

# QUARTERLY EXAMINATION - 2023

## 9 - STD

## SCIENCE

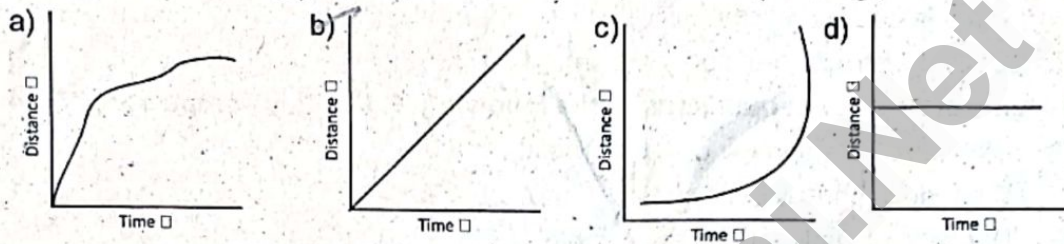
TIME: 3.00 Hrs

Marks : 75

### I. Choose the Correct answer.

12 x 1 = 12

- 1 metric ton is equal to  
a) 100 quintals      b) 10 quintals      c) 1/10 quintals      d) 1/100 quintals
- The centrifugal force is  
a) a real force      b) the force of reaction of centripetal force  
c) a virtual force      d) directed towards the centre of the circular path
- Which of the following graph represents uniform motion of a moving particles?



- Clouds float in atmosphere because of their **low**  
a) density      b) pressure      c) velocity      d) mass
- Among the following ..... is a mixture.  
a) common salt      b) Juice      c) Carbon dioxide      d) pure silver
- The correct electronic configuration of potassium is  
a) 2, 8, 9      b) 2, 8, 1      c) 2, 8, 8, 1      d) 2, 8, 8, 3
- Modern periodic law states that the physical and chemical properties of elements are the periodic functions of their....  
a) atomic numbers      b) atomic masses      c) similarities      d) anomalies
- If Dobereiner is related with 'law of triads', then Newlands is related with  
a) Modern periodic law      b) Hund's rule  
c) Law of octaves      d) Pauli's Exclusion principle
- Mesoglea is present in  
(a) Porifera      (b) Coelenterata      (c) Annelida      (d) Arthropoda
- Which of the following is a complex tissue?  
a) Parenchyma      b) Collenchyma      c) Xylem      d) Aerenchyma
- The bending of root of a plant in response to water is called \_\_\_\_\_  
a) Thigmonasty      b) Phototropism      c) Hydrotropism      d) Photonasty
- A presentation consists of many \_\_\_\_\_  
a) pages      b) slides      c) files      d) messages

### II. Answer any Seven of the following questions. Q.No.22 is compulsory. 7 x 2 = 14

**State True or False for Q.No. 13 and 14, if false then correct them.**

- In everyday life, we use the term weight instead of mass.
- Acceleration can get negative value also.

9 - SCIENCE

15. Why does a helium balloon float in air?
16. Match the following.
- |            |                                       |
|------------|---------------------------------------|
| Compound   | Settles down on standing <sup>3</sup> |
| Colloid    | Impure substance <sup>4</sup>         |
| Suspension | made up of molecule <sup>2</sup>      |
| Mixture    | Made up of atoms <sup>1</sup>         |
17. Calculate the number of neutrons in  ${}_{92}\text{U}^{238}$
18. Name an element which has the same number of electrons in its first and second shell.
19. What is nematocyst?
20. Name various kinds of complex tissues.
21. What is nastic movement?
22. Draw the structure of sodium atom.

**III. Answer any seven questions of the following. Q.No.32 is compulsory. 7 x 4 = 28**

23. Distinguish distance and displacement.
24. Write down the laws of flotation.
25. Define sublimation. Give an example.
26. Write down the postulates of Neils Bohr.
27. What are groups and periods in the modern periodic table.
28. List fine characteristic features of fishes.
29. State two points of differences between xylem and phloem.
30. Draw the structure of stomata and label it.
31. What is photosynthesis? Write down its equation.
32. Draw a neat and labeled diagram of a neuron.

**IV. Answer all the questions in detail.**

**3 x 7 = 21**

33. A) What are different kinds of motion?  
 B) Derive : i)  $v = u + at$  ii)  $s = ut + \frac{1}{2} a t^2$  iii)  $v^2 = u^2 + 2as$  (OR)  
 A) Describe the construction and working of mercury barometer.  
 B) What is Pascal's law.
34. A) Write down the difference between elements and compounds.  
 B) Draw a neat and labelled diagram for fractional distillation. (OR)  
 A) What is isotope and isobar?  
 B) Draw the structure of atoms for Potassium  ${}_{19}\text{K}^{39}$  and  ${}_{20}\text{Ca}^{40}$
35. A) List the respiratory organs of amphibians.  
 B) Give an account of Phylum Annelida. (OR)  
 A) Write down the differences between Mitosis and Meiosis.  
 B) How will you differentiate the different types of transpiration.

**9 - SCIENCE**