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SUB: CHEMISTRY **REVISION TEST (26.2.15)** **MAX.MARKS:70**

Q1Which type of defect can arises when a solid is heated ? Which physical property is affected by it and in what way?

Q2Out of C and CO which is better reducing agent for ZnO?

Q3Predict the order of reactivity of the following compound in SN1 and SN2 reaction:

$C_6H_5CH_2Br$,$C_6H_5CH(C_6H_5)Br$,$C_6H_5(CH_3)Br$,$C_6H_5C(CH_3)(C_6H_5)Br$

Q4Write the equation for the preparation of phenol from cumene?

Q5Draw the structure of 3-Bromo-4-phenylpentanoic acid?

Q6If E^0_{red} for copper electrode is 0.34V.How will you calculate its electrod potential when it is in contract with 0.1MCu^{2+} ion?How does electrod potential change if concentration of Cu^{2+} in solution is decreases?

Q7Write four difference between order and molecularity?

Q8Outline the principle of refining of metals by the following methods:

1.Zone refining 2 vapour phase refining

OR(1)Why copper matte is put in silica lined converter?

(2)write role of cryolite in the metallurgy of aluminium?

Q9Compare the chemistry of actionoid with that of lanthaniod with reference to:

Electronic configuration , oxidation state

Q10 (1)write short notes on Gabriel phthalimide synthesis and carbylamines reaction 1.

(2)convert Ethanamine into methanamine

(or)

(1)Write decreasing order of basic strength in gases phases:$C_2H_5NH_2$,$(C_2H_5)_2NH$, ,$(C_2H_5)_3N$ and NH_3 (1)

(2)What are essential amino acid give example? 1.

Q11 Aluminium crystallise ccp structure its metallic radius is 125pm

1what the length of the side of unit cell

2how many unit cell are there in 1.00 $cm^{3+}$of aluminium?

Q12 (1)What type of the cell lead storage battery is? Write the anode cathode reaction and also write overall reaction?

(2)write only chemistry corrosion of iron (1.5 each)

Q13 (1) A first order reaction is 20% complete in 5min. calculate the time taken for the

reaction to be 60% completed.

OR

Activation energy for the reaction $2HI \rightarrow H_2+I_2$ is 209.5kjmol^{-1} at 281K .Calculate the fraction of molecules of reactant having energy eual to or greater than activation energy?

(2)Define pseudo order reaction with example?

Q14(1)How XeO_3 and XeF_4 prepared discuss their shape?

(2)How sulphuric acid prepared by contact process?

Q15(1)Write the steps for the preparation of pot dichromate from chromate ore?

(2)Which 3d series of Tmetal exhibit the largest no of oxidation state amd why?

Q16(1)Write the IUPAC name of $[Pt\ Cl_2 9(en)_2](NO_3)_2$

(2)Show the bonding in metal carbonyl compound

(3)Draw the structure of $[Fe_2(CO)_9]$

Q17(1)Explain the following reaction: nBuBr+KCN-----EtOH-HBr-→nBuCN

(2)Explain alkyl halide ,though polar are immiscible withwater?/or Haloalkanes react with KCN to give alkyl cyanide as main product while with AgCN they form isocyanide as main product. Give reason.

Q18(1)Write mechanism of hydration of ethane to yield ethanol

(2)Explain Riemer Tiemann reaction?

Q19(1)An organic compound Aon treatment with aqueous ammonia and heating froms compound B,which on heating which $Br_2$and KOH form a compound C of molecular formula C_6H_7N.Write the structure and IUPAC name of compounds?

(2)Distinguish between 2^0,3^0 amine (write name of test only)

(3)Aniline does not undergo Friedal craft reaction ,why?

Q20(1)What happened when D-glucose is treated with the HNO_3

(2)Name two function of carbohydrate in plants?

(3)What is the expected product ohydrolysis of lactose?

Q21 (1)Classify the following as addition and condensation polymer:

Bakelite,teryline,pvc,polythene

(2)What are biodegradable polymer explain with example ?

Q22Explain the following terms with suitable examples:

Cationic det,anionic det, neutral det.

Or

1. Def Cheomotheraphy ?

2. Explain broad spectrum antibiotic with example?

Q23 **Kalavati wanted to give her baby a medicine for fever. She added boiled and cooled water as per the instruction, to the contents of the bottle, upto the mark. She shook the bottle. Then gave a spoonful of the medicine to the baby. As a student of chemistry answer the following questions:**

a. Why did she shake up the contents? What is the process called?(2)
b. What is tyndall effect?1
c. What is the value associated with selling medicine in this form?(1)

Q24 a) An organic compound (A) with molecular formula C_8H_8O forms an orange red ppt with 2,4 DNP reagent and gives yellow precipitate on heating with iodine in the presence of sodium hydroxide. It neither reduces Tollen's or Fehiling's reagent, nor does it decolorize bromine water or Baeyer's reagent. On drastic oxidation with chromic acid. It gives a carboxylic acid (B) having molecular formula $C_7H_6O_2$. Identify the compounds A & B and explain the reactions involved.

(B)Give simple chemical test to distinguish between following pair:

(1)ethanal and propanal

(2)propanal and propanone

Or (1).An organic compound A molecular formula $C_8H_{16}O_{2\text{was hydrolysed with sulphuric acid}}$ to give carboxylic acid B and an alcohol C.oxidation of C with chromic acid produce B. C on dehydration give but-1ene.Write equation for the reaction involved?

(2) (a) Give the mean of following term: (1)cynohydrin (2)Schiff,s base

(b)Write HVZ reaction?

Q25 (1)Though nitrogen exhibits +5 O.S. ,it does not form pentahalide. Give reason?

(2)Write the chemical equation for the hydrolytic reaction of PCl_5 with heavy water?

(3How O_3 estimated quanitatively?

(4)Give reason for the bleaching action of Chlorine.?

(5)Balance the chemical equation: XeF_6+2H_2O-----→

OR

(1) Draw the shapes of (a)XeF_6 (b)peroxodisulphuric acid (1)

(2) Give disproportionation reaction of H_3PO_3 (1)

(3) Illustrate how copper metal can give different product on reaction with HNO_3.(i.e. cold dil and hot conc). 2

(4) Arrange $HClO_4$,$HClO_3$,$HClO_2$, HClO in order of acidic strength and oxidising power? (1)

Q26 **(1)Two elements A and B form purely covalent compounds having molecular formula AB2 and AB4. When dissolved in 20 g of benzene, 1 g of AB2 lowers the freezing point by 2.3 K, whereas 1 g of AB4 lowers it by 1.3 K. The molal depression constant for benzene is 5.1 K Kg mol -1. Calculate the atomic mass of A and B.**

(2) (a)Define the following term: molarity,mole fraction

(b) write two application of Hanery law?

Or

(a) 2g benzoic acid dissolve in 25g of benzene show a depression in freezing point equal to 1.62K.Molar depression constant for benzene is 4.9Kkgmol^{-1}.What is the percentage associated of acid if it form double molecule in solution?

(b) The Half life for radioactive decay of C-14 is 5730 years. An archaeological sample containing wood had only 80% of the C-14 found in a living tree. Estimate the age of the sample

(c)Define molal ebullioscopic constt?

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