DAV PUBLIC SCHOOLS, BHUBANESWAR
PERIODIC ASSESSMENT-I (2022-23)

- Please check that this question paper contains **6** printed pages.
- Check that this question paper contains **17** questions.
- Write down the Serial Number of the question in the left side of the margin before attempting it.
- 15 minutes time has been allotted to read this question paper. The question paper will be distributed 15 minutes prior to the commencement of the examination. The students will read the question paper only and will not write any answer on the answer script during this period.

CLASS -IX
SUB: SCIENCE

Time Allowed:1½ Hours   **Maximum Marks : 40**

General Instructions:

(i) *The question paper comprises four section A,B,C and D. There are **17questions** in the question paper. All questions are compulsory.*

(ii) *Section–A - question no. 1 to 9 - all questions and parts thereof are of one mark each. These questions contain multiple choice questions (MCQs), very short answer questions and assertion - reason type questions. Answers to these should be given in one word or one sentence.*

(iii) *Section–B - question no. 10 to 12 are short answer type questions, carrying 2 marks each. Answers to these questions should in the range of 30 to 50 words.*

(iv) *Section–C - question no. 13 to 15 are short answer type questions, carrying 3 marks each. Answers to these questions should in the range of 50 to 80 words.*

(v) *Section–D – question no. - 16 to 17 are long answer type questions carrying 5 marks each. Answer to these questions should be in the range of 80 to 120 words.*

(vi) *Wherever necessary, neat and properly labeled diagrams should be drawn.*

SECTION – A

1. Identify the solute and solvent in tincture of iodine. **(1)**

2. Earthworm dies when comes in contact with common salt. Name the process involved in this situation. **(1)**

3. Name the organelle present in liver of animals for detoxifying poisons and drugs.

(1)

4. When a passenger jumps out of a slow moving train, he should run on the ground in the direction of motion of the train for some distance. Explain the reason briefly. **(1)**

5. Name the physical quantity that remains constant in uniform circular motion. Write its SI unit. **(1)**

For question numbers **6** and **7**, two statements are given- one labeled **Assertion(A)** and the other labeled **Reason (R)**.Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:

(a) Both assertion (A) and reason (R) are true, and reason (R) is correct explanation of the assertion.

(b) Both assertion (A) and reason(R) are true, but reason (R) is not the correct explanation of the assertion.

(c) Assertion (A) is true, but reason (R) is false.

(d) Assertion (A) is false, but reason (R) is true.

6. **Assertion(A):**Water kept in an earthen pot remains cool in summer season. **(1)**
   Reason(R): Condensation of water vapours take place at the pores present in the earthen pot.

7. **Assertion(A) :** Plasma membrane is selectively permeable. **(1)**
   Reason(R) : Plasma membrane allows some molecules to pass through it more easily than other .

8. *Read the following paragraph and answer any four questions from 8(i) to8(v)*
   (1x4=4)

   Prokaryotic cells are microorganisms that are known to be the earliest on earth. Kingdom **Monera** includes the prokaryotic cells. A teaspoon full of rich soil may contain billions of them. Prokaryotic cell refers to the cell which is unicellular, **Bacteria** and **Archaea** come under prokaryotes.The diagram of a bacterial cell is given below.
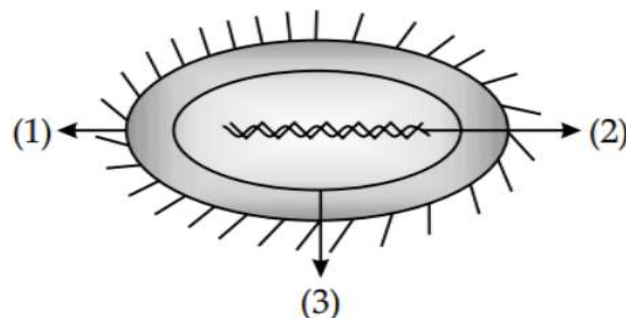
8(i) Which among the following is made up of protein and lipid ?

   (a) 1- Nucleus,

   (b) 3-Plasma membrane

   (c) 2-Plasma membrane

   (d) 3- Cell wall.

8(ii) Which among the following bear genes ?

   (a) 3- Chromosome

   (b) 2-Plasma membrane

   (c) 1- Cell wall

   (d) 2- Nucleic acid

8(iii) How is nuclear region of a bacterial cell and nuclear region of an animal cell different from each other?

   (a) Nuclear region of bacterial cell is well defined but lacks any covering while nuclear region of an animal cell is poorly defined and membrane bound.

   (b) Nuclear region of bacterial cell is poorly defined and has a covering while nuclear region of an animal cell is poorly defined and membrane bound.

   (c) Nuclear region of bacterial cell is poorly defined and lacks any covering while nuclear region of an animal cell is well defined and membrane bound.

   (d) Nuclear region of bacterial cell is poorly defined and lack any covering while nuclear region of an animal cell is well defined and non membrane bound.

8(iv) Which of the following statements is correct?

   (a) A single cell cannot perform all the life processes independently.

   (b) A single cell can perform all the life processes independently.

   (c) A single bacterial cell always needs another cell to carry out the life processes.

   (d) A bacterium is a multicellular organism.

8(v) In which way the bacterial cell and plant cell are same?

   (a) By having cell Wall

   (b) By having nucleus

   (c) By having nucleoid

   (d) By having plastid

9. Observe the velocity time graph of a moving body given below *and answer any four questions from 9(i) to9(v).* **(1x4=4)**

.
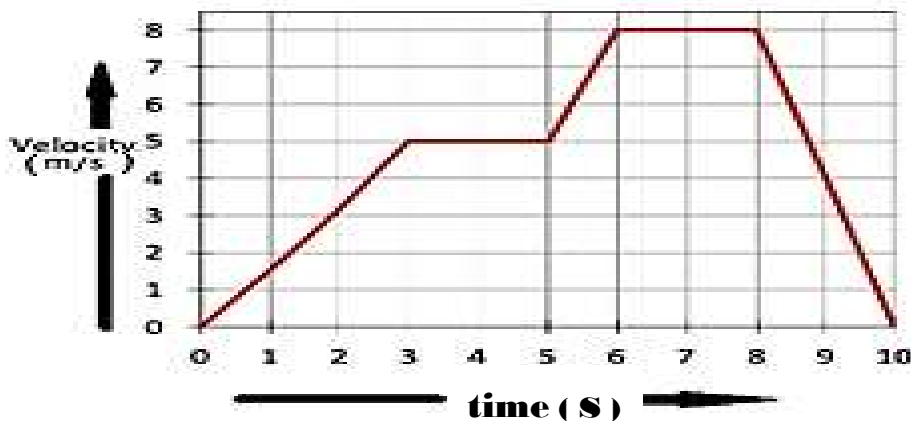
9(i). The type of motion of the object from 0s to 3s is
   (a) uniform motion   **(b)** uniformly accelerated motion
   (c) non uniform motion   **(d)** both (b) and (c)

9(ii). The time duration in which the velocity of the object does not change is
   (a) 0s to 3s   **(b)** 3s to 5s   **(c)** 6s to 10s   **(d)** 5s to 6s
9(iii). The displacement of the object from 6s to 8s is
   (a) 48 m   **(b)** 24 m   **(c)** 64 m   **(d)** 16 m
9(iv). The acceleration of the object from 0s to 3s is
   (a)1.67 m/s^2 **(b)** 0.6 m/s^2 **(c)** zero   **(d)** - 1.67 m/s^2

9(v). The shape of displacement-time graph of the object from 6s to 8s is

   (a) a curved line.
   (b) a straight line inclined to time axis .
   (c) a straight line parallel to time axis.
   (d) a straight line parallel to displacement axis.

SECTION -B
10. Give reason: **(2)**
   (a) When a carpet is beaten with a stick, dust comes out.
    (b) When we kick a football, it flies away but if we kick a stone of the same size
       with the same amount of force, it hardly moves.

11. (i) Distinguish between true solution and suspension on the basis of transparency. **(2)**

(ii) Find the amount of glucose in gram present in 250 gram of 25 %(w/w) glucose solution.

12. Differentiate between RER and SER on the basis of structure and function . **(2)**

SECTION -C

13. Give reason . **(3)**
    (i) Lysosome is called scavenger of the cell.
    (ii) Cell wall prevents plant cell from bursting in hypotonic solution.
    (iii) Amoeba acquires its food through endocytosis.

14. The peel of a *Rheo* leaf is put in strong solution of salt for some time. Then it is observed under the microscope. **(3)**
    (i) What will happen to the content of Rheo leaf?
    (ii) Why does it happen?
    (iii) Name the phenomenon.

15. **(i)** Write the process involved during the following: **(3)**
    (a) We can get the smell of perfume from large distance .
    (b) drying of wet clothes in summer.
    (c) wax melts on heating.
    (d) size of naphthalene balls decreases.
    (ii) Observe the following experimental set up and identify the process involved in the given experiment (diagram).
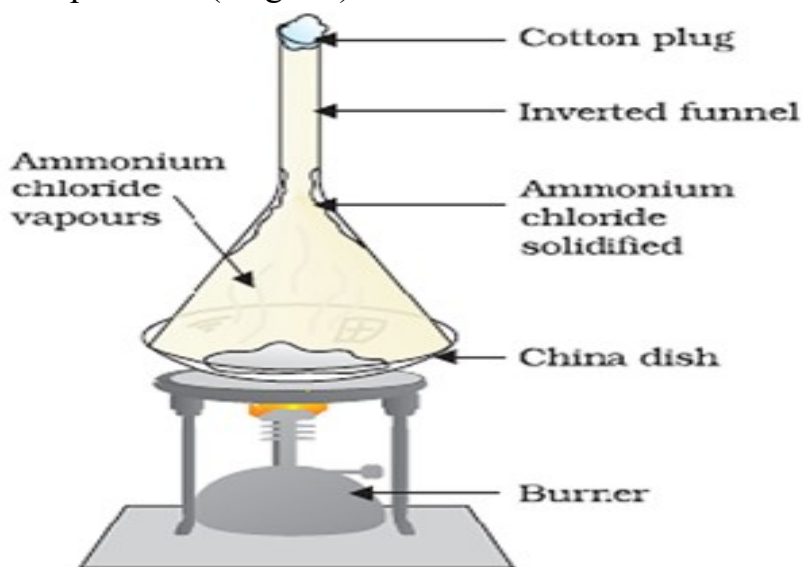
SECTION –D

16. **(i)** Define latent heat of fusion. Write its unit. **(5)**

    (ii) Arrange the following in the increasing order of force of attraction between them : Oxygen, iron bar, alcohol.

    (iii) Justify the following statements.

(a) Water as ice has a cooling effect, whereas water as steam may cause severe burns.

(b) We can see water droplets on the outer surface of a glass containing ice cold water.

17.(i) A bus decreases its speed uniformly from 80 km/h to 60 km/h in 10s. Find the acceleration of the bus. **(5)**

    (ii) A car moves from place **A** to **B** with a uniform speed of 48 km/h and returns From **B** to **A** with a uniform speed of 32 km/h. Find its average speed throughout the motion.

    (iii) Give an example in which an object has acceleration but has zero velocity.

* * *