**SHAH ABDUL LATIF UNIVERSTY KHAIRPUR**

 **INSTITUTE OF CHEMISTRY**

**Class:** M.Phil / M. S **Subject:** Inorganic chemistry (Practical)

**Semester:** 1st **Test:**  Final test

**Session:** 2019 **Date:** 12-11-2019

**Maximum Marks** 80  **Time allowed:** 1.5 hr

**Note: Attempt all Questions**

Q. No. 1 a) Prepare 100mls of 0.1N solution of H2SO4 when the % Purity of given solution is 96 and density is 1.8

(b)determine the amount of KCl for the preparation of 100mls 1000ppm of KCl when the atomic weight of K= 39 and Cl= 35.5

**Q. No. 2** How you will prepare 100mls of 1M solution of CaCl2 and from that solution 500mls of 0.1N solution of that solution. The atomic weights are Fe = 56, S = 32, O = 16,

**Write theory and procedure**

**Object:** Prepare 10ppm solution of KMnO4 and determine its λmax of using spectronic-20 spectrophotometer

Define the following Terms

(i) Mole (ii) Solubility(iii) Chelation (iv) Titration (v) Primary and secondary standards (vi) Masking agents (vii) Supersaturated solution (viii) Perciptation (ivx) Recrystallization (x) Distilation

**Q. No. 5** Write theory procedure observation and calculation for given object

**Object**Prepare 0.01M solution of EDTA and determine the hardness of tape water by using that solution

Write theory with balanced chemical equation, procedure, observation and calculation of following objectDetermine the amount of KMnO4 in given solution by titrating with 0.1N solution of ferrous sulfates.

SHAH ABDUL LATIF UNIVERSITY KHAIRPUR

DEPARTMENT OF CHEMISTRY

Subject: Inorganic chemistry (Practical) Class: M.S

Semester: 1st Test Final

Session: 2011 Date 20- 04 - 2012

Maximum Marks 50 Time allowed: 30min

Name --------------------------- Seat No -----------------------------

Fil in the blanks

1. Amount required for preparation of 100mls of 0.01N solution of Na2C2O4 is-----------------------------------------------------
2. When 4.5g of of NaOH is dissolved in litre of solution the concentration of that solution will be---------------------------------------------------
3. When the H+ concentration of solution is 1x10-2 pH of that solution will be -------
4. ----------------------------- Amount is required for preparation of 100mls of 100ppm solution of NaCl
5. Unknown concentration of samples can be determined by comparing their strength with --------------------------------------------------
6. The volume required for preparation 100mls of 0.05N and 0.1N solution from 1M solution is------------------------------------------------
7. % Yield can be calculated by formula----------------------------------------------------------
8. Compounds can be characterized by using UV/Vis spectrophotometer by determining their--------------------------------------------
9. -------------------------- is used as source of electromagnetic radiations in IR region
10. Maximum absorbance of KMnO4 is -------------------------------------------
11. When concentration is increased the transmittance will---------------------------------------------(decrease, Increase, not changed)
12. In NMR spectrophotometer fequancy remains constant -------------------------------------------is variable
13. The normality of H2SO4 is -----------when its % purity is 96 and density is 1.6
14. --------------------volume is required for preparation of 0.2molar solution from their concentrated 12M solution
15. Lambert beer’s law may be defined as-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
16. Precipitation may be defined as -----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
17. Crystilization is defined as --------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**Write theory and procedure**

**Object:** Prepare 10ppm solution of KMnO4 and determine its λmax of using spectronic-20 spectrophotometer