



THE ANSWERS MUST BE ATTEMPTED ON THE ANSWER SHEET PROVIDED

Q.1. Answer the following short questions: (6x5=30)

i. Derive a relation between Gibbs free energy change, entropy change and enthalpy change.

Give significance of the relation.

ii. What is difference between true solution and colloidal solution?

iii. What is catalysis? Give types of catalysis with examples.

iv. What is surface tension? How can it be determined experimentally?

v. Derive an expression for entropy of mixing of two ideal gases.

vi. Briefly describe the dialysis for purification of colloidal system.

Q.2. Answer the following questions. (3x10=30)

i. What is vapor pressure? Discuss the effect of temperature on vapor pressure using

Clausius-Clapeyron equation

ii. Derive and discuss kinetic equation for 1st order reaction.

iii. What is adsorption isotherm? Discuss Langmuir adsorption isotherm.