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18th July

Chapter : Moving charges and Magnetism

Homework

(1)

(1) A cyclotron is used to accelerate :
(a) some kind of charged particles

(2) The force that accelerates the particle in the cyclotron is (a) only electrostatic force.

(3) Choose the correct option :-
(a) Conductor shields any charge within it from electric fields created outside the conductor.

(b)

(4) Inside a dee :-
(b) The particle's velocity changes.

(5) What is the formula for maximum speed attained by a charged particle in a cyclotron.
(a) $\left(i = \frac{C}{BNA}\right)$ ✗

(6) In the galvanometer the radial magnetic field makes the magnetic torque
(b) independent of θ

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(1) Galvanometer was named after :-
(a) Italian electricity researcher Luigi Galvani.

(2) (i) Galvanometer is used :-
(a) to detect and measure small electric current.

(iii) Choose the correct option for current sensitivity of galvanometer.
(a) $S_i = \frac{\theta}{I} = \frac{NBA}{C}$

(iv) Increasing the current sensitivity :-
(d) none of these.

(v) Choose the correct option for design formula of galvanometer.
(a) $i = \left(\frac{C}{BNA}\right)\theta$

(vi) In the galvanometer the radial magnetic field makes the magnetic torque.
(b) Independent of θ

(3) (i) (b) Both Assertion and Reason are true but Reason is not correct explanation of the Assertion.

(ii) (a) both Assertion and Reason are true and the Reason is the correct explaination of the Assertion.

(iii) (a) both Assertion and Reason are true and the Reason is the correct explaination of the Assertion.

(iv) Both Assertion and Reason is false.

(v) (b) both Assertion and Reason are true but the Reason is not a correct explanation of the Assertion.

(VI) (a) both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.

4

1) A sensitive galvanometer like a moving coil galvanometer can be converted into an ammeter or a voltmeter by connecting a proper resistance to it. Which of the following statements is true?

Ans) a.

a voltmeter is connected in parallel and current through it is negligible.

2) The resistance of an ideal voltmeter is :-

c) Infinity

3) Two identical galvanometers are converted into an ammeter and a millimeter. Resistance of the shunt of milliameter through which the current passes through will be :-

(a) more

4) Choose the correct option for design formula :-

(a) $i = \left(\frac{C}{BNA}\right)\theta$

5) Choose the correct option for current sensitivity :-

(a) $S_i = \frac{\theta}{i} = \frac{NBA}{C}$