SAMPLE QUESTION PAPER

CHEMISTRY

CLASS XII

Design of Question paper

Time: 3 hrs. **Maximum Marks:70**

A. Weightage to different forms of questions

S. No.	Type of question	Marks per Question	Total number of Questions	Total marks
1	VSA	1	8	8
2	SA I	2	10	20
3	SA II/Value Based Question	3	9	27
4	LA	5	3	15
Total			30	70

B. Typology of Questions

S. No.	Typology	Weightage in marks	Weightage in percentage
1	**Knowledge Based**	14	20%
2	**Conceptual Understanding**	21	30%
3	**Inferential Type**	14	20%
4	**Reasoning Based**	11	15%
5	**Skill Based**	10	15%
	Total	70	100%

21 (a) Acidic flux is SiO_2 1/2

Basic flux is CaO 1/2

(b)

(i) Cu_2O undergoes self reduction to form blister copper as

$2Cu_2O + Cu_2S \longrightarrow 6Cu + SO_2$ 1

(ii) $Fe_2O_3 + 3C \longrightarrow 3CO + 2Fe$ 1

OR

(a) Cryolite reduces melting point of alumina . 1

(b) Concentration of ore is carried out by digesting the powdered ore with a concentrated solution of NaOH at 473-523 K and 35 -36 bar pressure. Al_2O_3 is leached out as sodium meta aluminate and SiO_2 as sodium silicate leaving behind impurities.

$Al_2O_3(s) + 2\,NaOH(aq) + 3H_2O \rightarrow 2Na[Al(OH)_4](aq)$ 1

The resulting solution is filtered, cooled and neutralised by passing CO_2 gas through it. Then hydrated Al_2O_3 gets precipitated leaving sodium silicate in the solution.

$2Na[Al(OH)_4](aq) + CO_2(g) \longrightarrow Al_2O_3.xH_2O(s) + 2NaHCO_3(aq)$ 1/2

Sodium silicates remain in the solution and hydrated alumina is filtered , washed, dried and heated to get pure alumina (Al_2O_3).

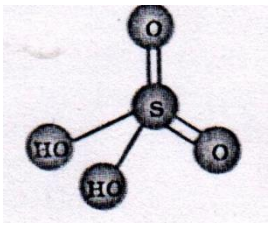
$$Al_2O_3 .x\,H_2O(s) \xrightarrow{1470K} Al_2O_{3(s)} + x\,H_2O(g)$$ 1/2

22.(i) $H_3PO_3 + 2AgNO_3 + H_2O \longrightarrow 2Ag + HNO_3 + 2\,H_3PO_4$ 1

(ii) $3Cl_2 + 6\,NaOH\,(conc.) \longrightarrow 5NaCl + NaClO_3 + 3\,H_2O$ 1

(iii) $2XeF_2 + 2H_2O \longrightarrow 2Xe + O_2 + 4\,H^+ + 4F^-$ 1

23(i)



1

(ii) Since the formation of ozone from oxygen is endothermic reaction silent electric discharge prevents its decomposition. 1

(iii) Bleaching by sulphur dioxide is temporary because of its reducing nature. 1

24 (i) Amylose is a long unbranched chain polymer α -D(+) glucose. 1/2

Amylopectin is a branched chain polymer of α-D glucose. 1/2

(ii) Globular protein and its shape is spherical. ½ +1/2

(iii) Liver and adipose tissue. ½ +1/2

25. (i) Antiseptics are the chemicals applied to the living tissues either to kill or prevent the growth of microorganisms .e.g dettol. ½ +1/2

(ii) Antioxidants are the compounds which retard the action of oxygen on food and reduces its rate of decomposition by oxidation.e.g BHA ½+1/2