Q1/ What is the isothermal critical point (plait point)?

Q2/explain why Alcohol is miscible with both benzene and water?

Q3/What is Eutectic point?

Q4/What is the difference between Liquidus & Solidus?

Q5/Define: Congruent melting and Incongruent melting.

Q6/ Classify a system composed of 3 liquids showing partial miscibility.

Q7/What are the basis of classification of the four types of matter?

Q8/ what are the properties of matter?

Q9/ what are the physical properties of matter?

Q10/ What are some examples of chemical properties?

Q11/ What is a simple definition of plasma?

Q12/ Does kinetic energy change during a phase change?

Q13/ What is sublimation process?

Q14/ What is difference between endothermic and exothermic?

Q15/ What is Gibb’s Phase rule for general system?

Q16/ What represent the reduced Gibb’s Phase rule? Write the equation and when it is used?

Q17/ In which cases reduced Gibb’s Phase rule are used?

Q18/ Discuss the details of the phase diagram of water.

Q19/ Draw the phase diagram for sulfur.

Q20/ How do you read the phase diagram of CO2?

Q21/ What is Triple Point?

Q22/Define Critical pressure and Critical temperature.

Q23/ Write the types of phase diagram for system of two components in which there is equilibrium between solid phase and one liquid phase.

Q24/Explain the phase diagram of phenol water system

Q25/ Draw a complete phase diagram for two-component system of (solid-liquid). discuss how phase rule can be applied to the 'phase boundaries' and 'phase regions'

Q26/Define cooling curve.

Q27/ What is the Le-Chatelier's principle? Write the effect of change in pressure, temperature, and

concentration on equilibrium.

Q28/ For the reaction below:



ΔH⁰ = 46980 cal. and, ΔG⁰= 33460 cal. at 25⁰C. Assuming ΔH⁰ to be independent of temp. calculate :

(a) ΔG

(b) the degree of dissociation at 600⁰C and 0.5 atm. Total pressure.

Q29/ NH4HS dissociates as follows:

NH4HS (s) = NH3 (g) + H2S (g)

At 25⁰C the dissociation pressure of the pure solid is 500mmHg. calculate

(a) Kp

(b) The total pressure at equilibrium when 300mmHg NH3 are introduced into a flask containing solid NH4HS.