UNIT TEST – 1 (2023-24)

Subject – SCIENCE SET 1

Class- 9th

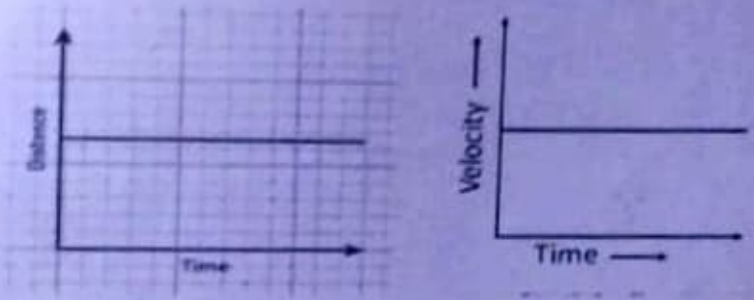
Time- **Max. Marks- 40**

INSTRUCTIONS-

- All questions are compulsory.
- Question paper contains three sections.
- Attempt each section separately
- Draw well labelled diagram wherever necessary

SECTION – A (PHYSICS – 13 marks)

1. Recognize the type of motion from the following graphs (1)



2. Is it possible that the object have acceleration but zero velocity ? Give example (1)

3. The minutes hand of a clock is 12 cm long. Calculate the distance and the displacement of minute hand of the clock from 10:00 AM to 11:15 AM (2)

4. Differentiate between (3)
   (i) Vector and scalar quantities
   (ii) Distance and displacement

5. An individual jogs along straight road from X to Y 400 m path in 4 min.20 sec and then he turns back to point A in another 2 minutes. Calculate the average velocity from X to Y and X to A . Points X, A, Y lies on straight line. (3)

6. Observe the following graph carefully and answer the following questions (3)

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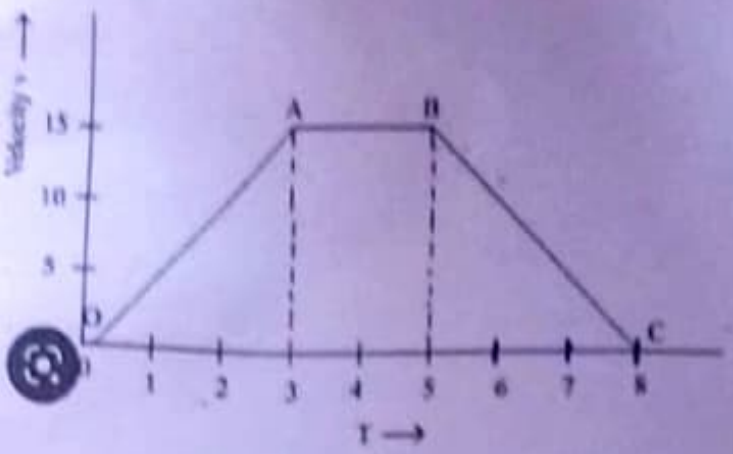


i. Name the type of motion represented by OA and AB
ii. Calculate the acceleration
iii. Calculate the total distance covered in 8 seconds

SECTION – B (CHEMISTRY – 14 marks)

8. Under what conditions gases can be liquified? (1)
9. Write down boiling point of pure water and sea water. (1)
9. Give reasons for the following (3)
   i. Water disappeared after some time of rain. Why?
   ii. Desert cooler cools better in hot dry day. Why?
   iii. Streetlights change their colour after glowing. why?
10. (i) Convert the 60 ° F into degree Celsius
    (ii) Convert the 80 ° C into degree Fahrenheit. (2)
11. Compare the 3 states of matter with respect to rigidity, kinetic energy and intermolecular spaces. (3)
12. (i) Differentiate between; Evaporation and boiling point (two points) (2)
    (ii) Name and explain 5th state of matter. (1)
    (iii) What is latent heat? (1)

SECTION – C (BIOLOGY – 13 marks)

13. Name the organelle and its part known as ribosome factory? (1)
14. Differentiate between cis and trans faces (1)
15. What happens to the egg in hypotonic solution explain with diagram (2)
16. (a) What is endocytosis? Explain it's two types. (2)
    (b) Why lysosomes are known as suicide bag? (1)
17. Which organelle of plants is known as semi autonomous in nature and why explain its two functions with diagram (3)
18. Which organelles are responsible for (3)
    i. osmoregulation in plants
    ii. packaging
    iii. membrane biogenesis

UNIT TEST – 1 (2023-24)

Subject – SCIENCE SET 2

Class- 9th

Time-

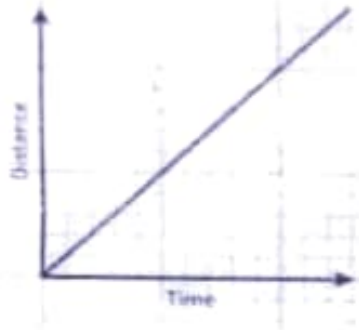
Max. Marks- 40

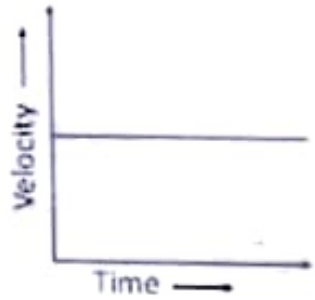
INSTRUCTIONS-

- All questions are compulsory.
- Question paper contains three sections.
- Attempt each section separately
- Draw well labelled diagram wherever necessary

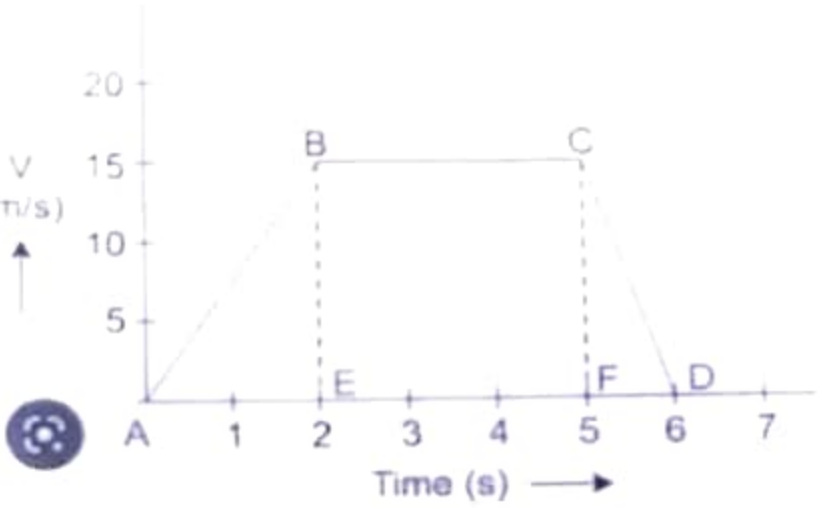
SECTION – A (PHYSICS – 13 marks)

1. Recognize the type of motion from the following graphs (1)





2. Is it possible that the object have acceleration but zero velocity ? Give example (1)
3. The minutes hand of a clock is 12 cm long. Calculate the distance and the displacement of minute hand of the clock from 09:00 AM to 10:30 AM (2)
4. Differentiate between (3)
   i. Vector and scalar quantities
   ii. speed and velocity
5. An individual jogs along straight road from X to Y 400 m path in 3min 20 sec and then he turns back to point A in another 2 minutes. Calculate the average velocity from X to Y and X to A . Points X, A, Y lies on straight line. (3)
6. Observe the following graph carefully and answer the following questions (3)



i. Name the type of motion represented by BC and CD
ii. Calculate the retardation
iii. Calculate the total distance covered in 6 seconds

SECTION – B (CHEMISTRY – 14 marks)

7. Under what conditions gases can be liquified? (1)
8. What happens to boiling point of water and on adding soluble substances? (1)
9. Give reasons for the following (3)
   i. Water disappeared after some time of rain. Why?
   ii. Water kept in earthen pot become cool during summer. Why?
   iii. Streetlights change their colour after glowing. why?
10. (i) Convert the 70 ° F into degree Celsius (2)
    (ii) Convert the 90 ° C into degree Fahrenheit
11. Compare the 3 states of matter with respect to compressibility, packaging and intermolecular forces. (3)
12. (i) Differentiate between; Evaporation and boiling point (two points) (2)
    (ii) Why the hot water produces more severe burning? Explain. (2)

SECTION – C (BIOLOGY – 13 marks)

13. Name the organelle along and its part known as ribosome factory? (1)
14. Differentiate between cis and trans faces (1)
15. What happens to the potato in hypertonic solution explain with diagram (2)
16. a) What is endocytosis? Explain it's two types. (2)
    b) Why lysosomes are known as suicide bag? (1)
17. Which organelle of animals is known as semi autonomous in nature and why explain its two functions with diagram (3)
18. Which organelles are responsible for (3)
    i. osmoregulation in plants
    ii. packaging
    iii. membrane biogenesis