

Sig. of Supdt. 

KT-XII-1701

P-281

Chemistry (Part - II)

Fresh/Reappear

Roll No.

Fic. No.

Code = A

Time allowed: 3 Hrs

Chemistry (Part - II)

Marks: 85

Fresh / Reappear

Note: There are three sections of the paper, A, B & C. Attempt Section - A on the same paper and return it to the Superintendent within the given time. No marks will be awarded for cutting, erasing or over writing Mobile phone etc. are not allowed in the examination hall.

Time: 20 Mins

Section "A"

Marks: 18

Q.1 Write the correct option i.e. A, B, C or D in the empty box provided opposite each part.

- i. When Cl_2 is limited (CH_2 is taken in excess), the major product is A
A. CH_3Cl B. CH_2Cl_2 C. CHCl_3 D. CCl_4
- ii. Phenol can be prepared from chlorobenzene by C
A. Cumene process B. Kolbe's process C. Dow process D. Williamson synthesis
- iii. The temperature in troposphere with increasing altitude. B
A. Increases B. Decreases C. Constant D. Variable
- iv. Acetic acid on reaction with LiAlH_4 are reduced to A
A. Ethanal B. Methanal C. Ethane D. Methane
- v. General formula of Carboxylic acid is B
A. $\text{C}_n\text{H}_n\text{O}$ B. $\text{C}_n\text{H}_{2n}\text{O}_2$ C. $\text{C}_n\text{H}_n\text{O}_2$ D. $\text{C}_n\text{H}_{2n}\text{O}$
- vi. The clemmensen reduction of acetaldehyde gives A
A. Ethane B. Ethene C. Propane D. Ethanol
- vii. $\text{CH}_3\text{-CH}_2\text{-Br}$ react with alcoholic KOH gives C
A. Ethanol B. Ethyne C. Ethene D. Ethane
- viii. Variable oxidation state cannot be shown (d-subshell is complete). A
A. Zn B. Cu C. Mn D. Ni
- ix. The main reactant of photochemical smog are C
A. SO_2 & NO B. SO_3 & NO_2 C. NO & HCs D. SO_3 & NO
- x. Most common type of nail polish remover is B
A. Ethyl acetate B. Acetone C. Methanol D. Water
- xi. Which one of the following is meta directing group? C
A. OR B. CH_3 C. CHO D. NH_2
- xii. Alkali metal carbonate decompose on heating A
A. Li_2CO_3 B. Na_2CO_3 C. K_2CO_3 D. All of them
- xiii. Which one of the following is as hard as iron. B
A. Na B. Be C. Mg D. K
- xiv. The oxide of chromium which is amphoteric in nature has oxidation state of B
A. +2 B. +3 C. +4 D. +6
- xv. Color of light absorbed have wave length (nm) ranges from 500-560. B
A. Blue B. Green C. Yellow D. Indigo
- xvi. Which one of the following is unsaponifiable lipids? D
A. Fats B. Oils C. Waxes D. Steroids
- xvii. In Williamson synthesis, alkyl halide is treated with A
A. Sodium alkoxide B. Sodium acetate C. Sodium oxide D. Sodium chloride
- xviii. C-O bond length in methanol is than C-O bond length in phenol. B
A. Less B. Greater C. Equal D. Variable

Section "B"

Marks: 40

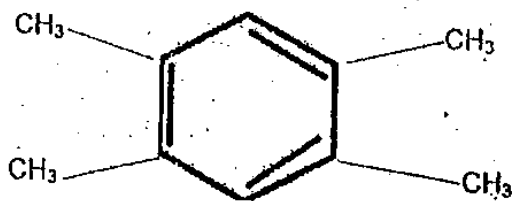
- Q.2. Attempt any TEN parts. Each parts carries equal marks.
- Explain the stability of carbocations.
 - Discuss Hydroxide of period 3 elements.
 - What are hydrocarbons? How they are classified?
 - Discuss hydration of alkyne.
 - Write the common ores of copper.
 - What is meant by stretching and bending vibrations?
 - Write note on synthetic polymer.
 - Write note on the properties of proteins.
 - How does ethanal react with: (a) Zn-Hg amalgam & HCl (b) Ethyl magnesium iodide
 - What are application of green chemistry?
 - Discuss the magnetic behavior of transition elements.
 - Write note on the general methods of preparation of ethers.
 - Write structural formulae for each of the following
 - Oxalic acid
 - Ethyl ethanoate
 - Triethylamine
 - Propyl Nitrile

Section "C"

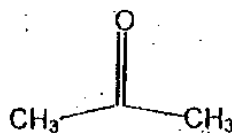
Marks: 27

Note: Answer any THREE questions. Each question carries equal marks.

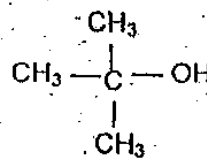
- Q.3.a. Explain ozonolysis of alkene and alkyne.
- b. Discuss structure and acidity of carboxylic acid.
- Q.4.a. Describe the structure of phenol in detail.
- b. Discuss the reaction of Grignard reagent with the following.
- Aldehydes
 - Esters
 - CO₂
 - Ketones
- Q.5.a. Describe acidity of alcohols
- b. Name the following compounds according to IUPAC system



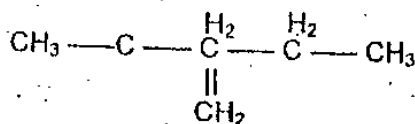
(i)



(ii)



(iii)



(iv)



(v)

- Q.6. Write short note on any two of the following.
- Chlorination of alkane
 - Bond enthalpies in halogens and hydrogen halides
 - Importance of Iron