

Roll No. LHR-G2-12-19 (To be filled in by the candidate)
 Academic Sessions 2015 – 2017 to 2017 – 2019)

CHEMISTRY

219-(INTER PART – II)

Time Allowed : 20 Minutes

Q.PAPER – II (Objective Type)

GROUP – II

Maximum Marks : 17

PAPER CODE = 8488

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 of these polymers is a synthetic polymer : (A) Animal fat (B) Starch (C) Cellulose (D) Polyester
2	When 1-chloropropane is reacted with alcoholic KOH, the product obtained is : (A) Propane (B) Propene (C) Propyne (D) Butane
3	The strongest acid in halogen acids in solution is : (A) HF (B) HCl (C) HBr (D) HI
4	Which is more soluble compound in H_2O : (A) 1-Propanol (B) Methanol (C) Phenol (D) n-Hexanol
5	Molecular formula of benzyl chloride is : (A) $H_5C_6CCl_3$ (B) $H_5C_6HCl_2$ (C) $H_5C_6CH_2Cl$ (D) $H_5C_6CH_2.CH_2Cl$
6	Which one of the following elements is not alkali metal : (A) Na (B) Sr (C) Cs (D) Fr
7	Peroxyacetylnitrate is an irritant to human beings and its effects : (A) Eyes (B) Ears (C) Stomach (D) Nose
8	Oxidation state of Cu in $K_2[Cu(CN)_4]$ is : (A) +4 (B) +3 (C) +2 (D) +6
9	The reagent used to reduce carboxylic group into an alcohol is : (A) H_2/Pt (B) H_2/Ni (C) $NaBH_4$ (D) $LiAlH_4$
10	Which one of the following oxides is more basic : (A) BeO (B) SrO (C) CaO (D) MgO
11	Which one of the following is not a nucleophile : (A) BCl_3 (B) NH_3 (C) H_2S (D) H_2O
12	The chief ore of aluminium is : (A) Al_2O_3 (B) $Al_2O_3.H_2O$ (C) $Al_2O_3.2H_2O$ (D) Na_3AlF_6
13	Which one of the following elements is not present in all proteins : (A) Carbon (B) Hydrogen (C) Nitrogen (D) Sulphur
14	The compound which reacts with Tollen's reagent : (A) HCHO (B) $H_3C.CO.CH_3$ (C) $H_3C.COOH$ (D) $H_3C.COC_2H_5$
15	Woody raw material used for manufacturing of paper pulp is : (A) Poplar (B) Rice straw (C) Bagasse (D) Cotton
16	The state of hybridization of carbon in ethylene is : (A) sp^3 (B) sp^2 (C) sp (D) dsp^2
17	Which one of the following species has two unpaired electrons : (A) O_2 (B) O_2^{1+} (C) O_2^{1-} (D) O_2^{2-}

228-219-II-(Objective Type)- 5750 (8488)

SECTION – I

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

16

- (i) What is hydration energy? Give an example.
- (ii) Why diamond is a non-conductor but graphite is a fairly good conductor?
- (iii) How are lime and sand used to make glass?
- (iv) How does orthoboric acid react with : (a) Sodium hydroxide (b) Ethyl alcohol
- (v) Why is CO_2 a gas at room temperature while SiO_2 is a solid?
- (vi) Why are borate glazes preferred over silicate glazes?
- (vii) H_2SO_4 is a powerful dehydrating agent. Prove it giving two examples.
- (viii) Why does aqua regia dissolve gold and platinum?
- (ix) Write two similarities of oxygen and sulphur.
- (x) What do you mean by prilling of urea?
- (xi) State the reactions that take place during first 24 hours by the setting of cement.
- (xii) How are detergents threat to aquatic animal life?

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

16

- (i) How coal is produced from remain of trees?
- (ii) Write structural formulas of : (a) 1,3-Butadiene (b) Vinyl bromide
- (iii) State Markownikov's rule and give an example.
- (iv) Write down the structural formulas of : (a) Biphenyl (ii) Diphenylmethane
- (v) How the cyclic structure of benzene got verified?
- (vi) Write down any two methods of preparation of alkyl halides.
- (vii) What is Grignard's reagent? How is it prepared?
- (viii) Absolute alcohol cannot be prepared by fermentation process. Give justification.
- (ix) How can you distinguish between methanol and ethanol?
- (x) What are essential and non-essential amino acids?
- (xi) How will you carry out following conversion :
Acetic acid into acetone.
- (xii) Write down the name and the structural formulas of two acidic amino acids.

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

12

- (i) Which halogen sublimes as violet vapours?
- (ii) Write reaction of Cl_2 with cold and hot NaOH.
- (iii) Halogens act as oxidizing agents, justify.
- (iv) Give systematic name of $Na_3[CoF_6]$.
- (v) Write Fehling's solution test.

(Turn Over)

(2) **CHR-G 2 1219**

4. (vi) How will you distinguish between ethanal and propanal?
(vii) What are polysaccharides?
(viii) Glycogen is called animal starch, give reason.
(ix) What is meant by denaturation of protein?

SECTION – II

Note : Attempt any **THREE** questions.

5. (a) Write similarities and differences of halogens with hydrogen. 4
(b) Complete and balance the following equations : 4
(i) $Mg(NO_3)_2 \xrightarrow{\text{Heat}}$ (ii) $Ca(OH)_2 + SiO_2 \rightarrow$
(iii) $Be + O_2 \rightarrow$ (iv) $Be + NaOH \rightarrow$
6. (a) How will you prepare steel by Bessemer's process? 4
(b) What is acid rain, how does it affect our environment? 4
7. (a) What is meant by orbital hybridization? Explain sp hybridization with an example. 4
(b) Draw structural formulae for the following compounds : 4
(i) m-Chlorobenzoic acid (ii) 2, 4, 6-Trinitrotoluene
(iii) p-Dibenzylbenzene (iv) p-Nitroaniline
8. (a) How would you prepare alkanes from carboxyl compounds? 4
(b) Discuss the acidic behaviour of phenol. 4
9. (a) Write a note on oxidation of aldehydes and ketones. 4
(b) Define β -Elimination reactions. Discuss in detail E1 reaction with mechanism. 4

228-219-II-(Essay Type)-23000