

B.Sc.- III CBCS Pattern Semester-VI
CHT13 - Chemistry Paper-I : Discipline Specific Elective Chemistry V :
Inorganic Chemistry

P. Pages : 2

Time : Three Hours



GUG/W/23/13341

Max. Marks : 50

1. a) Explain following test with examples 5
i) F-Test
ii) Q-Test

- b) Discuss basic principle and instrumentation of flame photometer with well labelled diagram. 5

OR

- c) Explain determinant error with examples. 2½

- d) Analysis of sample of iron ore gave following percentage value for the iron content 7.08, 7.21, 7.12, 7.09, 7.16 Calculate average deviation and standard deviation. 2½

- e) Give various applications of flame photometry. 2½

- f) Write a note on any two types of burner in flame photometry. 2½

2. a) Discuss principle and techniques in paper chromatography. 5

- b) i) What are nitrogenous fertilizer? Explain the amide fertilizer with examples. 5
ii) Explain how soil pH and soil salinity is determined?

OR

- c) Write a short note on Entisols. 2½

- d) Discuss advantage of compost over chemical fertilizer. 2½

- e) Give any five application of solvent extraction techniques. 2½

- f) Explain Principles of Column chromatography. 2½

3. a) What are organometallic compounds? Give their classification with suitable examples. 5

- b) What are nano-materials? Give method of synthesis of gold & silver nano material. 5

OR

- c) Explain Bio-inorganic nano materials. 2½

- d) Write a note on carbon nano tubes. 2½

- e) Give application of Alkyl & Aryls of Aluminium. 2½
- f) Discuss Homogeneous Hydrogenation. 2½
4. a) Describe primary & Secondary treatment method for industrial effluent. 5
- b) Discuss following water purification techniques. 5
- i) Reverse Osmosis
- ii) Ion Exchange

OR

- c) Write a note on aquatic ecosystem. 2½
- d) Explain sources & nature of water pollutant. 2½
- e) What are water quality parameters for waste water? 2½
- f) Describe Sludge Disposal. 2½
5. Solve **any ten**.
- i) Define the term Accuracy. 1
- ii) Write any two limitation of Flame photometry. 1
- iii) Define confidence limit. 1
- iv) What is fertilizer? 1
- v) What is mean by compost. 1
- vi) Define Ion-Exchange capacity. 1
- vii) Give one method of preparation of alkyl of tin. 1
- viii) Give IUPAC name of following compound 1
- i) C_2H_5BeH ii) $K_3[Fe(CN)_5CO]$
- ix) What are nano wires? 1
- x) What is sedimentation? 1
- xi) What you mean by TDS of water. 1
- xii) Define Hydro logical cycle. 1
