

Roll No Candidates must write the Set No.
on the title page of the answer book.**DAV PUBLIC SCHOOLS, ODISHA ZONE-1****PERIODIC TEST – II, 2017-18**

- Check that this question paper contains 5 printed pages.
- Set number given on the right hand side of the question paper should be written on the title page of the answer book by the candidate.
- Check that this question paper contains 27 questions.
- Write down Serial Number of the question paper before attempting it.
- 15 minutes cooling time has been allotted to read the question paper only and don't write any answer on the answer book during this period.

CLASS-IX**SUB: SCIENCE****Time: 3Hrs****Maximum Marks: 80****General Instructions:**

1. The question paper comprises of two sections, A and B. You are to attempt both the sections.
2. All questions are compulsory.
3. All questions of section A and all Questions of section B are to be attempt separately.
4. Question numbers 1 and 2 in section A are 1 mark questions. These are to be answered in one word or one sentence.
5. Question numbers 3 to 5 in section A are 2 mark questions. These are to be answered in about 30 words each.
6. Question numbers 6 to 15 in section A are 3 mark questions. These are to be answered in about 50 words each.
7. Question numbers 16 to 21 in section A are 5 marks questions. These are to be answered in about 70 words each.
8. Question numbers 22 to 27 in section B are 2 marks questions based on practical skills.

SECTION - A

1. What is the physical state of water at (i) 0°C and (ii) 100°C [1]
2. Mention any two abiotic factors that affects crop production. [1]

3. A horse continues to apply a force in order to move the cart with a constant speed. [2]
Explain why?
4. On the earth, a stone is thrown from a height in a direction parallel to the earth's surface while another stone is simultaneously dropped from the same height. Which stone would reach the ground first and why? [2]
5. A motor boat starting from rest on a lake accelerates in a straight line at a constant rate of 3.0m/s^2 for 8.0sec. How far does the boat travel during this time? [2]
6. (a) Define average speed. [1]
(b) A bus travels a distance of 120 km with a speed of 40 km/h and returns with a speed of 30 km/h. Calculate the average speed for the entire journey. [2]
7. Explain the followings briefly. [3]
(a) A cricket ball causes much severe injury than a tennis ball on hitting a spectator.
(b) An applied unbalanced force causes a change in momentum
(c) A greater force is required to impart greater velocity of an object.
8. A large truck and a car, both moving with a velocity of magnitude v , have a head-on collision and both of them come to a halt after that. If the collision lasts for 1s:
(a) Which vehicle experiences the greater force of impact?
(b) Which vehicle experiences the greater change in momentum?
(c) Which vehicle experiences the greater acceleration?
Give reasons for the above cases. [3]
9. Name the technique (s) to separate: [3]
i) Butter and Curd ii) Salt from Sea water iii) Oil from water
iv) Kerosene and Petrol v) Tea leaves from tea
vi) Different pigments from an extract of leaves
10. With the help of a labelled diagram, describe an activity to show that particles of matter are very small. Use the following materials that have been provided to you. 4 beakers, spatula, 4 test tubes, distilled water and few crystals of Potassium Permanganate. [3]

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11. Give reasons for the following observations: [3]
- (a) We can easily move our hand in air but to do the same through a solid block of wood, we need a karate expert.
 - (b) Sponge is a solid but it is compressible.
 - (c) A diver is able to cut through water in a swimming pool

Or

- (a) Why does the temperature remain constant at the melting point? [2]
- (b) Doctors advise to put strips of wet cloth on the forehead of a person having high temperature. Why? [1]

12. Explain composite fish culture with the help of example. [3]

Or

Name three different types of blood cells and give their functions.

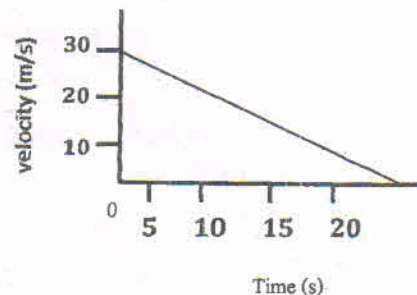
13. Your father bought few fruits from the market and asked everyday to wash it Properly before eating. Your sister was in a hurry and hence she ate an apple without washing it. [3]

- (a) Why did your father ask to wash the fruits before eating?
- (b) List the constituents of the phloem. What will happen if the phloem at the base of a branch is removed?
- (c) Should the government ban pesticide?

14. Define crop rotation. While choosing plants for crop rotation, what factors should be kept in mind? [1+2]

15. Name the cell organelles which are called "suicide bags" and "power house" of the cell. Why are they so called? Give reason. [1+2]

16. (a) State the law that provides the formula for measuring force. [2]
- (b) Velocity- time graph of a 50 g marble rolling on floor is given below. Find [3]
- (i) time in which its stops
 - (ii) negative acceleration produced in it
 - (iii) positive force acting on the marble



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17. (a) Differentiate between acceleration due to gravity and Universal gravitational constant. [2]
(b) Derive a relation between g and G . [2]
(b) State Universal law of Gravitation. [1]
- 18 (a) You are given a mixture of Sodium Chloride and ammonium chloride. Name [2]
and define the technique, which can be used to obtain ammonium chloride from
the above mixture.
(b) Draw a neat well-labelled diagram of the above process. [3]
Or
(a) Give reasons for the followings.
(i) Ripening of a fruit is a chemical change. [1]
(ii) Separation of gases from air is a physical change. [1]
(b) Identify solute and solvent in tincture of iodine. [1]
(c) Why is tyndall effect not seen in true solution? [2]
19. (i) Why is it not possible to distinguish particles of a solute from the solvent in solution? [2]
(ii) To make a saturated solution, 36g of NaCl is dissolved in 100g of water at 293K. Find its concentration at this temperature. [2]
(iii) What is the effect of temperature on the solubility of a solid in liquid? [1]
20. (i) Define osmosis and mention its types. [2]
(ii) What do you mean by diffusion? [1]
(iii) How is osmosis different from diffusion? [2]
Or
(i) How does plasma membrane act as a semi permeable membrane? Explain. [3]
(ii) What is membrane biogenesis? Explain. [2]
21. (a) Define meristematic tissue? Mention its location. [2]
(b) Distinguish among voluntary, involuntary and cardiac muscle [3]

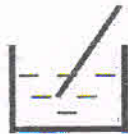
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SECTION-B

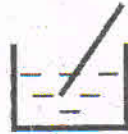
22. Define relative density of a substance. Relative density of silver is 10.8. The density of water is 1000 kg/m^3 . What is the density of silver in SI unit? [2]
23. A student prepared two solutions – a solution of salt and soil in water. Can you distinguish between the two on the basis of transparency and stability? Explain. [2]
24. Four students A, B, C and D are asked to prepare colloidal solutions. The following diagrams show the preparation done by them. Name the student who will be able to prepare colloidal solution. Write one property of colloidal solution. [2]



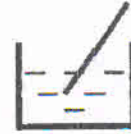
A
Starch



B
Sugar



C
Salt



D
Egg albumin

25. Raj took small amount of mixture of iron and sulphur powder in a test tube and to it, he added 15ml of carbon disulphide. The test tube was vigorously shaken. What would he observe? Will the observation be same when the mixture is heated? Explain. [2]
26. Why is Parenchyma called as storing tissue? Mention its location. [2]
27. Sclerenchyma is a hard and dead tissue. Justify and where it is found? [2]

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