

S.Y.B.SC. SEM – IV (2014 Course) : WINTER - 2018

SUBJECT : CHEMISTRY : ORGANIC & INORGANIC CHEMISTRY – IV (C – 42)

Day : Friday
Date : 19/10/2018

W-2018-0818

Time : 03.00 PM TO 05.00 PM
Max. Marks : 40

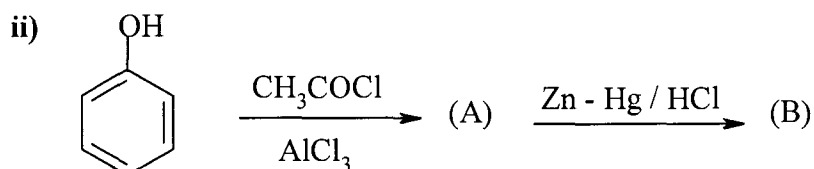
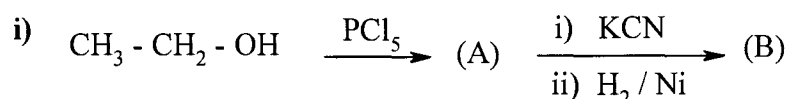
N.B.:

- 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.

SECTION – I

- Q.1 Attempt **ANY TWO** of the following: [10]
- a) Explain with suitable example Killiani – Fischer synthesis of carbohydrates.
 - b) Give specific use of following reagents with examples:
i) Cl_2 / UV ii) $\text{NaNO}_2 / \text{HCl}$ iii) $\text{Na} / \text{C}_2\text{H}_5\text{OH}$
 - c) How will you prepare aniline from: i) Benzene ii) Bromobenzene

- Q.2 Attempt **ANY ONE** of the following: [05]
- a) Discuss the importance of sonication method in green reactions with example.
 - b) Predict the products:



- Q.3 A) Attempt **ANY TWO** of the following: [05]
- a) Describe the mechanism for nitration of chlorobenzene.
 - b) Write a note on green solvents.
 - c) Discuss mutarotation in glucose with example.

SECTION – II

- Q.3 B) Attempt **ANY TWO** of the following: [10]
- a) Explain the Bronsted – Lowry acids-bases theory with suitable examples. Give its merits and demerits.
 - b) What is hydrogen bonding? Explain its effect on density of the compound.
 - c) Write the differences between Organic and Inorganic Polymers.

- Q.4 Attempt **ANY ONE** of the following: [05]
- a) Explain in detail about sulphur containing polymers.
 - b) Discuss Lux-Flood concept of acids and bases with suitable examples.

- Q.5 Attempt **ANY TWO** of the following: [05]
- a) What are antacids? Explain any one antacid with example.
 - b) Define the following terms:
i) Monomer iii) Co-polymer v) Degree of polymerisation
ii) Polymer iv) Polymer back bone
 - c) Discuss the physiological role of nitrogen and phosphorus.

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