First Periodical Test, July-December, 2021

Class	M.SC. I SEMESTER	
Subject	CHEMISTRY	
3	CHEM 406 – Organic Chemi	
Max Marks : 10		No. of Students: 40

Note: Students are required to attempt Three questions. Question No. 1 is compulsory.

Q.1. Give the product and Mechanism of the following reaction:

[4]

(b)
$$? \xrightarrow{\text{MeO}} \bigcirc O \xrightarrow{\text{MeOH}} ?$$

(c) ?
$$\stackrel{\bigcirc}{\underset{CH_3}{}}$$
 $\stackrel{\bigcirc}{\underset{H/H_2O}{}}$?

Q.2. Give the mechanism of following reactions and guide the product formation with different nucleophiles. [3]

[3]

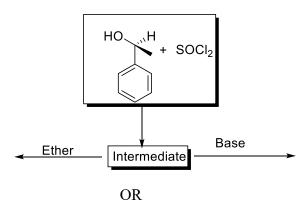
[3]

Q.3. Give the mechanism of following reactions.

(A)
$$H_3C$$
 CH_3
 H^+
 HN_3
 H_2SO_4

(C) CH_3COOOH

Q.4. Give the mechanism of following reactions.



Q.5. (a) Give the product formation in the following reactions with nucleophile. [2]

$$R^-X$$
 \longrightarrow $R^+X^ \longrightarrow$ R^+ $X^ \longrightarrow$ R^+ + X^-

(b) Give the energy profile diagram for SN1 and SN2 reaction with taking suitable examples. [1]