**DELHI PUBLIC SCHOOL, JAMMU**

**CLASS:IX** **ASSIGNMENT (2017-18)** **Sub- Science**

# PHYSICS

1. Derive equation of motion by graphical method.
2. Give Speed-Time graph when:
   i) Speed remains constant.
   ii) Speed changes at uniform rate.
   iii) Speed changes at non uniform rate.
3. Define non-uniform motion.
4. An athelete completes one round of circular track of diameter 200m in 40 seconds.What will be the distance covered and the displacement at the end of 2 min and 20 seconds?
5. What does the Odometer of an automobile measure?
6. Why is it advised to tide any luggage kept on the roof of a bus with a rope?
7. State and explain law of conservation of Linear Momentum?
8. Give the relationship of Inertia and Mass.
9. How much momentum will a dumb-bell of mass 10 Kg transfer to floor if it falls from a height of 80 cm? $g = 10m/s^2$
10. State and proof Newton $2^{nd}$ law of Motion.

**TOPICS: MOTION ,FORCES AND LAWS OF MOTION**

# CHEMISTRY

**Q1.** What are metalloids? Give examples.

Q2.What is meant by diffusion? Illustrate the factors on which diffusion depends.

Q3.When a crystal of potassium permanganate is placed at the bottom of beaker containing water, the water slowly turns purple. Why?

Q4. What is evaporation? Discuss the factors affecting evaporation.

Q5. Give reasons for the following:

i) Steam causes more severe burns than boiling water.
ii) Our palm feels cold when we put some acetone or perfume on it.
iii) Napthalene balls kept in our homes disappear over a period of time.
iv) Water kept in earthen pot become cold during summer.

Q6. Compare the properties of metals and non-metals.

Q7. What are mixtures? Discuss the properties and types of mixtures.

Q8. What do you understand by latent heat? What are the two types of latent heat?

Q9. How will you demonstrate that water vapour is present in air?
Q10. i) What is the common unit of temperature?
ii) Give S.I unit of temperature.

**TOPIC: MATTER IN OUR SURROUNDINGS, IS MATTER AROUND US PURE**

## BIOLOGY

Q1. Explain the process of Osmosis in detail.
Q2.What is nucleoid?
Q3.Draw and label Diagrams of plant cell and animal cell.
Q4. Explain the functions and structure of Golgi bodies?
Q5. What is the function of Chromosomes?
Q6. Epidermis in desert plants has a thin waxy coating of a chemical substance. Name the chemical?
Q7. What is the function of Xylem?
Q8. What is the specific function of Cardiac muscles?
Q9. Differentiate between striated and unstriated muscles on the basis of their structure and site/location in the body.
Q10. What are the functions of the Stomata?

**TOPICS: THE FUNDAMENTAL UNIT OF LIFE, TISSUES**