

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.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 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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