

1.

i) Cyclotron is used to accelerate  
Ans. Some kind of charged particles. (a)

ii) The force that accelerates the particles in the cyclotron is  
Ans. Lorentz force (c)

iii) Choose the correct option

Ans. a conductor shields any charge within it. (b)

iv) Inside a dee

Ans. The particle's velocity changes (b)

v) What is the formula for maximum speed attained by a charged particle in a cyclotron

Ans.  $v_{\text{max}} = \frac{qBR}{m}$  (a)

vi) In a cyclotron

Ans. ~~any speed can be~~

2.

i) Galvanometer was named after

Ans. Italian electricity researcher Luigi Galvani. (a)

ii) Galvanometer is used

Ans. to detect and measure small electric current (a)

iii) Choose the correct option for ~~current~~ current sensitivity of galvanometer

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

iv) Increasing the current sensitivity  
Ans may not change the voltage sensitivity. (b)

v) Choose the correct option for design formula of galvanometer

Ans ~~none of these~~ (d)  $i = \left( \frac{C}{BNA} \right) \theta$

vii) In the galvanometer the radial magnetic torque  
Ans

3.

i)

ii) (a)

iii) (a)

iv) (d)

v) (b)

vi) (a)

4.

1) (d)

2) (c) infinity

3) (a) More

$$4) (a) i = \left( \frac{C}{NBA} \right)^{10}$$

$$5) (c) Si = 0i = \frac{C}{NBA}$$