

MS JUNIOR COLLEGE  
Hyderabad

GUESS PAPER - 1  
INTERMEDIATE 1<sup>st</sup> YEAR  
CHEMISTRY - I

Time: 3 hours

Max.Marks:60

**INSTRUCTIONS:**

1. Q.Nos: 1 - 10 are Very Short Answer Type. Answer them in about 30 words each. Each question carries 2 marks.
2. Q. Nos: 11 - 18 are Short Answer Type. Answer them in 75 - 100 words each. Each question carries 4 marks.
3. Q.Nos: 19 - 21 are Long Answer Type. Answer them in about 300 words each. Each question carries 8 marks.

- I. Answer All Questions: (Very Short Answer Type). [10 x 2 = 20]
1. Which oxides cause acid rain? what is its pH value?
  2. Define BOD and COD.
  3. Which of the gases diffuses faster among  $N_2$ ,  $O_2$  and  $CH_4$  ? Why ?
  4. Calculate the volume of  $O_2$  at S.T.P required to completely burn 100ml of acetylene.
  5. State the third law of thermodynamics.
  6. What do you mean by autoprotolysis ? Give the equation to represent the autoprotolysis of water.
  7. Describe the important uses of caustic soda?
  8. Lithium salts are mostly hydrated. Why?
  9. Write the average composition of portland cement.
  10. Write IUPAC name of the following compounds  
i)  $(CH_3)_3CCH_2C(CH_3)_3$  ii)  $(CH_3)_2C(C_2H_5)_2$
- II. Answer any Six : (Short Answer Type) [6 x 4 = 24]
11. Explain the hybridization involved in  $PCl_5$  molecule.
  12. Write the postulates of Kinetic molecular theory of gases.
  13. A carbon compound contains 12.8% carbon, 2.1% hydrogen, 85.1% bromine. The molecular weight of the compound is 187.9 calculate molecular formula.
  14. State and explain Hess's law of constant heat summation. Give example.
  15. Discuss the application of Lechatelier's principle for the industrial synthesis of Ammonia ?
  16. Write the chemical reaction to justify that hydrogen peroxide can function as on oxidizing as well as reducing agent.
  17. Explain borax bead test with a suitable example.
  18. What Ozonolysis reaction and Polymerization reaction. Give an example for each.
- III. Answer any Two : (Long Answer Type) [2 x 8 = 16]
19. Write the postulates of Bohr's theory of hydrogen atom? Discuss the importance of this model to explain various series of line spectra in hydrogen atom.
  20. Write an essay on s,p,d and f block elements.
  21. What do you understand by Hybridization? Explain different types of hybridization involving s and p orbitals.