

Roll No.

LHR-G2-12-18

(To be filled in by the candidate)

(Academic Sessions 2015 – 2017 & 2016 – 2018)

CHEMISTRY

218-(INTER PART – II)

Time Allowed : 20 Minutes

Q.PAPER – II (Objective Type)

GROUP – II

Maximum Marks : 17

PAPER CODE = 8484

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 | Which is the weakest oxidizing agent : (A) Br_2 (B) Cl_2 (C) F_2 (D) I_2 |
| 2 | Which one of the following species is an electron releasing : (A) $-CHO$ (B) $-C(=O)-R$ (C) $-OH$ (D) $-COOH$ |
| 3 | Which one of the following nitrogenous base is not present in RNA : (A) Thiamine (B) Cytosine (C) Adenine (D) Uracil |
| 4 | Fungicides are used to : (A) Control the growth of fungus (B) Kill insects (C) Kill plants (D) Kill herbs |
| 5 | Which one of the following oxides is more acidic : (A) MnO (B) Mn_2O_3 (C) MnO_2 (D) Mn_2O_7 |
| 6 | Which one of the following compounds will not give iodoform test : (A) Ethanol (B) Acetaldehyde (C) Butanone (D) 3-Pentanone |
| 7 | Bauxite is an ore of : (A) B (B) Al (C) Mg (D) Ca |
| 8 | Which one of the following compounds is more acidic : (A) H_5C_6OH (B) H_2O (C) H_5C_2OH (D) H_3CCOOH |
| 9 | In purification of potable water the coagulant used is : (A) Nickel sulphate (B) Alum (C) Copper sulphate (D) Barium sulphate |
| 10 | For a ketone having molecular formula $C_5H_{10}O$, the number of possible metamers are : (A) 2 (B) 3 (C) 4 (D) 5 |
| 11 | Formula of sodium beryllate is : (A) $Na_2B_4O_7$ (B) Na_2BeO_2 (C) $BeONa$ (D) $Na_2B_4O_7 \cdot 10H_2O$ |
| 12 | Addition of water to acetylene takes place in presence of : (A) Ni (B) $HgSO_4 / H_2SO_4$ (C) $ZnCl_2$ (D) Cu |
| 13 | Which one of the following is a non-typical transition element : (A) Cr (B) Mn (C) Cd (D) Fe |
| 14 | When ethyl magnesium bromide reacts with HCHO followed by acid hydrolysis, the product formed is : (A) Ethanol (B) 1-Propanol (C) Ethanoic acid (D) 2-Propanol |
| 15 | The lowest ionization energy is possessed by : (A) P (B) N (C) Sb (D) As |
| 16 | The solution of which acid is used for seasoning of food : (A) Formic acid (B) Acetic acid (C) Benzoic acid (D) Butanoic acid |
| 17 | Ammonium nitrate fertilizer is not used for which crop : (A) Cotton (B) Wheat (C) Sugar cane (D) Paddy rice |

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CHEMISTRY

218-(INTER PART – II)

Time Allowed : 2.40 hours

PAPER – II (Essay Type)

GROUP – II

Maximum Marks : 68

SECTION – I

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

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- (i) Why is the oxidation state of noble gases usually zero?
- (ii) Why does the ionization energy decrease down the group and increase along the period?
- (iii) Why is the aqueous solution of Na_2CO_3 alkaline in nature?
- (iv) Write two reactions of preparation of borax.
- (v) What is chemical garden?
- (vi) Define semiconductors. Write its two properties.
- (vii) Write two reactions of preparation of nitrous acid.
- (viii) What is the action of heat on orthophosphoric acid? Write chemical equation also.
- (ix) Write four physical properties of sulphuric acid.
- (x) Name the four components of environment.
- (xi) What is meant by dissolved oxygen (DO) to check the quality of water?
- (xii) Write the destructive distillation of coal.

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

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- (i) $KMnO_4$ acts as oxidizing agent, show with two examples.
- (ii) What are chelates? Give one example.
- (iii) What is the statement of Markownikov's rule? Also give example.
- (iv) What happens when vic-dihalide is treated with Zn-dust?
- (v) What happens when benzene is burnt in free supply of air? Write equation.
- (vi) Describe the best method for preparation of alkyl halides.
- (vii) How phenol can be converted into benzene?
- (viii) How does phenol react with bromine water?
- (ix) What are aldehydes and ketones, give example?
- (x) How formaldehyde is prepared on large scale?
- (xi) How carboxylic acid can be obtained from alkene?
- (xii) Why does mostly carboxylic acid exist as dimers?

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

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- (i) Why is cement named as Portland cement?
- (ii) Write about digestion process for preparation of pulp.
- (iii) Define DAP. Write reaction for its preparation.
- (iv) What is difference between fat and oil?
- (v) Write note on condensation polymer.
- (vi) Define iodine number and acid number.

(Turn Over)

(2)

(vii) How NaOH reacts with Cl_2 in hot and cold state?

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(viii) What is iodized salt? Write its function.

(ix) Give reason oxidation power of halogens increases $F_2 > Cl_2 > Br_2 > I_2$

SECTION – II

Note : Attempt any THREE questions.

- (a) Define ionization energy. Give its units. Discuss the effects of three factors on the ionization energy values of elements. 4
- (b) Explain the peculiar behaviour of beryllium. 4
- (a) Describe the manufacture of wrought iron from cast iron. 4
- (b) Describe the natural and human sources of nitrogen oxides and sulphur oxides. 4
- (a) Differentiate between homocyclic and heterocyclic compounds with two examples each. 4
- (b) Write down two reactions in which benzene behaves as saturated hydrocarbon and two reactions in which benzene behaves as unsaturated hydrocarbon. 4
- (a) What are rules for naming alkynes? Explain with suitable examples. 4
- (b) Write down Dow's method for preparing phenol. What is action of following on phenol : 4
- (i) Bromine water. (ii) HNO_3 at different temperatures.
- (a) How will you bring about the following conversions from an alkyl halide : 4
- (i) Diethyl ether (ii) Ethyl thioalcohol (iii) Ethyl acetate (iv) Nitroethane
- (b) What type of aldehydes give Cannizzaro's reaction? Give its reaction mechanism. 4

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