Date 2-12-2024

Sub:—PHYSICS

TENDER HEART HIGH SCHOOL, SEC-33B, CHD

CLASS-X

Ch- Electromagnetism Continue

Practice Q/A's

Q14 :—(a) If a piece of soft-iron is placed inside the current carrying coil, what is the name given to that device?

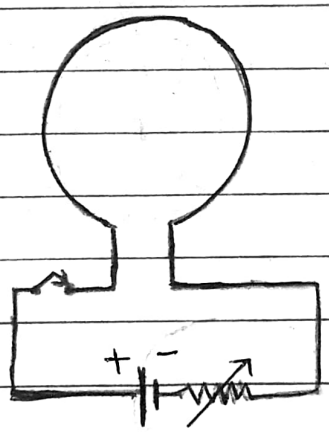
(b) Give one use of the device

Ans (a) Electromagnet (b) Electric Bell

Q15 :→ The diagram shows a loop of wire carrying current I :—

(a) What is the magnetic polarity of the loop that faces us?

(b) With respect to the diagram how can we increase the strength of magnetic field produced by the loop?

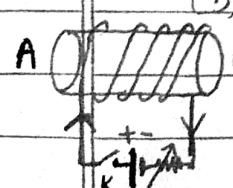


Q16 :→ The diagram below shows the insulated copper wire wound around a hollow cardboard cylindrical tube.

Ans. the following Questions :— .

(a) What are the magnetic poles at A and B when the Key is closed?

(b) If we place a soft iron bar at the centre of hollow cardboard and replace the DC source by an AC source then will it attract small iron pins toward itself when the current is flowing through the coil?



Q17 :— Why a magnetic needle shows a deflection when brought close

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to a current carrying conductor ?

Ans It is because a current carrying conductor has its magnetic field or it behaves like a magnet and it exerts force on a magnetic compass needle.

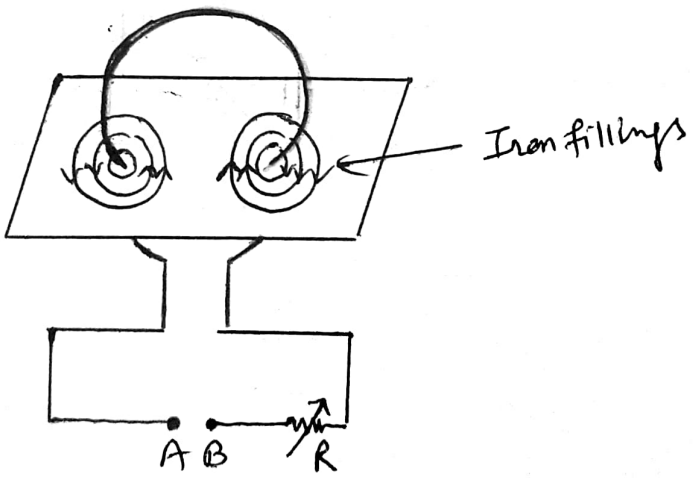
Q18:→ State two advantages of an electromagnet over a permanent magnet.

Q19:→ The diagram shows a cardboard on which iron fillings are kept. A wire in the form of loop is seen passing through the cardboard. When current flows through it, the iron fillings arrange themselves as shown below.

(a) State the polarities of battery at A and B.

(b) State the effect on magnetic field, if an iron rod is held along axis of the coil.

(c) State two ways to (i) Change the polarity of the coil.
(ii) Decrease the strength of magnetic field around the coil



Q20. (a) what is the name given to a cylindrical coil, whose diameter is less in comparison to its length?

(b) list two methods of producing magnetic fields.