

RED ROSE SENIOR SECONDARY SCHOOL, GOMTI NAGAR

SUMMER HOLIDAY HOME WORK [2020-21]

CLASS-IX

SUBJECT- SCIENCE

Instruction: Use a separate notebook of thin size for holiday homework (Do not use your classwork notebook).

1. Which of the following is matter?
“Gold, Salt, Love, Chair, Hate, Water, Oxygen, Smell, Air, Thought, Paper, Politics, Plastic, Force”
2. What is diffusion? Explain with example.
3. Compare the characteristics of solid, liquid and gas.
4. Write short notes on:
 - a) Melting
 - b) Sublimation
 - c) Vaporization
 - d) Condensation
5. What are the factors that affect the evaporation?
6. Compare Prokaryotic cell and Eukaryotic cell.
7. Draw a well labelled diagram of a plant cell.
8. Why the mitochondria is known as power house of the cell.
9. What is cell division? Write short notes on mitosis and meiosis.
10. Write the full form and notes on:
 - a) DNA
 - b) RNA
 - c) ATP
11. A person drives a car and reaches to the destination after covering 350 Km in 8 hours. Find the speed of car in m/sec?
12. Write notes on –
 - a) Velocity
 - b) Acceleration
13. Derive the equation $s = ut + \frac{1}{2}at^2$ using velocity- time graph where u is not zero.

14. A train is running at a speed 72 Km/h and the driver applies the break for 30 second then the train reaches to the speed of 36 Km/h. Find the (retardation) acceleration and distance covered by the train?

15. Explain and draw the graph to show:

a) Uniform acceleration

b) Uniform velocity

16. Convert into degree Celsius -

a) 305K

b) 129K

c) 457K

17. Convert into Kelvin –

a) 75°C

b) 145°C

c) 273°C

18. Differentiate between:

a) Plant cell and Animal cell

b) Diffusion and Osmosis

c) Scalar quantities and Vector quantities

19. Why solid carbon dioxide is known as Dry Ice? Under what conditions it can be converted into a gas?

20. Why is it advised not to touch dry ice and liquid nitrogen with bare hands?

21. On suffering from fever which will lower down your body temperature more- 'ice' or 'ice-cold water'? Give reasons.

22. i) Why do we perspire more in summers?

ii) Who will be more comfortable during summers, a boy wearing nylon clothes or a boy wearing cotton clothes? Give reason.

23. Why steam is used instead of boiling water to rotate the turbines for producing electricity in thermal power plants?

24. Define membrane biogenesis. State the function of SER and RER.

25. In evaporation and boiling both, liquid gets converted into gas. How can you differentiate between the two processes?