

INDIAN SCHOOL MUSCAT
FIRST PRE-BOARD EXAMINATION

February 2021

SET C

CLASS XII

Marking Scheme – CHEMISTRY [THEORY]

Q.N O.	Answers	Marks (with split up)
17	a) Schottky defect-definition b) Measured properties will be same along all directions	1+1
18	$W_2 = \frac{0.48 \times 75 \times 256}{5.12 \times 1000} \text{ g}$ $W_2 = 1.8 \text{ g}$	1+1
21	a) d ² sp ³ , Octahedral, diamagnetic OR a) Chlorido-bis(ethylene diamine)nitrito-O- cobalt(III) chloride. b) K ₂ [NiCl ₄]	1+1/2+1/2 1+1
22	a) NH ₃ has lone pair of electrons b) Eqn – Deacons process	1+1
25	a) Rosenmund reduction b) Wolf-Kischner reaction	1+1
26	$\rho = \frac{Z \times M}{a^3 \times N_A}$ $Z = \frac{2 \times (5 \times 10^{-8})^3 \times 6.022 \times 10^{23}}{75}$ $= 2$ $r = \frac{\sqrt{3}}{4a} = 216.5 \text{ pm}$	1 1 1
28	structure of : a) XeO ₃ Pyramidal b) BrF ₅ square pyramidal c) Chloric acid-HClO ₃	1x3
30	a) In zwitter ionic form, the amino acid can act both as an acid and as a base. b) Gluconic acid is formed c) Cytosine forms hydrogen bond with guanine and adenine forms hydrogen bond with thymine. The base sequence on a particular strand decides the base sequence on the other strand	1x3