



Aditya Group of Degree Colleges
ADITYA DEGREE COLLEGES

* ANDHRA PRADESH *

PRE-FINAL - EXAMINATIONS

SEMESTER-IV

II B.Sc-CHEMISTRY

Max. Marks : 75 M

Time: 3 Hours

Date: 27-3-2020

SECTION-A

I. Answer any FIVE of the following questions: 5 x 5 = 25 M

1. State and Explain Beer - Lambert's Law?
2. Write a short note on Chromophore and Auxochrome?
3. Draw the PMR Spectrum of Ethyl Alcohol?
4. How Molecular weight of non - volatile solute is determined from osmotic pressure?
5. Explain how equivalent conductance varies with dilution ?
6. Write Nernst equation and explain terms in it?
7. What is elevation of Boiling point ? Explain?
8. Write a short note on Freezing Mixtures?

SECTION-B

II. Answer the following questions: 5 x 10 = 50 M

9. a) Write the applications of Beer - Lambert's Law?.

(Or)

b) Explain various types of Electronic Transitions?

10. a) i) Explain characteristics IR absorption bands of various functional groups?

ii) Write the significance of Fingerprint Region ?

(Or)

b) What is Chemical shift and explain factors effecting it?

11. a) i) How to determine Osmotic pressure experimentally ?.

ii) Write about abnormal colligative properties ?

(Or)

b) i) State and explain Raoult's Law ?

ii) Derive relation between relative lowering of vapour pressure and molecular weight of solute ?

- 12 a) Describe Kohlrausch's Law and its applications ?

(Or)

b) Explain Debye-Huckel-Onsagar theory and equation ?

13. . a) Explain the following i) Calomel electrode ii) Standard Hydrogen Electrode ?

(Or)

b) Explain Phase diagram of Water System?