



# ADITYA DEGREE COLLEGES

ANDHRA PRADESH

IV SEMESTER –MID-I EXAMINATIONS

SUB : Physical Chemistry-II

Max Marks : 60M

Time : 2 Hr

Date:

*(States of matter, phase rule & surface chemistry) (major)*

## SECTION- A

I. Answer any five questions:

5 X 4 = 20 M

1. Deduce the reduce equation of state?
2. Explain the structure of water?
3. What is Surface tension and its factors?
4. Write the critical constants?
5. Write the difference between solids and liquids?
6. Write the applications of liquid crystals?
7. What is Andrew's Isotherm of  $\text{CO}_2$ ?
8. What is charle's law and Boyle's law?

## SECTION- B

II. Answer all the questions:

4 X 10 = 40 M

9. a) Write the postulates of kinetic theory of gases ?  
Or  
b) Derive the deduction of gas laws from kinetic gas equations?
10. a) What is liquid crystal? Explain the classification of liquid crystals?  
Or  
b) Define viscosity? Determination the coefficient of liquid by using Ostwald Viscometer?
11. a) Write the effect of solutes on surface Tension and viscosity?  
Or  
b) Derivation of critical constants from vanderwaal's equation.
12. a) Explain the Joule-Thomson effect?  
Or  
b) Explain the physical properties of vapour pressure in liquids?