

1219 Warning:- Please write your Roll No. in the space provided and sign. Roll No. _____
(Inter Part - II) (Session 2015-17 to 2017-19) Sig. of Student _____

Chemistry (Objective)

(Group - I)

Paper II

Time Allowed:- 20 minutes

PAPER CODE 4485

Maximum Marks:- 17

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 that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Write **PAPER CODE**, which is printed on this question paper, on the both sides of the Answer Sheet and fill bubbles accordingly, otherwise the student will be responsible for the situation. Use of Ink Remover or white correcting fluid is not allowed.

Q. I

- Which is not a calcareous material?
(A) Clay (B) Lime (C) Marble (D) Marine Shell
- The main pollutant of leather tanneries in the waste water is due to the salt of?
(A) Lead (B) Chromium (VI) (C) Copper (D) Chromium (III)
- Which is more acidic oxide in the following?
(A) MnO (B) Mn_2O_3 (C) MnO_2 (D) Mn_2O_7
- General name of mineral $MgSO_4 \cdot 7H_2O$ is?
(A) Gypsum (B) Dolomite (C) Calcite (D) Epsom salt
- Chemical formula of litharge is?
(A) Pb_2O (B) SiO_2 (C) PbO (D) Pb_3O_4
- The lowest ionization energy is possessed by?
(A) P (B) N (C) Sb (D) As
- Which is the strongest oxidizing agent in the following?
(A) I_2 (B) Cl_2 (C) F_2 (D) Br_2
- Which one of these elements is a typical transition element?
(A) Ni (B) Zn (C) Cd (D) Hg
- Number of possible chain isomers of an alkane C_5H_{12} are?
(A) 2 (B) 3 (C) 4 (D) 5
- Structural formula of vinyl chloride is
(A) $HC \equiv C - Cl$ (B) $H_2C = CHCl$ (C) $H_3C - CHCl_2$ (D) $H_2C - \underset{\substack{| \\ Cl}}{C} - \underset{\substack{| \\ Cl}}{CH_2}$
- Which one of the following species is an electron withdrawing?
(A) $-CH_3$ (B) $-\dot{C}HO$ (C) $-OH$ (D) $-NH_2$
- When ethyl magnesium bromide is reacted with $HCHO$, followed by acid hydrolysis, the product formed is?
(A) Ethanol (B) 1-propanol (C) 2-propanol (D) Ethanoic acid
- Which compound will have maximum repulsion with water?
(A) H_3C_2OH (B) H_3COH (C) C_6H_6 (D) $H_3C - O - CH_3$
- Which one of the following compounds will react with Fehling's solution?
(A) $HCOOH$ (B) $H_3C \cdot CHO$ (C) H_3CCOOH (D) $H_3C - COCH_3$
- Chemical formula of glycine is?
(A) H_3CCOOH (B) $H_3C \cdot CHO$ (C) $H_2N \cdot CH_2COOH$ (D) $H_3C \cdot CO \cdot CH_3$
- Which nitrogenous base is not present in RNA?
(A) Thiamine (B) Cytosine (C) Adenine (D) Uracil
- Which of these polymers is a synthetic polymer?
(A) Animal fat (B) Starch (C) Cellulose (D) Polyester

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Warning:- Please, do not write anything on this question paper except your Roll No.

1219 (Inter Part-II)

(Session 2015-17 to 2017-19)

Chemistry (Subjective)

Group - I

Paper II

Time Allowed: 2.40 hours

Maximum Marks: 68

SECTION I

2. Answer briefly any EIGHT parts from the followings:- $8 \times 2 = 16$

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| (i) Write two properties of covalent hydrides | (ii) Define Lanthanides and Actinides. |
| (iii) Complete and balance the following equations (a) $Li_2CO_3 + heat \rightarrow$ (b) $NaNO_3 + heat \rightarrow$ | |
| (iv) Justify that CO_2 is acidic in nature. | (v) How Borax is used as water softening agent. |
| (vi) How H_3BO_3 reacts with (a) C_2H_5OH (b) $NaOH$ | (vii) What is aqua regia. How is it dissolves the gold. |
| (viii) Write chemical Equations showing effect of temperature on H_3PO_4 | (ix) How temperature affects the gaseous Nitrogen di-oxide (NO_2) |
| (x) Why NH_4NO_3 is not used as fertilizer for paddy rice. | (xi) What do you mean by setting of cement. |
| (xii) What is Biochemical oxygen demand (BOD) | |

3. Answer briefly any EIGHT parts from the followings:- $8 \times 2 = 16$

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| (i) Write down the useful by-products obtained in the process of cracking. | (ii) What is Clemmensen reduction? Give an example. |
| (iii) Why alkanes are less reactive than alkenes? | (iv) Write down the structural formulas of (a) Naphthalene (b) Phenanthrene |
| (v) Write down five resonance structures of benzene. | (vi) Give IUPAC names of the following compounds. (a) $(CH_3)_3C-CH_2-Cl$ (b) $(CH_3)_2CHBr$ |
| (vii) What are Grignard's reagents. How are these produced? | (viii) How Phenol is prepared by Dow's process? |
| (ix) How Phenol reacts with formaldehyde? | (x) Write down the formulas of (a) Palmitic acid (b) Iso-Butyric acid |
| (xi) How can you convert acetic acid into (a) Methane (b) Acetyl chloride | (xii) Write down the mechanism for the reaction between CH_3COOH and NH_3 |

4. Answer briefly any SIX parts from the followings:- $6 \times 2 = 12$

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|---|---|
| (i) Complete and balance following equations. (a) $HClO_4 + P_2O_5 \xrightarrow{-10^\circ C}$ (b) $HgO + Br_2 \xrightarrow{50^\circ C}$ | |
| (ii) Write order of acid strength of oxyacids of chlorine. | (iii) What happens when bleaching powder reacts with (a) $conc. H_2SO_4$ (b) NH_3 |
| (iv) Give systematic names to following complexes (a) $K_2[PtCl_6]$ (b) $[Co(NH_3)_4]Cl_3$ | (v) Write industrial method for the preparation of formaldehyde. |
| (vi) What is Cannizzaro's reaction? Give an example. | (vii) Define thermoplastic and thermosetting polymers. |
| (viii) What are polyester resins? Give an example with reaction equation. | (ix) What is meant by denaturing of proteins. |

SECTION II

Note: Attempt any three questions from the following.

$(8 \times 3 = 24)$

5. (a) How does the classification of elements in different blocks help in understanding their chemistry
(b) How is sodium metal extracted by Down's cell? Describe the products formed by this cell on different electrodes by balanced chemical equation.
6. (a) Explain the electrochemical theory for corrosion.
(b) What is smog? Explain the pollutants which are the main causes of photochemical smog.
7. (a) Define Isomerism and explain any two types of structural isomerism with examples.
(b) Discuss the stability of benzene in detail with reference to 1,3,5 - cyclohexatriene.
8. (a) Explain the polymerization of acetylene in detail.
(b) Describe the preparation of ethyl alcohol by fermentation of starch and molasses.
9. (a) How does acetaldehyde react with (i) C_2H_5MgBr (ii) $NaHSO_3$ (iii) NH_2OH (iv) N_2H_4
(b) Write a detailed note on S_N2 reactions of alkyl halides.

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