

CHEMISTRY — OBJECTIVE

Intermediate Part-II · 1st Annual 2025 — Group: I

Time: 20 Minutes	OBJECTIVE	Marks: 17
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NOTE: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of the relevant question number. Use marker or pen to fill in the circles. Cutting or filling of two or more circles will result zero mark in that question.

QUESTION NO. 1

1	Mark the correct statement (A) Metallic character increases down the group (C) Metallic character remains the same from left to right along a period	(B) Metallic character increases from left to right along a period (D) Metallic character remains the same down in group
2	The oxides of Beryllium are (A) Acidic (B) Basic	(C) Amphoteric (D) None of these
3	The chief ore of Aluminium is (A) Na_3AlF_6 (C) Al_2O_3	(B) $\text{Al}_2\text{O}_3 \cdot 2\text{H}_2\text{O}$ (D) $\text{Al}_2\text{O}_3 \cdot \text{H}_2\text{O}$
4	Which catalyst is used in contact process? (A) Fe_2O_3 (B) V_2O_5	(C) SO_3 (D) Ag_2O
5	Which is strongest acid? (A) HClO (B) HClO_2	(C) HClO_3 (D) HClO_4
6	Which of the following is a typical transition metal? (A) Sc (B) Y	(C) Ra (D) Co
7	Select the one which is alcohol (A) $\text{CH}_3\text{CH}_2\text{OH}$ (B) CH_3OCH_3	(C) CH_3COOH (D) $\text{CH}_3\text{CH}_2\text{Br}$
8	Vinyl acetylene combines with HCl to form (A) Polyacetylene (B) Benzene	(C) Chloroprene (D) Divinylacetylene
9	Which acid can be used as a catalyst in Friedel Crafts Reactions? (A) AlCl_3 (B) HNO_3	(C) BeCl_2 (D) NaCl
10	Which one is not a nucleophile? (A) H_2O (B) H_2S	(C) BF_3 (D) NH_3
11	Rectified spirit contains alcohol about? (A) 80% (B) 85%	(C) 90% (D) 95%
12	Which compound will not give iodoform test on treatment with I_2/NaOH ? (A) Acetaldehyde (B) Acetone	(C) Butanone (D) 3-pentanone
13	Acetic acid is manufactured by (A) Distillation (B) Fermentation	(C) Ozonolysis (D) Esterification
14	Which element is not present in all proteins? (A) Carbon (B) Hydrogen	(C) Sulphur (D) Nitrogen
15	Which three elements are needed for the healthy growth of plants? (A) N, S, P (B) N, Ca, P	(C) N, K, C (D) N, P, K
16	How many Ozone molecules can a single chloride free radical destroy? (A) 100 (B) 100,000	(C) 10,000 (D) 10
17	In purification of potable water the coagulant used is (A) Nickel Sulphate (B) Copper Sulphate	(C) Alum (D) Barium Sulphate

CHEMISTRY — SUBJECTIVE

Intermediate Part-II · 1st Annual 2025 — Group: I

Time: 2.40 Hours	SUBJECTIVE	Marks: 68
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SECTION - I**Note:** Section I is compulsory. Attempt any THREE (3) questions from Section II.**QUESTION NO. 2 Write short answers to any EIGHT (8) questions:****16**

i	Ionization energy of Mg^{+2} is always greater than Mg^{+1} . Write down reason.
ii	Oxides of non-metals are acidic in nature. Write down reason.
iii	Write down formulae of the minerals: i) Natron ii) Gypsum
iv	What happens when i) Lithium Carbonate is heated ii) Lithium Hydroxide is heated to red hot
v	Draw hybridization structure of ethane.
vi	What are aromatic compounds? Write down two examples.
vii	Discuss the reactivity of a π -bond.
viii	What is Raney Nickel? How is it prepared? Write down its use.
ix	Write down ozonolysis reaction of Benzene.
x	Convert nitrobenzene into m-Chloronitrobenzene.
xi	Define nucleophile by giving two examples of nucleophiles.
xii	Convert ethyl bromide into Diethylamine.

QUESTION NO. 3 Write short answers to any EIGHT (8) questions:**16**

i	What is chemical garden?
ii	Impure clay is fused easily. Justify.
iii	Write down the action of Conc. HNO_3 on H_2S and HI .
iv	What happens when H_3PO_4 is subjected to heat?
v	How will you prepare Phenol by using Dow's method?
vi	Write down structural formula of Methoxy Benzene and Tartaric Acid.
vii	Write down Chemistry of Fehling's Solution Tests.
viii	Write down two uses of Formaldehyde.
ix	What are essential and non-essential amino acids?
x	Write down structural Formula of Melonic Acid and Phthalic Acid.
xi	What is Glycogen?
xii	How can you denature Protein?

QUESTION NO. 4 Write short answers to any SIX (6) questions:**12**

i	Write down any two uses of ClO_2 .
ii	Why Iodine has metallic luster?
iii	How does the process of galvanizing protect iron from rusting?
iv	Define coordination sphere. Write down an example.
v	Discuss the reactions taking place in first 24 hours of setting of cement.
vi	What are macro-nutrients? Write down their requirement per acre.
vii	Write down the names of components of the environment.
viii	What are leachates?
ix	How acid rain affects our environment?

SECTION - II

Q.5 (a)	What are halides? Classify different types of halides with trend in the Periodic Table.	4
(b)	Explain peculiar behaviour of Beryllium with other members of its family by four ways.	4
Q.6 (a)	Write down any four methods for the preparation of C_6H_6	4
(b)	Define cracking and discuss its different types.	4
Q.7 (a)	Convert the following: i) Ethane into Methane. ii) Acetic Acid into Ethane	4
(b)	Explain Cannizzaro's Reaction along with Mechanism and one example.	4
Q.8 (a)	What do you know about Phenol? Write reactions of Phenol in which 'OH' group is involved.	4
(b)	Starting from Carboxylic Acid prepare i) Acid anhydride ii) Alkane iii) Ester iv) Amide	4
Q.9 (a)	Write down the commercial uses of Halogens and their compounds. (Any eight)	4
(b)	Explain the Bessemer's process for the manufacturing of steel.	4

Notes on this transcription: This paper has no Urdu column; it is English throughout. • Transcribed from an "unsolved" guide reprint rather than the original board sheet, so no paper code is printed on the source. • Objective Q9 option (C) prints as $BeCf_3$ on the source; kept as printed. Board spellings kept elsewhere too ("Melonic Acid", "luster"). • Typeset by Tayarri from the original board paper; no answer key included.