## Magnetic Effects of Electric Current

## TRY YOURSELF

## ANSWERS

- **1. (b)** : Permanent magnetism
- **2.** (c) : Point towards the South pole.
- **3.** (b) : The magnitude of magnetic field due to a current carrying straight conductor is directly proportional to the current flowing through i.e.,  $B \propto I$ .

**4.** (a) : The magnitude of magnetic field due to straight current carrying conductor is inversely proportional to the

distance between source and point of observation.  $B \propto \frac{1}{2}$  So,

the field decrease with increase in distance and the separation between the field lines increases.

**5.** (c) : According to right hand thumb rule the direction of current in this face of the circular conductor is anticlockwise.

**6.** The magnetic field lines are nearly circular concentric due to circular carrying current.

- 7. (a) : Increases.
- **8.** Inside solenoid magnetic field is uniform.
- 9. The end of the solenoid at which current flows in

anticlockwise direction acts as a North pole, while the end at which current flows in clockwise direction acts as a south pole.

**10.** A moving charge produces an electric current which in turn causes the magnetic field.

- **11.** The particle has a positive charge.
- **12. (a)** Direction of rotation would be reversed.
  - (b) Direction of rotation would remain unchanged.

**13. (b)** : Commercial electric motors do not use a permanent magnet to rotate the armature.

**14.** (a) : To convert an AC generator into DC generator, split ring type commutator must be used.

**15.** The direction and magnitude of AC change periodically whereas in case of DC, these remain constant.

- **16.** Fuse should be connected to the live wires.
- **17.** It is the symbol of an electric fuse.

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