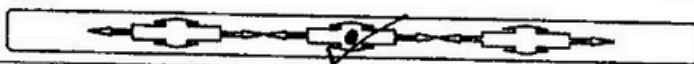


Time :	20 Minutes	Inter (Part II)	(New Pattern)
Marks :	17	Session (2015 -17) to (2017 - 19)	Group 2nd

Note : Four possible choices A , B , C , D to each question are given. Which choice is correct fill that circle in front of that Question No. Use Marker or Pen to fill the circles. Cutting or filling two or more circles will result in Zero Mark in that Question.

Q.No.1	Which one is not a Periodic Property :
(1)	(A) Ionization Energy (B) Density (C) Atomic Radii (D) Hydration Energy
(2)	Which element is deposited at the Cathode during the Electrolysis of Brine in Nelson's Cell : (A) H ₂ (B) Na (C) Cl ₂ (D) O ₂
(3)	Metal used in Thermite Process is : (A) Iron (B) Copper (C) Aluminium (D) Zinc
(4)	Maximum No. of unpaired electrons are in : (A) O ₂ (B) O ₂ ⁺ (C) O ₂ ²⁺ (D) O ₂ ²⁻
(5)	Cl ₂ O ₇ reacts with water to form : (A) Hypochlorous Acid (B) Chloric Acid (C) Perchloric Acid (D) Chlorine and Oxygen
(6)	Which one is non - typical transition element : (A) Cr (B) Mn (C) Zn (D) Fe
(7)	Tetra Ethyl Lead (T.E.L.) is used as : (A) Pain Killer (B) Petroleum Additive (C) Fire Extinguisher (D) Moth Repellent
(8)	Synthetic Rubber is made by Polymerization of : (A) Chloroform (B) Acetylene (C) Divinyl Acetylene (D) Chloroprene
(9)	Conversion of n - hexane to benzene by heating in the presence of Pt is called as : (A) Isomerization (B) Aromatization (C) Dealkylation (D) Rearrangement
(10)	For which set of Mechanism Step One (1st) is same (A) E1 and E2 (B) S _N 1 and E1 (C) S _N 2 and E2 (D) S _N 1 and S _N 2
(11)	According to Lewis concept Ethers behave as : (A) Acid (B) Base (C) Both Acid and Base (D) Amphoteric
(12)	Acetone + HCN give Cyanohydrin. It is the example of : (A) Electrophilic Addition (B) Electrophilic Substitution (C) Nucleophilic Addition (D) Nucleophilic Substitution
(13)	Origin of Formic Acid is : (A) Milk (B) Butter (C) Red Ants (D) Oil
(14)	Addition Polymer is : (A) Nylon 6, 6 (B) Polystyrene (C) Terylene (D) Epoxy Resin
(15)	Quantity Range of Micronutrients is : (A) 4 - 40 g (B) 6 - 200 g (C) 6 - 200 Kg (D) 4 - 40 Kg
(16)	Peroxyacetyl - Nitrate (PAN) is an Irritant of : (A) Eye (B) Nose (C) Stomach (D) Ears
(17)	Which one is not present in RNA : (A) Cytosine (B) Adenine (C) Thiamine (D) Uracil

B



Make Diagram where necessary.

Part - I

22 x 2 = 44

- Q.No.2 (i) Ionic character of Halides decreases from left to right in a period. Explain.
 (ii) Why the second value of electron affinity of an element is usually shown with a positive sign?
 (iii) Write the chemistry of **Borax Bead Test**.
 (iv) Give balanced equations to represent the following reactions :
 (a) **Borax** is heated with **CaO** (b) **Al₂O₃** is heated with **NaOH** solution.
 (v) Why are Liquid Silicones preferred over Ordinary Organic Lubricants?
 (vi) Give uses of Boric Acid.
 (vii) Complete and Balance the following equations :
 (a) **KNO₃ + H₂SO₄ →** (b) **NO₂ + H₂SO₄ →**
 (viii) Give the advantages of Contact Process for the manufacture of Sulphuric Acid.
 (ix) Give two methods of preparation of **PCl₅**.
 (x) What are the prospects of Fertilizer Industry in Pakistan?
 (xi) What are essential nutrients and why are these needed for plant growth?
 (xii) What are **Leachates**?
- Q.No.3 (i) What is **Catenation**? Why it is important process?
 (ii) Write down structural formulas of following compounds :
 (a) **3-Ethylpentane** (b) **4-Ethyl-3,4-dimethylheptane**
 (iii) How non-polarity of **Alkanes** is related to their unreactivity?
 (iv) Write down structural formulas of the followings :
 (a) **3-Chloriodobenzene** (b) **2-Bromonitrobenzene**
 (v) What is **Wurtz-Fittig Reaction**? Write its equation also.
 (vi) Write down the reaction of Grignard's Reagent with Water. Write mechanism of reaction also.
 (vii) Define Leaving Group in Nucleophilic Substitution Reactions. Give one example.
 (viii) How **Phenol** is prepared by Dow's Method?
 (ix) Write down the structural formulas of the : (a) **Sodium Ethoxide** (b) **Sodium Phenoxide**
 (x) Write down basic characters of **Amino Acids**.
 (xi) What happens when Carboxylic Acid reacts with metals? Give one example.
 (xii) What is Vinegar? How Acetic Acid is prepared in Laboratory by Hydrolysis of Methyl-Nitrile?
- Q.No.4 (i) What is Available Chlorine? How is Available Chlorine produced?
 (ii) Perchloric Acid is stronger than Chloric Acid. Justify.
 (iii) How does Fluorine differ from other Halogens?
 (iv) Define Co-ordination Number with an example.
 (v) Give an Industrial Method for the preparation of Ethanal.
 (vi) How is Calcium Acetate converted into Acetone?
 (vii) What is the difference between Fats and Oils?
 (viii) What is Acid Number? How is it determined?
 (ix) Give two importance of Proteins.

Part - II

- Q.No.5 (a) What are the improvements made in the Mendeleev's Periodic Table? (4)
 (b) Discuss the differences of **Li** with other members of **Alkali Metals** (any eight points) (4)
- Q.No.6 (a) **KMnO₄** acts as an Oxidizing Agent. Give four reactions in support of your answer. (4)
 (b) How are Oil Spillage and Detergents affecting the Marine Life? (4)
- Q.No.7 (a) Explain the reforming of Petroleum with suitable example. (4)
 (b) Describe the structure of Benzene on the basis of Atomic Orbital Treatment. (4)
- Q.No.8 (a) How does Ethyne reacts with : (4)
 (a) **Hydrogen** (b) **Halogen Acid** (c) **Alkaline KMnO₄** (d) **10 % H₂SO₄** in the presence of **HgSO₄**.
 (b) Write method for the preparation of **Methanol** along with its flow sheet diagram. (4)
- Q.No.9 (a) What are Nucleophilic Substitution Reactions? Explain **S_N1** reactions in detail. (4)
 (b) What do you mean by **Aldol Condensation Reactions**? Explain it with mechanism. (4)

