

**SAMPLE PAPER 2013**  
**SUB: CHEMISTRY**  
**CLASS- XII**

**TIME: 3Hrs.**

**M.M 70**

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

[b] Arrange the following in increasing order of B.P  $C_2H_5OH, C_2H_5NH_2, (CH_3)_2NH$

Q-13 Write the mechanism of formation of ethane from ethanol.

Q-14 What is lanthanod contraction ?write its consequences.

Q-15 What is ELLINGHAM DIAGRAM explain with diagram.

Q-16 Give Reason –1.Acylatation 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 burnt to produce steam for electricity. The smoke produced gets precipitated in the chimneys having precipitator

- Answer the following
1. Why is the smoke passed through precipitator?
  2. How does coal ash affect atmosphere?
  3. Which value is promoted through the use of electrostatic 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  $E^\circ Cr^{+++}/Cr = -0.75V$ ,  $E^\circ Fe^{++}/Fe = -0.45V$   
 $E^\circ Zn/Zn^{++} = 0.76V$ ,  $E^\circ Cu^{++}/Cu = -0.34V$

Q-22 Complete the following

1.  $NH_3 + Cl_2 (EXCESS) \rightarrow$
2.  $SiO_2 + HF \rightarrow$
3.  $H_3PO_3 \rightarrow$

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

[b] Write the I.U.P.A.C name of  $[Cr(NH_3)(H_2O)_3]Cl_2$

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
- 4.

Q-26 Answer the following questions

1. Why does a soda water bottle fizzle out on opening the cap?
2. How is sea water 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  $27^\circ C$

- [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  $C_6H_7N$ .

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

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