

O P JINDAL SCHOOL, SAVITRINAGAR

CLASS TEST & PRACTICE

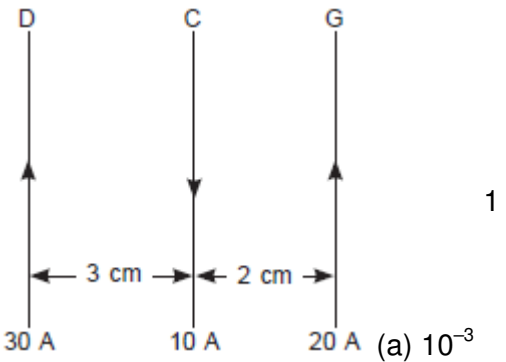
CLASS XII PHYSICS

TOPIC : MOVING CHARGES AND MAGNETISM

- 1 If the beams of electrons and protons move parallel to each other in the same direction, then they
(a) attract each other. 1
(b) repel each other.
(c) no relation.
(d) neither attract nor repel.
- 2 The magnetic field due to a straight current carrying conductor of infinite length at a perpendicular distance a is equal to _____ . 1
- 3 Relation between S.I. unit and C.G.S unit magnetic field is _____ . 1
- 4 According to ampere circuital law, the line integral of the magnetic field \vec{B} around any closed path enclosing current I , is equal to _____ . 1
- 5 Force on a charge q moving in a magnetic field B with velocity v at angle θ is equal to _____ . 1
- 6 Force on a current carrying conductor in a magnetic field is _____ . 1
- 7 The magnetic field of a straight solenoid carrying current I and having n turns per unit length is _____ . 1
- 8 A conducting circular loop of radius r carries a constant current i . It is placed in a uniform magnetic field B , such that B is perpendicular to the plane of the loop. The magnetic force acting on the loop is 1
(a) irB (b) $2\pi riB$
(c) zero (d) πriB
- 9 The gyro-magnetic ratio of an electron in an H-atom, according to Bohr model, is 1
(a) independent of which orbit it is in.
(b) neutral
(c) positive
(d) increases with the quantum number n .
- 10 An electron is projected along the axis of a circular conductor carrying the same current. Electron will experience 1
(a) a force along the axis.
(b) a force perpendicular to the axis.
(c) a force at an angle of 4° with axis.

(d) no force experienced.

11 Three long, straight parallel wires, carrying current are arranged as shown in the figure.



The force experienced by a 25 cm length of wire C is
(a) 10^{-3} N
(b) 2.5×10^{-3} N
(c) zero
(d) 1.5×10^3 N

12 In a circular coil of radius r , the magnetic field at the centre is proportional to

- (a) r^2 (b) r
(c) $\frac{1}{r}$ (d) $\frac{1}{r^2}$

13 A positive charge enters in a magnetic field and travels parallel to but opposite the field. It experiences

- (a) an upward force.
(b) a downward force.
(c) an accelerated force.
(d) no force.

14 Deflection produced in a galvanometer when a unit current flows through it is known as _____.

15 A moving coil galvanometer can be converted into voltmeter by connecting a large resistance R in _____ with it.

16 Maximum torque acts on a current carrying coil when it is suspended in magnetic field such that its plane is _____ to magnetic field.

17 An ammeter is _____ resistance galvanometer.