

CHEMISTRY

218-(INTER PART – II)

Time Allowed : 20 Minutes

Q.PAPER – II (Objective Type)

GROUP – I

Maximum Marks : 17

PAPER CODE = 8483www.pakcity.org

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	The anhydride of $HClO_4$ is : (A) ClO_3 (B) ClO_2 (C) Cl_2O_5 (D) Cl_2O_7
2	During nitration of benzene, the active nitrating agent is : (A) NO_3 (B) NO_2^+ (C) NO_2^- (D) HNO_3
3	Which one of these polymers is a synthetic polymer : (A) Animal fat (B) Starch (C) Cellulose (D) Polyester
4	The main pollutant of leather tanneries in the waste water is due to the salts of : (A) Lead (B) Chromium (VI) (C) Copper (D) Chromium (III)
5	Keeping in view the size of atoms, which order is the correct one : (A) $Mg > Sr$ (B) $Ba > Mg$ (C) $Lu > Ce$ (D) $Cl > I$
6	Formalin is : (A) 10% solution of formaldehyde in water (B) 20% solution of formaldehyde in water (C) 40% solution of formaldehyde in water (D) 60% solution of formaldehyde in water
7	Tincal is a mineral of : (A) Al (B) B (C) Si (D) C
8	Which enzyme is not involved in fermentation of starch : (A) Diastase (B) Zymase (C) Urease (D) Maltase
9	Peroxyacetylnitrate (PAN) is an irritant to human beings and it affects : (A) Eyes (B) Ears (C) Stomach (D) Nose
10	Which set of hybrid orbitals has planer triangular shape : (A) dsp^2 (B) sp^3 (C) sp^2 (D) sp
11	Which one of the following is not an alkali metal : (A) Fr (B) Cs (C) Rb (D) Ra
12	Preparation of vegetable ghee involves : (A) Halogenation (B) Hydrogenation (C) Hydroxylation (D) Dehydrogenation
13	Co-ordination number of pt in $[PtCl(NO_2)(NH_3)_4]$ is : (A) 2 (B) 4 (C) 1 (D) 6
14	For which mechanism, the first step involved is the same : (A) E_1 and E_2 (B) E_2 and S_N2 (C) S_N1 and E_2 (D) E_1 and S_N1
15	Which catalyst is used in contact process for preparing H_2SO_4 : (A) Fe_2O_3 (B) V_2O_5 (C) SO_3 (D) Ag_2O
16	Which of the following is not a fatty acid : (A) Propanoic acid (B) Acetic acid (C) Phthalic acid (D) Butanoic acid
17	Micro-nutrients are required in quantity ranging from : (A) 4 – 40 g (B) 6 – 200 g (C) 6 – 200 kg (D) 4 – 40 kg

Roll No _____ (To be filled in by the candidate)

(Academic Sessions 2015 – 2017 & 2016 – 2018)

CHEMISTRY

218-(INTER PART – II)

Time Allowed : 2.40 hours

PAPER – II (Essay Type)

GROUP – I

Maximum Marks : 68

www.pakcity.org**SECTION – I****2. Write short answers to any EIGHT (8) questions :****16**

- (i) Why diamond is a non-conductor and graphite is fairly a good conductor?
- (ii) The hydration energy of the ions are in the order, justify it : $Al^{+3} > Mg^{+2} > Na^{+1}$
- (iii) Why lime water turns milky with CO_2 but becomes ^{clear} with excess of CO_2 .
- (iv) Give any four uses of "Al".
- (v) What happens when ortho boric acid reacts with : (i) NaOH (ii) Ethyl alcohol
- (vi) What is vitreous silica, give its two uses?
- (vii) NO_2 is a strong oxidizing agent, prove with the help of two reactions.
- (viii) Give two reactions of H_2SO_4 which show its oxidizing behaviour.
- (ix) Give four dissimilarities of oxygen and sulphur.
- (x) What is BOD?
- (xi) What is the role of chlorofluorocarbons in destroying ozone?
- (xii) Explain cis-trans isomerism, give one example.

3. Write short answers to any EIGHT (8) questions :**16**

- (i) Define ligand with an example.
- (ii) What is the percentage (%) of carbon in different types of steel?
- (iii) Why alkanes are less reactive organic compounds?
- (iv) Convert : (a) Acetylene \rightarrow Benzene (b) Vinyl acetylene \rightarrow Chloroprene
- (v) What is meant by nitration of benzene? Write its reaction.
- (vi) What do you mean by leaving group? Give an example.
- (vii) What is denaturing of alcohol?
- (viii) How Lucas test is used to distinguish between primary, secondary and tertiary alcohol?
- (ix) Write any four uses of acetaldehyde.
- (x) How iodoform test can be used to distinguish methyl ketones from other ketones?
- (xi) What is the difference between essential and non-essential amino acids?
- (xii) How acetic acid reacts with : (a) PCl_3 (b) $SOCl_2$

4. Write short answers to any SIX (6) questions :www.pakcity.org**12**

- (i) What is denaturation of proteins?
- (ii) What are thermosetting polymers?
- (iii) What is acid number?
- (iv) What is clinker formation?
- (v) Name two woody and two non-woody raw materials.
- (vi) Give significance of potash fertilizer.

(Turn Over)

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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 : www.pakcity.org
	(A) Br_2 (B) Cl_2 (C) F_2 (D) I_2
2	Which one of the following species is an electron releasing : <div style="text-align: center;">O \parallel</div>
	(A) $-CHO$ (B) $-C-R$ (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)

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PAPER – II (Essay Type)

GROUP – II

Maximum Marks : 68

www.pakcity.org**SECTION – I****2. Write short answers to any EIGHT (8) questions :****16**

- (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 :**16**

- (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 :**12**

- (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)

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

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5. (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
6. (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
7. (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
8. (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.
9. (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