



I. Answer any 10 of the following questions:

[10 x 2 = 20]

1. State Newton's Second law of motion and derive an expression for force. Give units of Force
2. State Snell's law.
3. What are Real gases & Ideal gases?
4. Define Ohm's law.
5. What is a molecule?
6. What are homoatomic molecule? Give example.
7. Give the applications of Avagadro's Law.
8. State modern periodic law
9. What is Casparian strips?
10. Define Imbibition.
11. What are the differences between arteries and veins? Write any four.
12. What is bolting?

II. Answer any 5 of the following questions:

[5 x 3 = 15]

13. Write down the properties of light
14. State Joule's law of heating.
15. Write a note on aluminothermic process
16. What is binary solutions? Give examples.
17. Parasitic adaptations of leech.
18. Draw and label the structure of Ovule.

III. Answer any 7 of the following questions:

[7 x 5 = 35]

19. Define (i) Raman scattering (ii) Raman Lines and its classification (iii) Rayleigh lines
20. Write a note on the 3 types of expansion in solids.

21. With the help of a circuit diagram derive the formula for the resultant resistance of three resistances connected: a) in series and b) in parallel
22. Derive the relationship between Relative molecular mass and vapour density.
23. Explain froth floatation
24. What happens when $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ is heated. Write the equations.
25. Difference between dicot stem and monocot stem.
26. Illustrate the structure and functions of brain.
27. Give an account of Islets of Langerhans.

-----ALL THE BEST-----

70 marks will be converted to 100 marks

Test should be written under the supervision of your parents and get the answer paper signed from them.

No corrections should be made after the test timings. We expect your honesty.

Test Papers have to be submitted after the completion of all the 4 tests.

Submission Date of Test Papers: 6th January, 7th January, 8th January

Timings: 9.30 AM – 12.30 PM / 5 PM- 8.30 PM