

Objective
Paper Code
8488

Intermediate Part Second (New Scheme)
CHEMISTRY (Objective) GROUP - II
Time: 20 Minutes Marks: 17

Roll No. : _____



Q.No.1 You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill the relevant circle in front of that question number on computerized answer sheet. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero marks in that question. Attempt as many questions as given in objective type question paper and leave other circles blank.

S.#	Questions	A	B	C	D
1	Benzene cannot undergo:	Substitution reactions	Addition reactions	Oxidation reactions	Elimination reactions
2	Vinyl acetylene combines with HCl to form:	Polyacetylene	Benzene	Chloroprene	Divinyl acetylene
3	In t-butyl alcohol, the tertiary carbon is bonded to:	Two hydrogen atoms	Three hydrogen atoms	One hydrogen atom	No hydrogen atom
4	Which is a typical transition metal?	Sc	Y	Ra	Co
5	Which halogen occurs naturally in positive oxidation state?	Fluorine	Chlorine	Bromine	Iodine
6	Which species has the maximum number of unpaired electrons?	O_2	O_2^-	O_2^{2-}	O_2^{2+}
7	Which element is not present abundantly in earth's crust?	Silicon	Aluminium	Sodium	Oxygen
8	Which sulphate is not soluble in water?	Sodium sulphate	Potassium sulphate	Zinc sulphate	Barium sulphate
9	Mark the correct statement:	All the lanthanides are present in the same group	All the halogens are present in the same period	All the alkali metals are present in the same group	All the noble gases are present in the same period
10	In the purification of potable water the coagulant used is:	Nickle sulphate	Copper sulphate	Barium sulphate	Alum
11	Micro-nutrients are required in quantity ranging from:	4 - 40 g	6 - 200 g	6 - 200 kg	4 - 40 kg
12	Which is a monosaccharide?	Fructose	Sucrose	Starch	Cellulose
13	The reaction between fat and NaOH is called:	Esterification	Hydrogenolysis	Fermentation	Saponification
14	Which is not a fatty acid?	Propanoic acid	Acetic acid	Phthalic acid	Butanoic acid
15	Which of the given compounds will not give iodoform test on treatment with I_2 / NaOH ?	Acetaldehyde	Acetone	Butanone	3-pentanone
16	Which compound will have maximum repulsion with H_2O ?	C_6H_6	$\text{C}_2\text{H}_5\text{OH}$	$\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$	$\text{CH}_3 - \text{O} - \text{CH}_3$
17	Grignard reagent is reactive due to:	The presence of halogen atom	The presence of Mg atom	The polarity of C-Mg bond	The polarity of Mg-X bond

SECTION - I

16

2. Write short answers to any EIGHT parts.

- (i) How do you justify the position of hydrogen at the top of group IA?
- (ii) Why does metallic character increase from top to bottom in a group of metals?
- (iii) Write any four uses of lime in industries.
- (iv) Write balanced equations for the reactions of Al with (a) H_2SO_4 (b) $NaOH$
- (v) How does borax serve as a water softening agent?
- (vi) Give the names and formulae of different acids of boron.
- (vii) Write balanced equations for the reaction of orthophosphoric acid with $NaOH$.
- (viii) NO_2 is a strong oxidizing agent. Prove the truth of this statement giving examples.
- (ix) Complete and balance the given chemical equations. (a) $P + NO \rightarrow$ (b) $HNO_3 + HI \rightarrow$
- (x) What is meant by setting of cement? Discuss the reactions taking place in first 24 hours.
- (xi) What are the prospects of paper industry in Pakistan?
- (xii) Explain the process of incineration of industrial waste.

16

3. Write short answers to any EIGHT parts.

- (i) What is the difference between tautomerism and metamerism?
- (ii) What is raney nickel? Write its function.
- (iii) Convert CH_3I to $HI - COOH$
- (iv) Write name of two groups which are called as meta directing group and two groups which are called as ortho. para-directing groups.
- (v) Write mechanism for sulphonation of benzene.
- (vi) Convert C_2H_5Br to tetra ethyl lead (TEL).
- (vii) Convert C_2H_5Br to $(C_2H_5)_3NH$
- (viii) Why absolute alcohol cannot be prepared by fermentation process?
- (ix) Draw structure of (a) methyl-n-propyl ether (b) methoxy benzene.
- (x) Write structure of (a) alanine (b) valine.
- (xi) What is ninhydrin test?
- (xii) Point out difference between protein and polypeptide.

12

4. Write short answers to any SIX parts.

- (i) How are the halogen acids ionized in water?
- (ii) What is bleaching powder? Give its two uses.
- (iii) Describe chemical reactions of bleaching powder with (a) HI (b) CO_2
- (iv) How does the process of galvanizing protect iron from rusting?
- (v) Give four uses of acetaldehyde.
- (vi) How will you distinguish between ethanal and propanal?
- (vii) What are thermoplastic polymers? Give two examples.
- (viii) What are lipids? Give their types.
- (ix) Define saponification number and iodine number.

SECTION - II Attempt any THREE questions. Each question carries 08 marks.

5. (a) Give two similarities and two dissimilarities of hydrogen with elements of group IA. 04
 (b) Write any eight uses of lime in industry. 04
6. (a) Describe rules for naming the coordination complexes and give one example. 04
 (b) Describe air pollution briefly. 04
7. (a) What is cracking? Discuss its two types. 04
 (b) Write the classification of aromatic hydrocarbons giving one example of each. 04
8. (a) Describe Kolbe's method for the preparation of ethyne with reaction mechanism. 04
 (b) Describe Lucas test for the identification of primary, secondary and tertiary alcohols with suitable chemical reactions. 04
9. (a) Differentiate between S_N1 and S_N2 reactions. 04
 (b) Write one laboratory and one industrial method for the preparation of acetaldehyde. 04