

Chemistry	Inter Part-II, 2025 Lahore Board	Group -1
Time: 20 Min.	Objective Type	Marks : 17

Note:

Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer book. Cutting or filling two or more circles will result in zero mark in that question.

- 1.1 Chlorine heptaoxide (Cl_2O_7) reacts with water to form:
 - Ⓐ Hypochlorous acid
 - Ⓑ Chloric acid
 - Ⓒ Perchloric acid
 - Ⓓ Chlorine and oxygen
- 2 Which of the following acid can be used as a catalyst in Friedel-Crafts reactions:
 - Ⓐ AlCl_3
 - Ⓑ HNO_3
 - Ⓒ H_2SO_4
 - Ⓓ HCl
- 3 The fibre which is made from acrylonitrile as monomer:
 - Ⓐ PVC
 - Ⓑ Rayon fibre
 - Ⓒ Acrylic fibre
 - Ⓓ Polyester fibre
- 4 Ozone layer is found in:
 - Ⓐ Troposphere
 - Ⓑ Stratosphere
 - Ⓒ Hydrosphere
 - Ⓓ Lithosphere
- 5 Mark the correct statement:
 - Ⓐ Na^+ is smaller than Na atom
 - Ⓑ Na^+ is larger than Na atom
 - Ⓒ Cl^- is smaller than Cl atom
 - Ⓓ Cl^- and Cl atom are equal in size
- 6 Cannizzaro's reaction is not given by:
 - Ⓐ Formaldehyde
 - Ⓑ Acetaldehyde
 - Ⓒ Benzaldehyde
 - Ⓓ Trimethyl acetaldehyde
- 7 Boric acid cannot be used:
 - Ⓐ As antiseptic in medicine
 - Ⓑ For washing eyes
 - Ⓒ in soda bottles
 - Ⓓ For enamels and glazes
- 8 Which compound will have maximum repulsion with H_2O :
 - Ⓐ C_6H_6
 - Ⓑ $\text{C}_2\text{H}_5\text{OH}$
 - Ⓒ $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$
 - Ⓓ $\text{CH}_3-\text{O}-\text{CH}_3$
- 9 Ecosystem is a smaller unit of:
 - Ⓐ Lithosphere
 - Ⓑ Hydrosphere
 - Ⓒ Atmosphere
 - Ⓓ Biosphere
- 10 The state of hybridization of carbon atom in methane is:
 - Ⓐ sp^3
 - Ⓑ sp^2
 - Ⓒ sp
 - Ⓓ dsp^2
- 11 Which ion will have maximum value of heat of hydration:
 - Ⓐ Na^+
 - Ⓑ Cs^{+2}
 - Ⓒ Ba^{+2}
 - Ⓓ Mg^{+2}
- 12 Formula of chloroform is:
 - Ⓐ CH_3Cl
 - Ⓑ CCl_4
 - Ⓒ CH_2Cl_2
 - Ⓓ CHCl_3
- 13 The strength of binding energy of transition elements depends upon:
 - Ⓐ Number of electron pairs
 - Ⓑ Number of unpaired electrons
 - Ⓒ Number of neutrons
 - Ⓓ Number of protons
- 14 Elimination bimolecular reaction involves:
 - Ⓐ First order kinetics
 - Ⓑ Second order kinetics
 - Ⓒ Third order kinetics
 - Ⓓ Zero order kinetics
- 15 The brown gas formed, when metal reduce HNO_3 to:
 - Ⓐ N_2O_5
 - Ⓑ N_2O_3
 - Ⓒ NO
 - Ⓓ NO_2
- 16 A carboxylic acid contains:
 - Ⓐ A hydroxyl group
 - Ⓑ A carboxyl group
 - Ⓒ A hydroxyl and carboxyl group
 - Ⓓ A carboxyl and an aldehydic group
- 17 Which three elements are needed for the healthy growth of plants:
 - Ⓐ N, S, P
 - Ⓑ N, Ca, P
 - Ⓒ N, P, K
 - Ⓓ N, K, C

SECTION - I

Q.2 Write short answers to any EIGHT (8) questions: 16

- i. Metallic character increases from top to bottom, justify.
- ii. The oxidation state of noble gas is usually zero, give reason.
- iii. Why 2% gypsum is added in cement?
- iv. Alkali metals are among the most reactive elements of the periodic table, give reason.
- v. Define vital force theory, how it was rejected?
- vi. What is natural gas? Write its two uses.
- vii. Alkanes are less reactive than alkenes, justify.
- viii. Write any two uses of methane.
- ix. Write structure of anthracene and biphenyl.
- x. Define aromatic hydrocarbon with one example.
- xi. Prepare propenoic acid using Grignard reagent.
- xii. S_N2 reactions are 2nd order reactions, justify.

Q.3 Write short answers to any EIGHT (8) questions: 16

- i. What is Chemical Garden?
- ii. Write down four uses of Ar.
- iii. What is Aqua Regia, give one example?
- iv. Write down two dissimilarities of oxygen with sulphur.
- v. What is absolute alcohol, and how it can be obtained?
- vi. Write down reaction of phenol with formaldehyde in the presence of alkali.
- vii. Write down two methods for the preparation of acetaldehyde.
- viii. What is silver mirror test?
- ix. Write down the flavours of amyl butyrate and isobutyl formate esters.
- x. Write down the reaction of acetic acid with ammonia.
- xi. What is condensation polymerization, give one example?
- xii. What are acrylic resins, give one example?

Q.4 Write short answers to any SIX (6) questions: 12

- i. How municipal solid waste is incinerated? Discuss briefly.
- ii. What are chloramines? How are these formed?
- iii. Livestock waste is polluting water. Discuss.
- iv. Give the significance of ammonia fertilizer.
- v. Discuss the reactions taking place between 1 to 7 days during setting of cement.
- vi. Briefly discuss the colour chemistry in transition element compounds.
- vii. Give the formulae of: (a) Magnetite, (b) Haematite.
- viii. Give peculiar behaviour of fluorine
- ix. Give formulae of: (a) Cryolite (b) Halite

SECTION - II

Note: Attempt any THREE questions.

Q.5(a) How do you justify the position of hydrogen at the top of group IA and VII A? 4**(b)** Describe with diagram the manufacture of sodium by Down's cell. Point out the three advantages of this process. 4**Q.6(a)** Write down chain isomerism and functional group isomerism along with two examples each. 4**(b)** What are ortho para directing groups and meta-directing groups, give one example in each case? 4**Q.7(a)** How will you bring about the following conversions: 2.2
(i) 1-Butene to 1-Butyne
(ii) 1-Propanol to $\text{CH}_3\text{--CH}_2\text{--CH}_2\text{--Cl}$ **(b)** Write a note on haloform reactions. Give the significance of iodoform test. 4**Q.8(a)** Discuss Lucas test by giving suitable examples. 4**(b)** How will you prepare acetic acid by using: 4
(i) Methyl magnesium bromide, (ii) Ethyl acetate.**Q.9(a)** Give eight uses of Nobel gases. 4**(b)** Discuss rules for naming the complex compound of transition element by giving the examples. 4