

## ECAT Pre General Science Online Test

Sr	Questions	Answers Choice
1	The SI unit of magnetic flux is.	A. weber B. $\text{Nm}^{-1}\text{A}^{-1}$ C. tesla D. gauss
2	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
3	The unit of magnetic flux is	A. Weber- $\text{m}^2$ B. Weber- $\text{m}^3$ C. Henry D. Weber
4	Weber is a unit of	A. magnetic flux B. magnetic field intensity C. magnetic induction D. magnetic flux density
5	Magnetic flux and flux density are related by	A. Flux density = flux x area B. Flux density = flux / area C. Flux density = flux - area D. None of these
6	The SI unit of magnetic flux is	A. $\text{NmA}^{-2}$ B. $\text{NmA}^{-1}$ C. $\text{NAmA}^{-1}$ D. $\text{Nm}^2\text{A}^{-1}$
7	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. $F = B/2$
8	The force exerted on a conductor of length L, carrying current I when placed in a magnetic field B is given by	A. $F = IB/L$ B. $F = L \times B/I$ C. $F = IL \times B$ D. $F = IL \cdot B$
9	The SI unit of magnetic induction is	A. Gauss B. Tesla C. Weber D. Weber $^2$
10	A relationship between Gauss of magnetic induction and Tesla(T) is given by	A. $10^{-3}\text{T}$ B. $10^{-2}\text{T}$ C. $10^{-4}\text{T}$ D. $10^{-1}\text{T}$
11	A meter wire carrying a current of 2A is at right angle to the uniform magnetic field of 0.5 Weber/ $\text{m}^2$ . The force on the wire is	A. 5N B. 4N C. 1.5N D. 6N
12	The SI unit of magnetic induction is tesla which is equal to	A. Newton/ampere-meter or $\text{N/A-m}$ B. Newton/ampere $^2$ -meter or $\text{N/A}^2\text{-m}$ C. Newton/ampere $^2$ -meter $^2$ or $\text{N/A}^2\text{-m}^2$ D. Newton/ampere $^2$ -meter $^2$ or $\text{N/A}^2\text{-m}^2$
13	The force acting on one meter length of the conductor placed at right angle to the magnetic field, when one A current is passing through it, defines the	A. magnetic flux B. magnetic induction C. magnetic field D. self inductance
14	Gauss(G) is smaller unit of magnetic induction which is related to tesla(T) as	A. $10^{-4}\text{G}$ B. $10^{-5}\text{G}$ C. $10^{-3}\text{G}$ D. $10^{-4}\text{G}$

15	The force acting on a charge moving in a magnetic field	<p>A. is perpendicular to the both magnetic field and direction of motion</p> <p>B. is proportional to the magnetic of charges</p> <p>C. vanishes when the motion is directly opposite to the direction of field</p> <p>D. all of the above</p>
16	'K' is the proportionality constant of force experienced by conductor. What is the value of 'K' in SI units?	<p>A. 0</p> <p>B. 1</p> <p>C. 0.5</p> <p>D. -1</p>
17	A current carrying conductor is placed at right angle to the magnetic field. The magnetic force experienced by the conductor is	<p>A. minimum</p> <p>B. maximum</p> <p>C. zero</p> <p>D. none of these</p>
18	In a straight current carrying conductor, the direction of magnetic field can be found by	<p>A. right hand rule</p> <p>B. left hand rule</p> <p>C. head to tail rule</p> <p>D. none of these</p>
19	The direction of lines of force depends upon the direction of	<p>A. voltage</p> <p>B. current</p> <p>C. charges</p> <p>D. none of these</p>
20	The most suitable material for permanent magnet is	<p>A. cobalt</p> <p>B. iron</p> <p>C. steel</p> <p>D. aluminium</p>
21	The field around a moving charge is called	<p>A. magnetic field</p> <p>B. conservative field</p> <p>C. non-conservative field</p> <p>D. none of these</p>
22	The sources of magnetic field are	<p>A. isolated magnetic poles</p> <p>B. charges at rest</p> <p>C. charges in motion</p> <p>D. none of these</p>
23	Heating effect caused by an electric circuit is written	<p>A. <math>H = I^2 R t</math></p> <p>B. <math>H = I^2 R</math></p> <p>C. <math>H = I R^2 t</math></p> <p>D. <math>H = I R^2</math></p>
24	Electric generators which convert mechanical energy into	<p>A. solar energy</p> <p>B. thermal energy</p> <p>C. kinetic energy</p> <p>D. electrical energy</p>
25	Solar cell converts sunlight directly into	<p>A. potential energy</p> <p>B. thermal energy</p> <p>C. mechanical energy</p> <p>D. electrical energy</p>
26	If a 40 watt light bulb burns for 2 hours. how much heat is generated	<p>A. <math>288 \times 10^3 \text{ J}</math></p> <p>B. <math>288 \times 10^8 \text{ J}</math></p> <p>C. <math>288 \times 10^5 \text{ J}</math></p> <p>D. <math>288 \times 10^6 \text{ J}</math></p>
27	The potential difference across the conductors should be maintained constant by connecting the ends of wire to the terminal of a device called a source of	<p>A. power</p> <p>B. current</p> <p>C. resistance</p> <p>D. temperature</p>
28	The speed of randomly moving electrons depends upon	<p>A. pressure</p> <p>B. volume</p> <p>C. temperature</p> <p>D. mass</p>
29	The conventional current in a circuit is defined as " current which passes from a point at higher potential to a point at lower potential as if it represent a movement of	<p>A. negative charges</p> <p>B. positive charges</p> <p>C. protons</p> <p>D. electrons</p>
30	The charge carriers in gases are	<p>A. electrons</p> <p>B. ions</p> <p>C. protons</p> <p>D. ions and electrons</p>