

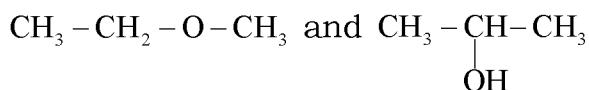
DISTRICT INSTITUTE OF EDUCATION AND TRAINING THIRUVANANTHAPURAM
EVALUATION TOOL FOR CLASS X – 2022 FEBRUARY
CHEMISTRY
ANSWER KEY

PART I

A.1.	Zinc	1
2.	C_7H_{16}	1
3.	1s	1
4.	Zn	1
5.	Tetrafluoroethene or $CF_2 = CF_2$	1
6.	Mercury	1
B.7.	Hydrogen (H_2)	1
8.	Rectified spirit	1
9.	To reduce the melting point of alumina / To increase the electrical conductivity of alumina	1

PART II

A.10.	a) The coin moves. When the temperature of a gas is increased volume increases. b) Charle's law	1
B.11.	a) (i) and (ii)	1



b)	Functional isomerism	1
12	A – SO_3	1
	B – $H_2S_2O_7$	1

PART III

A.13.	a) Chemical energy is converted into electrical energy b) $Zn^{2+} + 2\bar{e} \rightarrow Zn$ c) From Mg to Zinc/ From anode to cathode.	1
14.	a) ii) $1s^2 2s^2 2p^6 3s^2 3p^6$ b) i) $1s^2 2s^2 2p^6 3s^2 3p^5$ c) iii) $1s^2 2s^2 2p^6 3s^2 3p^4$	1
15.	a) Increases b) No change. Pressure has no effect on this system. c) No change	1

16.	a) $Fe_2O_3 + 3CO \rightarrow 2Fe + 3CO_2$	1
	b) Flux - CaO	$\frac{1}{2}$
	Slag – $CaSiO_3$	$\frac{1}{2}$
	c) Pig Iron	1
B.17.	a) Ester	1
	b) Alcohol – Propanol (Propan - 1 - ol), $CH_3 - CH_2 - CH_2 - OH$	1
	Carboxylic acid – Ethanoic acid, CH_3COOH	1

PART IV

A.18.	A – Hydraulic washing (Levigation)	1
	B – Froth floatation	1
	C – Magnetic separation	1
	D – Leaching	1
19	a) NH_4Cl (Ammonium Chloride), $Ca(OH)_2$ (Calcium Hydroxide)	1
	b) Removing moisture/drying	1
	c) Ammonia is less denser than air	1
	d) Liquor ammonia	1
20.	a) A – $CH_3 - CH_3$	1
	B – $CH_3 - Cl$	1
	b) i) Addition reaction	1
	ii) Substitution reaction	1
B.21.	a) Fe (Iron)	1
	b) $Cu \rightarrow Cu^{2+} + 2\bar{e}$	1
	c) Copper sulphate ($CuSO_4$) / Any salt solution of copper	1
	d) Refining of metal or any relevant application	1
22.	a) 22.4L	1
	b) 5 mole	1
	c) 112L	1
	d) 140 g	1

PART V

A.23.a)	5	1
	b) Methyl ($-CH_3$)	1
	c) 3	1
	d) 3 – methyl Pentane	1
	e) Pentan – 3 – ol	1

24. a) $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 3d^5\ 4s^2$ 1
- b) Group = 7 1
- Period = 4 1
- c) Coloured compound/Shows variable oxidation state / Any other relevant property 1
- d) +7 1