

TELANGANA UNIVERSITY
S.S.R. DEGREE COLLEGE, NIZAMABAD (C.C:5029)
III SEMESTER INTERNAL ASSESSMENT II EXAMINATIONS
CHEMISTRY QUESTION BANK

I. Multiple choice questions.

1. Phase rule states that [a]
 a. $P+F=C+2$ b. $P+F=C-2$ c. $P+C=F+2$ d. None
2. The number phases in a mixture of N_2 , O_2 and it will be [b]
 a. 0 b. 1 c. 2 d. 3
3. Number of phases in a mixture of O_2 , N_2 , H_2O will be [c]
 a. 0 b. 1 c. 2 d. 3
4. The number of components in the dissociated of NH_4Cl is [b]
 a. 0 b. 1 c. 2 d. 3
5. When the temp is constant the degree of freedom is reduced by [a]
 a. 1 b. 2 c. 3 d. 4
6. For a one component system, the maximum variable may be [c]
 a. 0 b. 1 c. 2 d. 3
7. A triple point is [d]
 a. Trivariant b. variant c. univariant d. invariant
8. For water system when three phases are under equilibrium the system is [d]
 a. Zero variant b. univariant c. Bi variant d. None
9. The maximum no. of degree of freedom in the phase diagram of an aqueous of nad is [a]
 a. 1 b. 2 c. 3 d. 4
10. The degree of freedom at the eutetic point is [a]
 a. 0 b. 1 c. 2 d. 3
11. Benzaldehyde does not under goes [c]
 a. Benzoin b. canvizaro c. Aldol d. None
12. Products of perkin reaction [b]
 a. Aldol b. $\alpha - \beta$ unsaldrated acid c. Nohols d. None
13. 1 calorie = [a]
 a. 4.184 Jouls b. 4.124 J c. $10^7 J$ d. None
14. 1 Joule = [a]
 a. 10^7 ergs b. $10^4 J$ c. $10^7 J$ d. None
15. In adiabatic process [a]
 a. $dQ = 0$ b. $dT = 0$ c. $dp = 0$ d. $dv = 0$
16. In isochoric process [c]
 a. $dT = 0$ b. $dp = 0$ c. $dv = 0$ d. $cl = 0$
17. Extensive property depends on [c]
 a. Nature of substances b. Both c. Quantity of substances d. None
18. Intensive proper is depends on [b]
 a. Quantity of substances b. Both c. Nature of substance d. None
19. 1 erg = _____ Joules [a]
 a. $10^{-7} J$ b. $10^{-4} J$ c. $10^{-5} J$ d. None
20. In isobaric process [c]
 a. $dQ = 0$ b. $dT = 0$ c. $dp = 0$ d. None

II. Fill in the blanks

1. Quantum efficiency of heat engine formula $u = \frac{T_2 - T_1}{T_2}$
2. First law of thermodynamics formed as $\Delta Q = \Delta E + W$
3. $C_p - C_v = R$

4. Joule-Thomson coefficient $\mu = \left(\frac{dT}{dP} \right)_H$

5. If $\mu = -ve$ then gas cool

6. $dE = cvdT$

7. $dH = cpdT$

8. Enthalpy $H = E + PV$

9. More disorderness of the system more will be Entropy

10. Entropy $\Delta S = \frac{Q}{T}$

11. Example for path function work

12. Example for state function Enthalpy

13. Homogenous system contains ones

14. Example for isolated system Thermos Flask

15. Work formula F X L

16. A triple point, water has the vapour pressure 4.58 mm

17. Silver-Lead phase diagram is applied in the purification of Lead

18. The maximum possible no. of phases in water system 3

19. via phase diagram for a one component system there cannot be a quadruple point because of +ve no. of degrees of freedom is -1

20. Reduced phase rule equation is F = C - P + 1

III. Short Answers

1. Define Entropy ?

A: Measure of the randomness of system.

2. Define Enthalpy?

A: Total amount of heat energy stored in system.

3. What is first law of thermo dynamics?

A: Energy is neither created nor destroyed it can change one form to another form

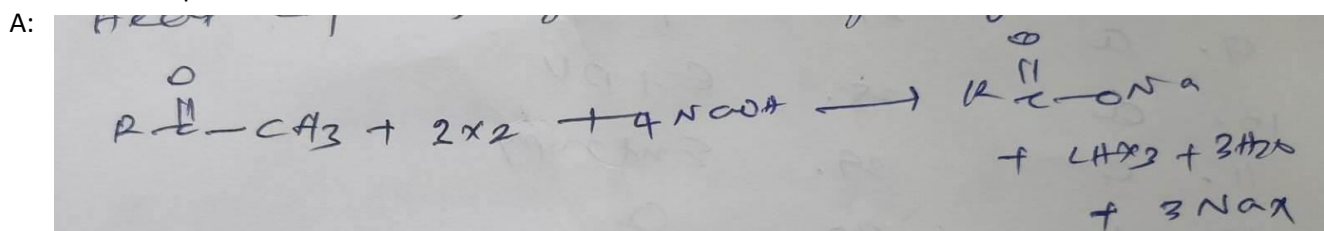
4. Define Heat capacities?

A: The amount of heat observed if raising temperature 1°C

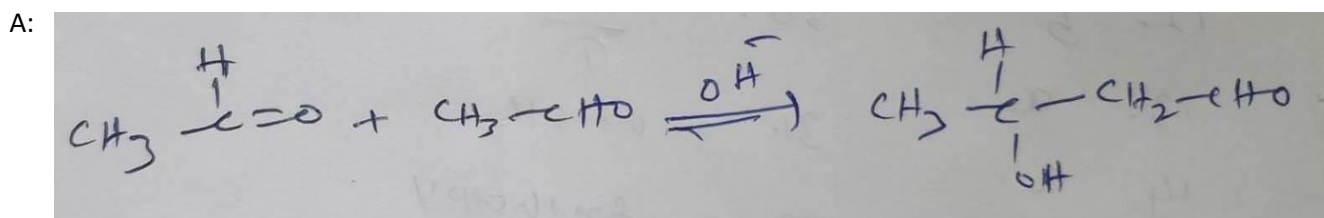
5. Define molar Heat capacities?

A: Heat capacities of 1 mole of a gas

6. Write the equation of Haloform test?



7. Write aldol reaction?



8. Write phase rule equation?

A: $F = C - P + 2$

9. Write specific heat?

A: Heat capacity of one gram of substance

10. Define internal energy?

A: Sum of all energies