



Because of Today Tomorrow Will Be better

# RK Academy

One step Ahead to Your Success...



CLASS: XII  
SUBJECT: PHYSICS

FM: 20  
TIME: 45 MIN

**(1 MARK)**

1. Magnetic field strength inside a solenoid is  
a. decreasing      b. increasing      c. uniform      d. none
2. To convert Galvanometer to ammeter one should connect  
a. high resistance in series  
b. high resistance in parallel  
c. low resistance in series  
d. low resistance in parallel
3. Two wire having electron and proton moving in same direction will  
a. attract      b. repel      c. remain rest      d. none
4. A square loop of side 10cm, 100 turns and having current 1 A is placed in a magnetic field of 0.02T. the torque is  
a. 0.02      b. 0.2      c. 2      d. 20
5. Force on an electron moving with  $V_x \hat{i}$  in a magnetic field  $B_y \hat{j}$  is in the direction  
a.  $\hat{i}$       b.  $\hat{j}$       c.  $\hat{k}$       d.  $-\hat{k}$
6. Derive the expression to convert a galvanometer into voltmeter of desired range. **(2 MARKS)**
7. A wire of length  $l$  is placed in a magnetic field  $B$  at angle  $\Theta$ . Find the expression for force on it and direction. **(2MARKS)**



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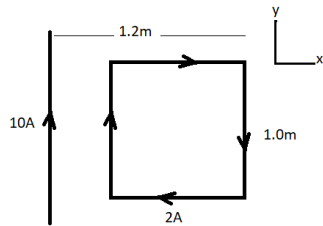
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8. What is current sensitivity? Write the importance of radial field in moving coil galvanometer with expression. **(3 MARKS)**
9. Two wires of infinite length and having current 2A and 4A in same direction are placed at 2m apart. Find the direction of current and position of the 3<sup>rd</sup> wire of 1A such that it will remain rest. **(3 MARKS)**

**10.(5 MARKS)**

- a. Two wires of infinite length having current  $i_1$  and  $i_2$  are placed at a distance  $d$  from each other in air with current in same direction. Find the expression for force on each other and nature of force.
- b. Find the net force on the loop



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