

# Chemistry Sample Paper for Class X Andhra Pradesh Board

Time Duration : 2 hours

Marks : 70

## General Instructions:

- This paper consists of three sections
- Section-A
- Section -B
- Section-C
- Marks are allotted to each section.

## SECTION – A

Note: Answer all questions. 2 x 13 = 26 Marks

1. Define mole.
2. How many moles of ammonia are present in 170 gm. sample of ammonia ?
3. Draw the diagrams of 's' and 'p' orbitals.
4. Explain why Dalton's law is not applicable to a system of  $\text{NH}_3$  and  $\text{HCl}$ .
5. What is the effect of temperature on vapour pressure of a liquid ?
6. Which of the following will increase the internal energy of the system ? Give reasons
  - a. Heat given to the system.
  - b. Work done on the system.
7. Identify Lewis acids and bases from the following
  - a.  $\text{NH}_3$ .
  - b.  $\text{OH}^-$ .
  - c.  $\text{BF}_3$ .
  - d.  $\text{Al}^{+3}$
8. What is nitrolim ?
9. How do you restore the colour of old paintings ?
10. Draw the cyclic structure for  $\alpha$  – d – glucose and  $\beta$  – d – glucose.

11. Carbon gets into the environment from dead organic matter. Justify.
12. Mention the causes for minamata disease. Write any two of its symptoms.
13. Identify the hybridization of each of the carbon atom mentioned as 1,2,3 in  $\text{CH}_2 = \text{C}_2 = \text{CH}_2$ .

## SECTION – B

Note : Answer any Six of the following  $5 \times 6 = 30$  Marks

14. 7.3 gm of  $\text{H}_2$  and 53.4 gm of  $\text{O}_2$  are mixed and reacted. Calculate the weight of  $\text{H}_2\text{O}$  formed in grams.
15. Explain the following with suitable examples:
- Schottky defect
  - Frenkel defect
16. Define the following
- Heat of combustion
  - Heat of formation
17. Compare the properties of alkali metals and alkaline earth metals with respect to
- Atomic radius
  - Ionization energy
  - Electro negativity
18. Calculate the magnetic moment of metals in the following complex ions.
- $[\text{Co}(\text{NH}_3)_4\text{Cl}_2]^+$
  - $[\text{Cr}(\text{NH}_3)_6]^{+3}$
19. Identify the functional group present in the following compound and write IUPAC names of each compound.
- $\text{CH}_3\text{CH}_2\text{OH}$
  - $\text{CH}_3\text{COOH}$
  - $\text{CH}_3\text{CH}_2\text{Cl}$
  - $\text{CH}_3\text{CONH}_2$
  - $\text{CH}_3\text{CHO}$
20. 'Any disturbance in the concentration of the constituents of the air cause pollution'. Justify your answer.
21. Basing on the application of the dyes, distinguish between acid dyes and basic dyes.

## SECTION – C

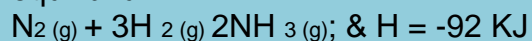
Note: Answer any Three of the following 8 x 3 = 24 Marks

22. What are the quantum numbers. Write the significance of quantum numbers.

23. What is hybridization ? Discuss the hybridization involved in the following examples.

- $C_2H_2$ .
- $C_2H_4$ .
- $CH_4$ .

24. Apply the  $\alpha$  – chatelaines principle in manufacture of ammonia from the following equilibrium.



25. Classify the following hydrocarbons as alkanes, alkenes and alkynes. Write their IUPAC names.

- $(CH_3)_3CH$ .
- $CH_3CH=CH_2$ .
- $(CH_3)_4C$ .
- $CH_3C \equiv CH$
- $CH_3C \equiv C \cdot CH_3$ .
- $CH_2=CH_2$ .

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