Chapter: 1,2,3,4,5

Q.1 **Find the odd one out**   **3**

  1 dyne – cm, kilowatt, joule, erg.

  2 Potential difference, Electric current, Resistance, The coulomb

  3 Bicarbonate ion, Ammonium ion, Phosphate ion, Nitrate ion

Q.2 **State True or False**   **3**

  1 Ammonium is a composite radical.

  2 A body moving with a uniform velocity is said to have uniform acceleration.

  3 Resistivity is a specific property of a material and different materials have different resistivity.

Q.3 **Solve Numerical problems (Any Two)**   **4**

  1 Find the potential difference to be applied across a conductor of resistance 200 Ω so that a current of 10 mA flows through the conductor.

  2 An object moves 18m in the first 3s, 22m in the next 3s and 14m in the last 3s. What is the average speed?

  3 If the energy of a ball falling from a height of 10 m is reduced by 40%, how high will it rebound?

Q.4 **Distinguish between (Any Two)**   **4**

  1 Speed and Velocity

  2 Voltmeter and Ammeter

  3 Acids and Bases.

Q.5 **Give scientific reasons (Any Three)**   **6**

  1 When an object falls freely to the ground, its acceleration is uniform.

  2 While driving a nail into wood, the hammer is taken backward.

  3 We should use footwear with rubber soles while using electrical appliances.

  4 The element sodium is monovalent.

Q.6 **Give explanation using the given statement: (Any One)**   **3**

  1 **Complete the sentences and explain them**
     Deceleration is .... acceleration.

  2 When the moon revolves around the earth, no work is done by the gravitational force exerted on the moon by the earth. Explain

Q.7 **Attempt the following.(Any Two)**   **6**

  1 Write down the changes that will be seen in the following and explain the reason behind it.
     A litmus paper was dropped into 2ml dilute acid then 2ml concentrated NaOH was added to it.

  2 Match the columns I , II and III

I	II	III
Negative acceleration	The velocity of the object remains constant	A car initially at rest reaches a velocity of 50km/hr in 10sec.

Positive acceleration	The velocity of the object decreases	A vehicle is moving with a velocity of 25m/s.
Zero acceleration	The velocity of the object increases.	A vehicle is moving with a velocity of 10m/s, stops after 5 seconds.

3   Write down the changes that will be seen in the following and explain the reason behind it.
     50 ml of water is added to a 50 ml solution of copper sulphate.

Q.8   Answer the following (Any Two)   **6**

1   A body goes around the sun with constant speed in a circular orbit. Is the motion uniform or accelerated?

2   What should be done if a person gets an electric shock?
     Why our body can conduct electricity?

3   Show the dissociation of following compounds on dissolving in water and write whether dissociation is small or large.
     (i) Acetic acid.
     (ii) Copper sulphate.
     (iii) Hydrochloric acid.

Q.9   Answer the following in detail (Any One)   **5**

1   Law of conservation of momentum

2   Study the following activity and answer the questions.
     i.   Take two alluminium channels of different lengths.
     ii. Place the lower ends of the channels on the floor and hold their upper ends at the same height.
     iii. Now take two balls of the same size and weight and release them from the top end of the channels. They will roll down and cover the same distance.
     Questions
     1. At the moment of releasing the balls, which energy do the balls have?
     2. As the balls roll down which energy is converted into which other form of energy?
     3. Why do the balls cover the same distance on rolling down?
     4. What is the form of the eventual total energy of the balls?
     5. Which law related to energy does the above activity demonstrate ? Explain.