

O. P. JINDAL SCHOOL, SAVITRI NAGAR

27/9/18

Half Yearly Examination (2018 – 2019)**Class: IX**
Subject: Science**MM: 80 Marks**
Time: 3 Hrs.(Fifteen Minutes Extra will be given for reading the Question Paper.)**General Instructions:**

- (i) The question paper comprises two sections, A and B. You are to attempt both the sections.
- (ii) All questions are compulsory.
- (iii) All questions of section A and section B are to be attempted separately.
- (iv) Question numbers 1 and 2 are one mark questions. They are to be answered in one word or in one sentence
- (v) Question numbers 3 to 5 are two marks questions. They are to be answered in about 30 words each.
- (vi) Question numbers 6 to 15 are three marks questions. They are to be answered in 50 words each.
- (vii) Question numbers 16 to 21 are five marks questions. They are to be answered in 70 words each.
- (viii) Question numbers 22 to 27 are based on practical skills. Each question is a 2 marks question. These are to be answered in brief.

SECTION-A

1. Why is blood considered to be connective tissue?
2. How rain water can be harvested?
3. Velocity –time graph for the motion of an object in a straight path is a straight line parallel to time axis.
 - i) Identify the nature of the motion of the body.
 - ii) Find the acceleration of the body.
4. (i) Convert the following temperature into Celsius scale (a) 402K (b) 108K
(ii) Convert the following temperature into Kelvin scale (a) 150 °C (b) 27 °C
5. Cells of plants absorb so much water but do not burst. Why?
6. (i) Define average speed.
(ii) 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.
7. Derive the equation of motion $v = u + at$ by graphical method.

OR

State three differences between scalar quantity and vector quantity.

8. Why do you fall in the forward direction when a moving bus brakes to stop and fall backwards when it accelerates from rest?

9. (i) The smell of a hot sizzling food reaches you several meters away but to get the smell from cold food you have to go close. Give reason for this observation.

(ii) Why does a desert cooler cool better on a hot dry day?

10. Distinguish solids, liquids and gases in a tabular form under the following characteristics:

(i) Fluidity

(ii) Intermolecular space

(iii) density

11. At 373K steam causes severe burn than that of boiling water. Why?

OR

How does the water kept in an earthen pot (matka) become cool during summer?

12. What are pollutants? Give the sources of following pollutants-

i) carbon monoxide

ii) carbon dioxide

iii) sulphur dioxide

iv) chlorofluoro carbon

13. Name the different types of plastids. Give one function of each type.

OR

i) Name two cell organelles having its own genetic material.

ii) Why lysosomes are known as suicidal bag of cell?

iii) Which cell organelle is responsible for the release of energy in the form of ATP?

14. Name three kinds of permanent tissues found in plants. Write one function of each.

15. Diagrammatically show the difference between three types of muscle fibres.

16. State and prove the law of conservation of momentum.

17. State the universal law of gravitation. What is freefall? During freefall what is the weight of an object?

18. (i) Distinguish between true solution, suspension and colloid in a tabular form under the following heads: (a) Transparency (b) Filterability (c) Type of mixture (d) Stability

(ii) 30g of sugar was dissolved in 430 g of water to prepare a solution. Calculate the concentration of the solution in terms of mass by mass percentage.

19. (i) Draw a neat and labeled diagram of the apparatus used to separate two immiscible liquids from a mixture. Name the process and state the principle involved.

(ii) Name the process or separation technique which are used to separate the following:

(a) Dyes in a black ink

(b) Butter from cream

(c) Camphor and common salt

(d) Iron fillings and sand

20. Name the following:

i) Cells of cork contain a chemical called-

ii) Lining of blood vessels is made up of-

iii) Meristem present at shoot and root tip-

iv) Protective tissue in animal body-

v) Husk of coconut is made up of-

OR

What are Epithelial tissues. Describe different types of Epithelial tissue with labelled diagram.

21. Describe 'Carbon Cycle' with the help of a diagram.

SECTION-B

22. State two precautions while measuring the volume in the cylinder.

23. A spring balance has a zero error of 2 divisions and there are 10 marks between 0-10 N. Find the value of zero error.

24. What happens when a beam of light passed through milk solution? Name this phenomenon.

25. You are given a mixture of iron fillings and sulphur. You are asked to heat the mixture.

(i) What will you observe?

(ii) Name the compound that formed by heating the above mixture.

26. Write any two precaution you should keep while preparing temporary stained mount of onion peel.

27. Name the components of xylem. Which of its components are dead and which are living?

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