



11th STD: Quarterly Exam

CHEMISTRY

Time: 2 Hrs 30 Mins / Total Marks: 70

I. Answer any 10 of the following questions:

[10 x 2 = 20]

1. What is the common Oxidation state of alkali metals?
2. An alkali metal (x) forms a hydrated sulphate, $X_2SO_4 \cdot 10H_2O$. Is the metal more likely to be sodium (or) potassium.
3. Write the chemical equations for the reactions involved in solvay process of preparation of sodium carbonate.
4. Give the systematic names for the following
 - (i) Milk of magnesia
 - (ii) lye
 - (iii) lime
 - (iv) Caustic potash
 - (v) Washing soda
 - (vi) soda ash
 - (v) trona
5. How is plaster of paris prepared?
6. What are ideal gases? In what way real gases differ from ideal gases.
7. Can a Van der Waals gas with $a = 0$ be liquefied? Explain.
8. Name two items that can serve as a model for Gay Lusaac' law and explain.
9. Distinguish between diffusion and effusion.
10. Aerosol cans carry clear warning of heating of the can. Why?
11. Why do astronauts have to wear protective suits when they are on the surface of moon?

II. Answer any 5 of the following questions:

[5 x 3 = 15]

12. Why sodium hydroxide is much more water soluble than sodium chloride?
13. Mention the uses of plaster of paris.
14. Beryllium halides are covalent whereas magnesium halides are ionic why?
15. Substantiate Lithium fluoride has the lowest solubility among group one metal fluorides
16. Give the mathematical expression that relates gas volume and moles.

17. Which of the following gases would you expect to deviate from ideal behaviour under conditions of low temperature F₂, Cl₂ or Br₂? Explain.

III. Answer any 7 of the following questions:

[7 x 5 = 35]

18. Discuss briefly the similarities between beryllium and aluminium.
19. Explain the important common features of Group 2 elements.
20. Describe briefly the biological importance of Calcium and magnesium.
21. Explain the biological importance of sodium and potassium
22. Explain the uses of Alkaline Earth Metals.
23. When ammonia combines with HCl, NH₄Cl is formed as white dense fumes. Why do more fumes appear near HCl?
24. Explain the liquefaction of gases by adiabatic process.
25. Explain compressibility factor for real gas.

-----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: 1st December, 2nd December, 3rd December Timings: 9 AM – 12.30 PM / 5 PM- 7 PM