

# CLASS XII

## SAMPLE PAPER-043

### CHEMISTRY

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**M.M 70****TIME :3 Hr**

All questions are compulsory.

Question Nos. 1 to 5 are very short answer questions and carry 1 mark each.

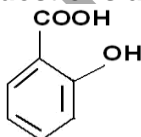
Question Nos. 6 to 10 are short answer questions and carry 2 mark each.

Question Nos. 11 to 22 are short answer questions and carry 3 mark each.

Question Nos. 23 carry 4 mark each

Question Nos. 24 to 26 are long answer questions and carry 5 mark each

Q-1 What is the IUPAC name of



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 temperature on adsorption?

OR

what are monomer units of nylon6,6

Q-8 Differentiate b/w

(A) bactericidal & bacteriostatic antibiotic drugs

(B) Disinfectant & antiseptic

OR

Distinguish b/w following pairs

(A). Phenol & benzoic acid

(B).propan-2-ol propan -1-ol

Q-9 What is the difference b/w schottky and frenkel defect?

Q-10 What is the chemical reaction of-----

(a) lead storage battery

(b) Ni/Cd battery

OR

[a] Arrange the following in increasing value of Kb

$C_6H_5NH_2, C_2H_5NH_2, (C_2H_5NH)_2, NH_3$

[b] Arrange the following in increasing order of B.P

$C_2H_5OH, C_2H_5NH_2, (CH_3)_2NH$

Q-11 Write the mechanism of formation of ethane from ethanol.

Q-12 What is lanthanod contraction ?write its consequences.

OR

Why it is difficult to separate lanthanoids ?

Q-13 Write conditions at which Al can reduce MgO .Explain with the help of Ellingham diagram .

Q-14 Give Reason –1.Acylation of aniline is necessary before nitration.

2.Why o-nitrophenol has low boiling point than p-nitrophenol?

Q-15 Draw the structure of ----1.amylopectin 2. Maltose

Q-16 [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.

OR

Answer the following questions

1. Why soda water bottle fizzes out on opening the cap

2. How sea water is purified

3. What is raoults law

Q-17 Define the following terms

[a] Zwitter ion [b] peptide bond [c] broad spectrum antibiotics

Q- 18 calculate the cell potential of

[a]  $Zn/Zn^{++} // Cu^{++}/Cu,$

[a]  $Cr/Cr^{+++}(0.1M) // Fe^{++}(0.01M)/Fe$

Given that  $E^{\circ} \text{Cr}^{3+}/\text{Cr} = -0.75\text{v}$ ,  $E^{\circ} \text{Fe}^{2+}/\text{Fe} = -0.45\text{v}$   
 $E^{\circ} \text{Zn}/\text{Zn}^{2+} = 0.76\text{v}$ ,  $E^{\circ} \text{Cu}^{2+}/\text{Cu} = -0.34\text{v}$

Q-19 complete the following

- $\text{NH}_3 + \text{Cl}_2 (\text{EXCESS}) \rightarrow$
- $\text{SiO}_2 + \text{HF} \rightarrow$
- $\text{H}_3\text{PO}_3 \rightarrow$

Or.

Q-20 [a] With the help of V.B.T explain the magnetic character, shape of  $[\text{Ni}(\text{CN})_4]^{2-}$   
 [b] Write the I.U.P.A.C name of  $[\text{Cr}(\text{NH}_3)(\text{H}_2\text{O})_3]^+$

Q-21 Draw the structure of (a) chromate ion (b) manganate ion (c)  $\text{XeO}_2\text{F}_2$

Q-22 Carry out following conversions

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

OR

What happens when, Write chemical reactions

- Propane -2-ol is treated with conc  $\text{H}_2\text{SO}_4$
- Toluene is treated with  $\text{KOH}/\text{KMnO}_4$
- Benzene diazonium chloride is treated with  $\text{H}_3\text{PO}_2$

Q23 In thermal power station shahjahanpur coal is burnt to produce steam for electricity. The smoke produced gets precipitated in the chimneys having precipitator

Answer the following

- Why is the smoke passed through precipitator?
- How does coal ash affect atmosphere?
- Which value is promoted through the use of electrostatic precipitator?

Q-24 EXPLAIN WITH CHEMICAL REACTION

- Rosenmund reduction
- Carbyl amine reaction..
- Hoffmann's reaction

OR

EXPLAIN WITH CHEMICAL REACTION

- A. Gabriel Phthalimide synthesis
- B. Stephen's Reaction
- C. Wolff Kishner reduction

Q-25 [A] Determine the amount of  $\text{CaCl}_2$  ( $i=2.47$ ) dissolved in 2.5 litre of water such that its osmotic pressure is 0.75atm at  $27^\circ\text{C}$

[B] Write chemical reaction occurring in

[1] Bessemer converter

[2] Blast furnace

Q-26 An organic compound 'A' on treatment with aqueous solution of ammonia and heating forms compound 'B' which on heating with  $\text{Br}_2$  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.

OR

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]  $\text{H}_2\text{O}, \text{H}_2\text{S}, \text{H}_2\text{Se}, \text{H}_2\text{Te}$  (THERMAL STABILITY)

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

## EQUILIBRIUM CLASSES