

Sample Paper – 2014
Class – XII
Subject – Chemistry
EQUILIBRIUM CLASSES

PAPER CODE A/S/043

TIME :3 Hr

M.M 70

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- GENERAL INSTRUCTIONS----- (ACCORDING TO BOARD)

- Q-1 Out of c and co which is better reducing agent for ZnO?
- Q-2 what is the role of NaCN in froth floatation method?
- Q-3 what is F centre?
- Q-4 what are antioxidants?
- Q-5 why AgBr shows both frenkel and schottky defect?
- Q-6 Name the initiator used in free radical polymerization.
- Q-7 What is the effect of tem on adsorption?
- Q-8 what are monomer units of nylon6,6
- Q-9 Differentiate b/w ----(1)bactericidal & bacteriostatic antibiotic drugs
 (2) Disinfectant &antiseptic
- Q-10 What is the difference b/w schottky and frenkel defect?
- Q-11 What is the chemical reaction of-----(a) lead storage battery (b) Ni/Cd battery
- Q-12 [a] Arrange the following in increasing value of Kb—C₆H₅NH₂,C₂H₅NH₂,(C₂H₅NH)₂,NH₃
 [b] Arrange the following in increasing order of B.P C₂H₅OH,C₂H₅NH₂, (CH₃)₂NH
- Q-13 Write the mechanism of formation of ethane from ethanol.
- Q-14 What is lanthanod contraction ?write its concequences.
- Q-15 What is ELLINGHAM DIAGRAM explain with diagram.
- Q-16 Give Reason –1.Acylation of aniline is necessary before nitration.
 2.Why o-nitrophenol is more volatile than p-nitrophenol?
- Q-17 Draw the structure of ----1.amylopectin 2. Maltose
- Q-18 [a] What is instantaneous rate of reaction?
 [b] The conversion of molecule X to Y follows second order kinetics. If concentration of X increased to three times how will it affect the rate of formation.
- Q-19 In thermal power station shahjahanpur coal is bernt to produce steam for electricity. The smoke produce gets precipited in the chemnies having precipitator
 Answer the following 1.why is the smoke passed through precipitator ?
 2. How does coal ash affect atomosphere?
 3. Which value is promoted through the use of electrostatic precipitator
- precipitator
- Q-20 Define the following terms
 [a] Zwitter ion [b] peptide bond [c] broad spectrum antibiotics

Q- 21 calculate the cell potential of [1] Zn/Zn⁺⁺//Cu⁺⁺/Cu,
[2]Cr/Cr⁺⁺⁺(0.1M)//Fe⁺⁺(0.01M)/Fe

Given that $E^{\circ}\text{Cr}^{+++}/\text{Cr} = -0.75\text{v}$, $E^{\circ}\text{Fe}^{++}/\text{Fe} = -0.45\text{v}$

$E^{\circ}\text{Zn}/\text{zn}^{++} = 0.76\text{v}$, $E^{\circ}\text{Cu}^{++}/\text{Cu} = -0.34\text{v}$

Q-22 complete the following

1. $\text{NH}_3 + \text{Cl}_2 (\text{EXCESS}) \rightarrow$
2. $\text{SiO}_2 + \text{HF} \rightarrow$
3. $\text{H}_3\text{PO}_3 \rightarrow$

Q-23 [a] With the help of V.B.T explain the magnetic character & shape of $\text{Ni}(\text{CN})_4$

[b] Write the I.U.P.A.C name of $[\text{Cr}(\text{NH}_3)(\text{H}_2\text{O})_3]\text{Cl}_2$

Q-24 Draw the structure of (a) chromate ion (b) manganate ion (c) XeO_2F_2

Q-25 Carry out following conversions

1. Prop-1-ene to propan-2-ol
2. Methanamine to ethanamine
3. Chlorobenzene to D.D.T

Q-26 Answer the following questions

1. Why soda water bottle fizzes out on opening the cap
2. How sea water is purified
3. What is Raoult's law

Q-27 1. EXPLAIN WITH CHEMICAL REACTION

- A. Rosenmund reduction
 - B. Carbyl amine reaction..
 - C. Hoffmann's reaction
2. Distinguish b/w following pairs
- A. Phenol & benzoic acid
 - B. propan-2-ol propan -1-ol

Q-28 [A] Determine the amount of CaCl_2 ($i = 2.47$) dissolved in 2.5 litre of water such that its osmotic pressure is 0.75 atm at 27°C

[B] Write chemical reaction occurring in [1] Bessemer converter

[2] Blast furnace

Q-29 An organic compound 'A' on treatment with aqueous solution of ammonia and heating forms compound 'B' which on heating with Br_2 and KOH forms a compound 'C' of molecular formula $\text{C}_6\text{H}_7\text{N}$.

Write structure of & I.U.P.A.C names of A, B, & C. Write chemical reactions involved.

Q-30 Arrange the following according to given instructions

[A] $\text{HClO}_4, \text{HClO}_3, \text{HClO}_2, \text{HClO}$ (INCREASING ACIDIC STRENGTH)

[B] $\text{F}_2, \text{Cl}_2, \text{Br}_2, \text{I}_2$ (INCREASING BOND DISSOCIATION ENERGY)

[C] $\text{NH}_3, \text{PH}_3, \text{AsH}_3, \text{SbH}_3, \text{BiH}_3$ INCREASING BASIC CHARACTER)

[d] $\text{HF}, \text{HCl}, \text{HBr}, \text{HI}$ (INCREASING ACIDIC CHARACTER)

[E]H₂O , H₂S , H₂Se ,H₂Te (THERMAL STABILITY)

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*****BEST OF LUCK*****

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