

Objective  
Paper Code  
**8483**

*FBD-12-1-23*  
Intermediate Part Second - 136  
**CHEMISTRY (Objective) GROUP - I**  
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	The main water pollutant chromium-VI is discharged by:	Plastic industry	Paper industry	Leather industry	Cement industry
2	Urea contains:	36% nitrogen	46% nitrogen	56% nitrogen	66% nitrogen
3	Polyamide resins are:	Homopolymer	Copolymer	Terpolymer	Addition polymer
4	Compounds having $-C \equiv N$ group are called:	Nitro compound	Amino acid	Alkane nitriles	Amide
5	During reduction of aldehyde with $NaBH_4$ , $H^-$ ion act as:	Electrophile	Nucleophile	Acid	Base
6	Which enzyme is not involved in fermentation of starch?	Diastase	Zymase	Urease	Maltase
7	Carbolic acid has another name of:	Alcohol	Phenol	Ether	Carboxylic acid
8	Which is not a nucleophile?	$H_2O$	$H_2S$	$BF_3$	$NH_3$
9	The electrophile in aromatic sulphonation is:	$H_2SO_4$	$HSO_4^-$	$SO_3$	$SO_3^+$
10	$\beta$ - $\beta'$ -dichloroethyl sulphide is known as:	Mustard gas	Laughing gas	Phosgene gas	Bio gas
11	A double bond consists of:	Two sigma bonds	One sigma and one pi bond	One sigma and two pi bond	Two pi bond
12	The colour of transition metal complexes is due to:	d-d transition of electrons	Ionization	Loss of s-electron	Gain of s-electron
13	Bleaching powder is prepared by passing chlorine over:	Calcium carbonate	Calcium sulphate	Calcium hydroxide	Magnesium hydroxide
14	Catalyst used in contact process is:	$Fe_2O_3$	$V_2O_5$	$SO_3$	$Ag_2O$
15	The chief ore of aluminium is:	$Na_3AlF_6$	$Al_2O_3 \cdot 2H_2O$	$Al_2O_3$	$Al_2O_3 \cdot H_2O$
16	The mineral $CaSO_4 \cdot 2H_2O$ has the general name:	Gypsum	Dolomite	Calcite	Epsom salt
17	Melting point of halogens	Decrease down the group	Increase down the group	Remains same in group	First increase and then down the group

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**CHEMISTRY (Subjective) GROUP - I**

FBD-12-1-23

Time: 02:40 Hours

Marks: 68

**SECTION - I**

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**2. Write short answers to any EIGHT parts.**

- How will you convert boric acid into borax and vice versa?
- Write the chemical formula of these minerals: (a) borax (b) Colemanite
- What are the common properties of group IVA elements? (any four)
- What is Wurtz-fitting reaction?
- How is glyoxal produced from benzene?
- Define aromatic compounds with two examples.
- What is condensation polymerization?
- How can you differentiate between glucose and fructose?
- Write any four uses of lipids?
- What is dissolved oxygen?
- How do  $\text{CO}_2$  and  $\text{SO}_2$  cause acid rain?
- How do pesticides affect living organism?

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**3. Write short answers to any EIGHT parts.**

- Write the functional group of alkanone and alkanonic acid with one example in each case.
- What do you know about functional group isomerism? Give one example.
- Give structural formula of alkene expected to be formed by dehydrohalogenation of 1-chloropentane.
- Starting from ethene prepare ethyne.
- How is acetylene converted into chloroprene?
- How does Grignard reagent react with methanal?
- Starting from ethyl chloride prepare (a) n-butane (b) ethane.
- Write the names of woody raw materials of paper industry.
- What are the four essential qualities of a good fertilizer?
- Write the allotropic forms of phosphorus.
- Write reaction taking place in contact tower for the manufacturing sulphuric acid.
- Write the ring test for the confirmation of nitrate ion in solution.

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**4. Write short answers to any SIX parts.**

- What are ligands? Give one example.
- Draw the geometry of  $\text{PCl}_5$ .
- What is chromyl chloride test?
- Define fermentation. Give one example.
- What is Lucas Test?
- Why phenol is acidic but alcohol is not?
- Give mechanism of addition of  $\text{NH}_3$  with acetone.
- What is iodoform test? Give its use.
- What are amino acids? Give their general formula.

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

- Discuss the position of hydrogen with group I-A elements. 04
  - Write a detailed note on the commercial preparation of sodium by Down's cell. 04
- Write eight applications of noble gases. 04
  - Describe the process of digestion in paper industry. 04
- Explain any four features of organic compounds. 04
  - Explain the structure of benzene on the basis of molecular orbital treatment. 04
- Convert: (i) Ethyne into oxalic acid (ii) Propyne into acetone 02,02
  - What are alkyl halides? How alkyl halides are prepared from alcohol by three different reactions. 01,03
- How does acetaldehyde react with the following reagents? 01,01,01,01
    - $\text{C}_2\text{H}_5\text{MgI}$  (ii)  $\text{HCN}$  (iii)  $\text{NaHSO}_3$  (iv)  $\text{dil NaOH}$
  - Discuss two methods of preparation of  $\alpha$ -amino acids. 04

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