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14/9/17

Roll No

SET NO - 086/1

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 attempted 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

2. Name a chemical fertilizer which can supply Potassium as well as Nitrogen. [1]
3. Two balls of the same size but of different material, rubber and iron, are kept on the smooth floor of a moving train. The brakes are applied suddenly to stop the train. Will the ball start rolling? If so, in which direction? Will they move with the same speed? Give reason for your answer. [2]
4. The Earth is acted upon by gravitation of the sun, even though it does not fall into the sun. Why? [2]
5. A bus starting from rest moves with a uniform acceleration of 0.1 m/s^2 for 2 minutes. Find the speed acquired. [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 on an object.
8. Two forces $F_1 = 20\text{N}$ and $F_2 = 30\text{N}$ are acting on an object as shown in figure. [3]
- (a) What is the net force acting on the object?
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- (b) What is the direction of the net force acting on the object?
 (c) How much extra force is acting on the object if the object is not moving due to the application of these two forces?
9. Name the technique (s) to separate: [3]
- i) Butter and Curd ii) Salt from Sea water iii) Oil from water
 ii) Kerosene and Petrol v) Tea leaves from tea
 vi) Different pigments from an extract of leaves

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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]

11. Give reasons for the followings: [3]

- The smell of hot sizzling food reaches you several meters away but to get the smell of cold food we have to go close.
- A gas fills completely the vessel in which it is kept.
- Our palm feels cold when we put some acetone on it.

Or

Write three points of differences between evaporation and boiling.

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

Or

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

13. (a) Define weed with examples. [1 × 3 = 3]

- Why is it essential to remove weeds from agricultural fields?
- What are weedicides?

14. Distinguish between hypotonic solution, isotonic solution and hypertonic solution. [3]

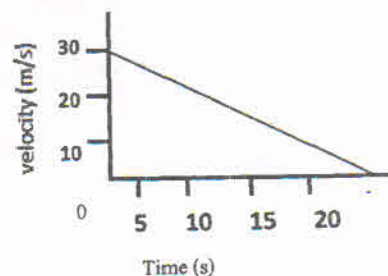
15. Your father bought few fruits from the market and asked everyday to wash it properly before eating. Your sister was in a hurry and hence she ate an apple without washing it. [3]

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

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]

- time in which it stops
- negative acceleration produced in it
- positive force acting on the marble



17. (a) Differentiate between acceleration due to gravity and Universal gravitational constant. [2]
 (b) Derive a relation between g and G . [2]
 (c) State Universal law of Gravitation. [1]
- 18 (a) You are given a mixture of Sodium Chloride and ammonium chloride. Name and define the technique, which can be used to obtain ammonium chloride from the above mixture. [2]
 (b) Draw a neat well-labelled diagram of the above process. [3]
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]

SECTION-B

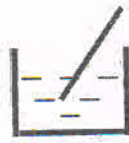
22. Define relative density of a substance. Relative density of silver is 10.8. The density of water is 1000 kg/m^3 . What is the density of silver in SI unit? [2]
23. A student prepared two solutions – a solution of salt and soil in water. Can you distinguish between the two on the basis of transparency and stability? Explain. [2]

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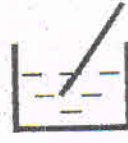
24. Four students A, B, C and D are asked to prepare colloidal solutions. The following diagrams show the preparation done by them. Name the student who will be able to prepare colloidal solution. Write one property of colloidal solution. [2]



A
Starch Powder



B
Sugar



C
Salt



D
Egg albumin

25. Why is it that iron in a mixture of iron fillings and sulphur powder is attracted by a magnet but iron present in Ferrous Sulphide (FeS) is not. [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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