FIRST MID TERM TEST - 2021

Standard - 12

e : 1.30 Hrs | **CHEMISTRY** | Marks: 50

PART - I

oose the correct answer: **10×1=10**

1) Bauxite has the composition
   a) Al_2O_3 b) $Al_2O_3.nH_2O$ c) $Fe_2O_3.2H_2O$ d) None of these

2) **Match:**

A. Cyanide process	-	i) Ultrapure Ge
B. Froth floatation process	-	ii) Dressing of Zns
C. Electrolytic reduction	-	iii) Extraction of Al
D. Zone refining	-	iv) Extraction of Au
	-	v) Purification of Ni

	A	B	C	D		A	B	C	D
a)	(i)	(ii)	(iii)	(iv)	b)	(iii)	(iv)	(v)	(i)
c)	(iv)	(ii)	(iii)	(i)	d)	(ii)	(iii)	(i)	(v)

3) Oxidation state of carbon in its hydrides
   a) +4 b) −4 c) +3 d) +2

4) Which one of the following is a weak monobasic acid?
   a) HBO_2 b) H_3BO_3 c) $H_2B_4O_7$ d) $H_4B_2O_7$

5) Which one of the following orders is correct for the bond dissociation enthal of halogen molecules?
   a) $Br_2 > I_2 > F_2 > Cl_2$ b) $F_2 > Cl_2 > Br_2 > I_2$
   c) $I_2 > Br_2 > Cl_2 > F_2$ d) $Cl_2 > Br_2 > F_2 > I_2$

6) **Assertion** : due to Frenkel defect, density of the crystalline solid decreas
   Reason : in Frenkel defect cation and anion leaves the crystal.
   a) Both assertion and reason are true and reason is the correct explanation assertion.
   b) Both assertion and reason are true but reason is not the correct explanat of assertion.
   c) Assertion is true but reason is false.
   d) Both assertion and reason are false.

7) The rate constant of a reaction is $5.8\times10^{-4}s^{-1}$. The order of the reaction
   a) first order b) zero order c) second order d) third order

8) Carbolic acid is
   a) phenol b) picric acid
   c) benzoic acid d) phenyl acetic acid

9) The volatile starting fluid for diesel and gasoline engine is
   a) $CH_3OC_2H_5$ b) $C_2H_5OC_2H_5$ c) $CH_3OCH_2CH_2CH_3$ d) CH_3OC

10) Which of the following amino acids is achiral?
a) alanine b) leucine c) proline d) glycine

PART - II

Answer any 5 questions. Question Number 15 is compulsory: **5×2=10**

11) Differentiate - Ores and Minerals.
12) Write a short note on anamolous properties of the first element of p block.
13) What is inert pair effect?
14) Define unit cell.
15) Write Kolbe's reaction.
16) Rate constant of a first order reaction is $1.54 \times 10^{-3}\ s^{-1}$. Calculate its half life time.
17) What is epimerisation?

PART - III

Answer any 5 questions. Question Number 22 is compulsory: **5×3=15**

18) How nickel is refined by Mond's process?
19) What are the uses of silicones?
20) How is chlorine prepared by Deacon's process?
21) Write notes on schottky defect.
22) Prove that the time taken for the completion of 99.9% first order reaction ten times for the completion of half of a reaction.
23) How is acrolein formed?
24) What are the differences between RNA and DNA?

PART - IV

Answer ALL the questions: **3×5=1**

25) i) What is calcination? (2
ii) Explain froth floatation process. (3

(OR)

i) How will you identify borate radical? (
ii) What is catenation? What are the conditions for catenation? (

26) i) What is packing fraction? (
ii) Calculate the packing efficiency in body centered cubic arrangement. (

(OR)

i) Write and explain Arrhenius equation. (
ii) Derive integrated rate equation for a zero order reaction. (

27) i) How will you distinguish primary, secondary and tertiary alcohols by Lu test?
ii) How is 1, 4 dioxane prepared from ethylene glycol?

(OR)

Elucidate the structure of glucose.

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