Registration No.: | | | | | | | | | | |

Total Number of Pages: 02

Course: M.Sc.I
Sub_Code: FCYF906

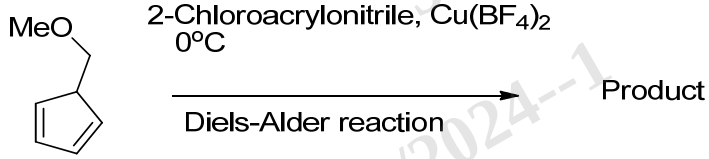
9th Semester Regular Examination: 2024-25
SUBJECT: Chemistry of Natural Products
BRANCH(S): M.Sc.I(AC)
Time: 3 Hours
Max Marks: 70
Q.Code: R155

Answer Question No.1 (Part-I) which is compulsory, any five from rest (Part-II)
The figures in the right-hand margin indicate marks.

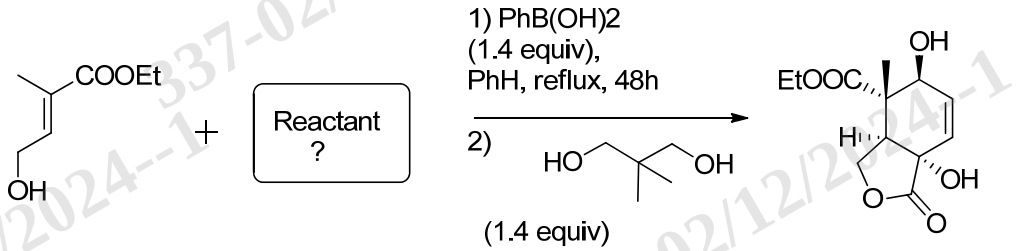
Part-I

Q1 **Answer the following questions:** **(2 x 10)**

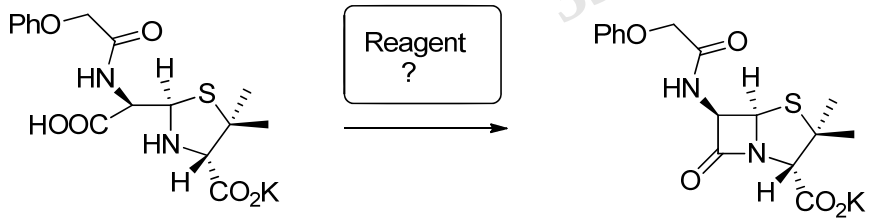
a) Mention two examples for Alkaloids.
b) Draw the structures and mention the possible chiral centers in strychinine, tylophorine
c) What are alkaloidal reagents?
d) What are the biological applications of Isoflavones?
e) Mention two examples for benzylisoquinoline alkaloids.
f) Give the medicinal use of Morphine.
g) Predict the product in the following reaction.



h) Predict the reactant in the following reaction.



i) What reagent is required in the following reaction?



j) Draw the structure of Prostaglandin E2.

Part-II

Long Answer Type Questions (Answer Any five)

Q2	**a)**	Establish the structure of Strychinine.	**(5+5)**
	b)	Describe the Isolation of Xanthones and flavonoids.	
Q3	**a)**	How will you synthesize Quinine from m-hydroxybenzaldehyde?	**(5+5)**
	b)	Describe the biosynthetic aspects and synthesis of Anthraquinones.	
Q4	**a)**	Draw the structure of Erythronolide B. How many chiral centres are present in this structure? What is the configuration of each chiral centre?	**(5+5)**
	b)	Describe the Total synthesis of Penicillin V.	
Q5	**a)**	Draw the structures of Tylophorine and Abietic acid along with other possible stereomers.	**(5+5)**
	b)	Describe the Isolation methods of terpenes.	
Q6	**a)**	Describe the synthesis of 6-Hydroxy quinolone from Quininic acid.	**(5+5)**
	b)	How will you prove that in Quinine and Quinuclidine units are linked through –CHOH to position -8 of quinuclidine on one side and to position-4- of quinolone on the other side?	
Q7		Describe the Total Synthesis of Taxol	**(10)**
Q8	**a)**	Describe the synthesis of Colchicines.	**(5+5)**
	b)	Explain the retrosynthetic strategy for the Prostaglandin F2-alpha.	