{N/A}^2\cdot\text{m}^2$

20 Strength of magnetic field is measured in SI units, in:

- A. N
- B. N/Am
- C. Am/N
- D. Nm/A
- E. None of these