

S.Y.B.SC. SEM – III (2014 Course) : WINTER - 2018
SUBJECT: CHEMISTRY: ORGANIC & INORGANIC CHEMISTRY (C – 32)

Day: Friday
Date: 19/10/2018

Time: 12.00 NOON TO 02.00 PM
Max. Marks: 40

W-2018-0804

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SAME** answer book.
- 4) Draw neat labeled diagrams **WHEREVER** necessary.

SECTION-I

Q.1 Attempt any **TWO** of the following: **(10)**

- a) What is Saytzeff and Hofmann elimination? Illustrate with suitable example.
- b) Describe the Williamson synthesis for preparation of ether? Write the effect of following reagents in diethyl ether.
i) Hot HI ii) Cold HI
- c) Distinguish between electrophiles and nucleophiles.

Q.2 Attempt any **ONE** of the following: **(05)**

- a) What is the action of following on pyridine?
i) $\text{KNO}_3 / \text{H}_2\text{SO}_4$ ii) H_2SO_4
- b) Explain chair form is more stable than boat form by drawing Newman projection.

Q.3 Attempt any **TWO** of the following: **(05)**

- a) What is Markovnikov's rule? Give one example.
- b) What are the factors affecting the stability of conformation.
- c) Discuss the effect of acidic and basic reagents on epoxide.

SECTION-II

Q.4 Attempt any **TWO** of the following: **(10)**

- a) Explain the trends in melting and boiling points of d-block elements.
- b) Discuss the process of calcination in metallurgy with suitable diagram.
- c) Explain biological role of calcium and magnesium in different biological processes.

Q.5 Attempt any **ONE** of the following: **(05)**

- a) Discuss Hoopes' process for refining of Aluminium.
- b) Write the members of first series of d-block elements along with their outer electron configuration and also mention general characteristics of d-block elements.

Q.6 Attempt any **TWO** of the following: **(05)**

- a) Explain the trends in 'Densities' of d-block elements.
- b) Discuss Serpek's process for purification of Al from bauxite ore.
- c) Write a short note on Magnetic separation method in metallurgy.

* * * *