

Chapter - Moving charges and Magnetism

Q1) ① Cyclotron is used to accelerate
Ans- some kind of charged particles.

② The force that accelerates the particles in the cyclotron :-

Ans- ② both electrostatic and magnetic force called Lorentz force.

③ Choose the correct option :-

Ans- ① a conductor shields any charge within it from both electric and magnetic fields created outside the conductor.

④ ③ The particle's velocity does not change.

⑤ ① $v_{max} = \frac{qBR}{m}$

⑥

Q2) ① Italian electricity researcher Luigi Galvani

② to detect and measure small electric current

③ $B_i = \frac{Q}{r} = NBA/c$

④ may not change the voltage sensitivity.

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

Ⓕ zero

Q3) Ⓐ both Assertion and Reason are true and the Reason is correct explanation of the Assertion.

Ⓑ both Assertion and Reason are true and Reason is correct explanation of the Assertion.

Ⓒ Both Assertion and Reason are true and the Reason is correct explanation of the Assertion.

Ⓓ Both Assertion and Reason are false.

Ⓔ both Assertion and Reason are true but Reason is not the correct explanation for Assertion.

Ⓕ both Assertion and Reason are correct and Reason is the correct explanation for Assertion.

Q4) Ⓐ a voltmeter is connected in parallel and current through it is not negligible.

Ⓑ Infinity

Ⓔ $S_i = \frac{\theta}{i} = \frac{NBA}{C}$

Ⓒ More

Ⓓ $\left(\frac{C}{BNA} \right) \theta$