
25. The self-inductance of a solenoid is increased when a soft iron core is inserted into it. This is because the soft iron core

- A. Decreases the resistance of the solenoid B. Reduces the effect of eddy current
- C. Improves the flux linkage between the turns of the coil D. Increases the mutual inductance between the solenoid and the core

[Answer & Explanation](#)

Answer: Option C

26. A small coil lies inside a large coil. The two coils are horizontal concentric and carry currents in opposite directions. The large coil will experience

- A. A torque about horizontal axis B. A torque about vertical axis
- C. An upward force along the axis D. No resultant force

[Answer & Explanation](#)

Answer: Option D

27. An aeroplane of wingspan 10m flies from the equator towards the North Pole. The wings are perpendicular to the vertical component of the earth's magnetic field ($B = 4 \times 10^{-5} \text{T}$). At maximum speed an emf of 96mV is induced across the wing tips. The maximum speed of the aeroplane is

- A. 150msec⁻¹ B. 384msec⁻¹
- C. 38.4msec⁻¹ D. 200msec⁻¹

[Answer & Explanation](#)

Answer: Option B

28. A.C can not be used for

- A. producing heat B. producing light
- C. Magnetizing iron D. Producing magnetic field

[Answer & Explanation](#)

Answer: Option C

29. Non inductive resistances are used in decreasing

[A.](#) Mutual inductance

[B.](#) Self inductance

[C.](#) Magnetic fields

[D.](#) Heating effect

[Answer & Explanation](#)

Answer: Option B

30. Magnetic compass needle will be deflecting if it is kept near

[A.](#) Static charge

[B.](#) Soft iron

[C.](#) Semi-conductor

[D.](#) Accelerating charge

[Answer & Explanation](#)

Answer: Option D

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