



ADITYA DEGREE COLLEGES

ANDHRA PRADESH

IV SEMESTER - MID -1 EXAMINATIONS

II – B.Sc CHEMISTRY MINOR

PHYSICAL CHEMISTRY

Max. Marks : 60

Time : 2 Hr

Date:

SECTION – A

I. Answer any FIVE of the following:

5 x 4 = 20 M

1. Draw Andrew's isotherms of carbon dioxide.
2. Discuss about qualitative structure of water.
3. Define inversion temperature.
4. Critical phenomenon
5. Write the variation of viscosity of liquids and gases with temperature.
6. Applications of liquid crystals.
7. What are liquid crystals?
8. Joule Thomson effect

SECTION – B

II. Answer all the following questions:

4 x 10 = 40 M

9. a) Derive vanderwaal's equation of state.
(or)
b) Postulates of kinetic theory of gases and deduction of gas laws from kinetic gas equation.
10. a) What is vapour pressure and its determination?
(or)
b) What is critical phenomenon and derive relation between critical constants and vanderwaal's constant.
11. a) What is surface tension and its determination?
(or)
b) What are liquid crystals and write the classification of liquid crystals?
12. a) (i) Differences between liquid crystals and solid/ liquid
(ii) Joule – Thomson effect.
(or)
b) Law of corresponding states and continuity of states

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