O P JINDAL SCHOOL, SAVITRINAGAR

ASSIGNMENT

CLASS XII PHYSICS

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61 Phenomenon of production of induced emf due to change of magnetic flux linked with a closed circuit is known as _____.   1

62 Direction of induced current is such that it _____ the cause which produces it.   1

63 A long straight current carrying wire passes normally through the centre of circular loop. If the current through the wire increases, will there be an induced emf in the loop? Justify.   1

64 The self-inductance L of a solenoid of length l and area of cross-section A, with a fixed number of turns N increases as [NCERT Exemplar]
(a) l and A increase.
(b) l decreases and A increases.
(c) l increases and A decreases.
(d) both l and A decrease.   1

65 A metal plate is getting heated. It can be because [NCERT Exemplar]
(a) a direct current is passing through the plate.
(b) it is placed in a time varying magnetic field.
(c) it is placed in a space varying magnetic field, but does not vary with time.
(d) a current (either direct or alternating) is passing through the plate.   1

66 The self-inductance of a coil having 500 turns is 50 mH. The magnetic flux through the cross-sectional area of the coil while current through it is 8 mA is found to be
(a) 4×10^{-4} Wb   1

(b) 0.04 Wb
(c) 4 m Wb
(d) 40 m Wb

67 While keeping area of cross-section of a solenoid same, the number of turns and length of solenoid are both doubled. The self-inductance of the coil will be

(a) halved.

1

(b) doubled. (c) $\frac{1}{4}$ times the original value.

(d) unaffected.

68 In a coil of resistance 10 π, the induced current developed by changing magnitude of change in flux through the coil is weber is

(a) 8 (b) 2

1
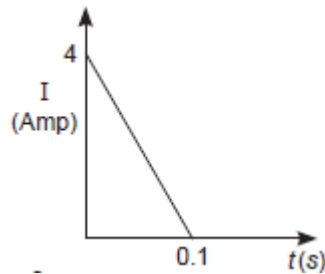
(c) 6 (d) 4

69 A metal ring is held horizontally and bar magnet is dropped through the ring with its length along the axis of the ring. The acceleration of the falling magnet is

(a) equal to g.

(b) less than g.

1

(c) more than g.

(d) first increases then decreases.

70 A coil of resistance 400 Ω is placed in a magnetic field. If the magnetic flux φ linked with the coil varies with times t (sec) as φ = $50t^2 + 4$, the current in the coil at t = 2 sec is
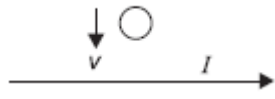
1

(a) 0.5 A (b) 0.1 A

(c) 2 A (d) 1 A

71 Phenomenon of production of induced e.m.f. in a coil when a changing current passes through it is known as _____.   1

72 When magnetic lines of force are parallel to a closed surface, then the net magnetic flux through the surface is _____.   1

73 Predict the direction of induced current in a metal ring when the ring is moved towards a straight conductor with constant speed

1

v. The conductor is carrying current I in the direction shown in the figure _____