

B.N. Bandothkar College of Science, Thane
Second Semester End Examination – ~~March 2018~~ Additional/ATKT/JUN-15
USCH202

Marks 75

Time 2 ½ hrs.

N. B. :

1. All the questions are compulsory.
2. Figures to the right indicates full marks.
3. Use of log table/ non programmable calculator is allowed.

- Q.1 a What is Electronegativity? Describe factors affecting on it. 4
- OR
- a Second period element shows anomalous behavior. Explain. 4
- b Discuss metallic character in detail. 4
- OR
- b Write a short note on Anomalous behaviour of Lithium. 4
- c What is Allotropy? Discuss Carbon Allotropes. 4
- OR
- c Discuss Allotropes of Phosphorous in detail. 4
- d Lithium and Magnesium shows diagonal relationship. Explain, 4
- OR
- d Enlist Allotropes of Sulphur and draw structure of S_8 molecule. 4
- e What is Carbides? Give its classification. 4
- OR
- e Classify the Oxide with suitable example. 4
- Q.2 a Draw Fischer projection formula of Erythro-3-bromobutan-2-ol and convert it into Sawhorse form. 4
- OR
- a Explain solvent-solute concept. 4
- b Explain Lewis concept of acid and base. 4
- OR
- b Explain Lowry –Bronsted concept. 4
- c Write short note on Arrhenius Theory. 4
- OR
- c Distinguish between Enantiomers and Diastereomers. 4
- d Explain stereochemistry of carbon compound with two dissimilar asymmetric carbon atoms. 4
- OR
- d Explain Newmann Projection formula with example. 4
- e Write short note on structural isomerism. 4
- OR
- e Explain Geometric isomerism in Olefins and Ethylene dicarboxylic acid.. 4
- Q.3 a Write a short note on Wurtz reaction.. 4
- OR
- a Explain substitution and elimination reactions with suitable examples. 4
- b Explain chlorination of methane in presence of UV light at high temperature. 4
- OR
- b Write a short note on SN^2 reaction. 4
- c Write a short note on Markovnikov's addition reaction. 4

OR

- c Explain E₂ mechanism with suitable examples. 4
d Give product for ozonolysis of ethene & 2-methyl-2-butene. 4

OR

- d Write a short note on Diels-Alder reaction 4
e What is Grignard reagent? How is it prepared? How can we prepare methane by using Grignard reagent? 4

OR

- e What is peroxide effect? Explain it with example. 4

- Q. 4 a Give the details for lubricating property of Graphite 3

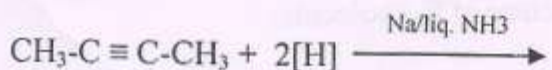
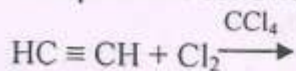
OR

- a What is Catenation? Give one example. 3
b Write short note on Erythro and Threo Isomer. 3

OR

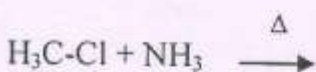
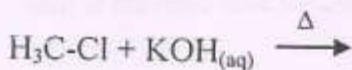
- b Explain the following terms 3
i) Chirality ii) Stereogenic Centre iii) Asymmetric carbon atom.

- c Complete the following reactions 3



OR

- c Complete the following reactions 3



- d Give two examples of Acidic Oxide. 2

OR

- d Give any two examples of Ionic Carbide 2

- e Write short note on Racemic Mixture. 2

OR

- e Write short note on Meso compound. 2

- f $\text{H}_3\text{C-COOH} + 2\text{Na} \longrightarrow$ 2

OR

- f Benzene + $\text{CH}_3\text{Cl} \xrightarrow{\text{Anhy. AlCl}_3}$ 2

*****End*****