

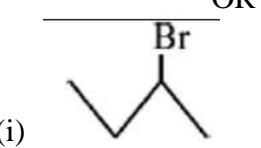
SET	A/B/C
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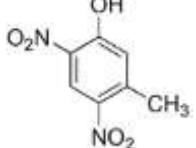
INDIAN SCHOOL MUSCAT
HALF YEARLY EXAMINATION 2023
CHEMISTRY (043)

CLASS: XII

Max.Marks: 70

MARKING SCHEME			
SET	QN.NO	VALUE POINTS	MARKS SPLIT UP
A	1)	a	1
	2)	c	1
	3)	a	1
	4)	b	1
	5)	d	1
	6)	d	1
	7)	d	1
	8)	b	1
	9)	a	1
	10)	b	1
	11)	d	1
	12)	b	1
	13)	a	1
	14)	c	1
	15)	b	1
	16)	(c)	1
	17)	Anoxia, Cryoscopic constant definition	1+1

	18)	Correct Mechanism	2
	19)	(a) Neutral FeCl ₃ test (b) Eqn- Pentan-3-ol is formed	1+1
	20)	(a) Ethyne (b) Correct str OR (a) Benzaldehyde-Eqn (b) Acetophenone-Eqn	1+1
	21)	(a) Ethyl iodide is formed (b) Diphenyl	1+1
	22)	(i) Reimer-Teiman,str,iupac (ii) Williamson's synthesis,Str,Iupac	1½+1½
	23)	Correct equations	1x3
	24)	(i) Hydroboration oxdn,PCC (ii) Diazotisation,H ₂ O (iii)CH ₃ MgBr,H ₂ O/H ⁺	1x3
	25)	i=3.556 $\Delta T_b = 1.85$ $T_b = 375K$ OR $m = \frac{8.21 \times 180}{0.0821 \times 310} = 58.13g$	1x3
	26)	(a) (i)solute associated (ii)associated (b) B,KH increases solubility decreases	1+1 1
	27)	Correct reasons	1x3
	28)	(i) With HI (ii) With HNO ₃ (iii) HCN/NH ₂ OH (equations)	1x3
	29)	(a) 2-bromo-1-chlorobut-1-ene (b) 2,3dimethylbutane (c) (i)Pent-2-ene (ii)C ₆ H ₅ Cl OR (i)  (ii) CH ₂ =CH-CH ₂ -Cl	1+1+2
	30)	(a) β -D-Galactose, β -D-glucose (b) structure (c) (i)definition -Anomers	1+1+2

		(ii) Maltose (i) Phosphodiester (ii) any one func difference	
	31)	(a) Correct products OR  (a)	5x1
	32)	(a) Sequence of aminoacid (b) Cannot be synthesized (c) Fibrous ,insoluble (d) Zwitter ionic form (e) Denaturation (f) Any one diff (g) peptide hormones-any two examples	5x1
	33)	(a) (i) negative deviation (ii) undergoes dissociation , ΔT_f increases and T_f decreases (b) 6.08×10^{-4} (c) $P^0 A = 278.5$ $pA = 32$ OR (a) Definition, Osmotic pressure (b) Definition $0.45 = i \times 5.12 \text{ K kg mol}^{-1} \times \frac{0.3 \text{ g}}{60 \text{ g mol}^{-1}} \times \frac{1000}{30 \text{ kg}}$ (c) $i = 0.527$ $\alpha = 94.6\%$	1x2 1 2 $\frac{1}{2} + \frac{1}{2}$ 1 $\frac{1}{2}$ $\frac{1}{2}$

Set B	17	Mechanism	2
	18b	2-methylbutan2ol	1
	19	(a) Toluene (b) Flouroethane	1+1
	20b)	(b)Correct str OR (a) Ethanal (b) Propanone	1 1+1
	21	Definition-Azeotropes,Ebulioscopic constant	1+1
	25	(a) (ii)Dissociation	1
	28	(ii)Phenetole	1
	29	c)C ₆ H ₅ I	1
	31	g)Aminoacid derivatives –two examples	1
Set c	17	i)Henrys law	1
	18	Mechanism	2
	19b	Butan-2-ol	1
	20 b	Structure	1
	21a	Biphenyl Toluene	1
	22a (i)	Dissociation	1
	30b	structure	1