

**M.Sc. Examination, 2018**  
**Semester-III**  
**Chemistry(Elective)**  
**Course: CH-916**  
**Optional ( Organic Chemistry)**

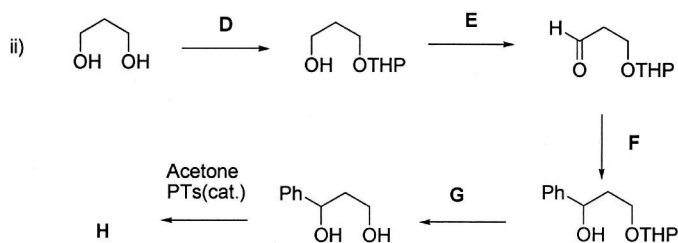
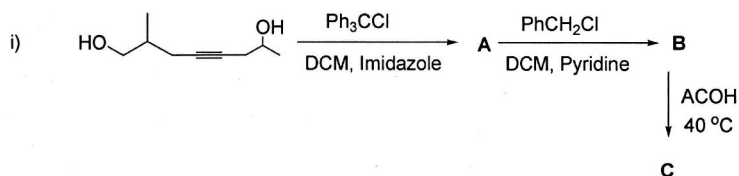
**Time: Three Hours**

**Full Marks: 40**

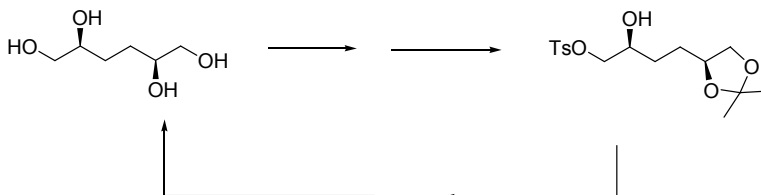
Questions are of value as indicated in the margin.

Answer **any four** questions, taking **any two** from **Question No.1 to 3**  
and another **two** from **Question No. 4 to 6**.

1. a) "Carbamate is better N-protecting group than acyl group in peptide synthesis" – Why? 2  
b) Identify **A** to **H** in the following reaction sequences: 0.5x8



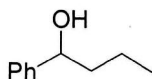
- c) Suggest the proper sequence of the following protection and deprotection with proper explanation. 1+1+1+1



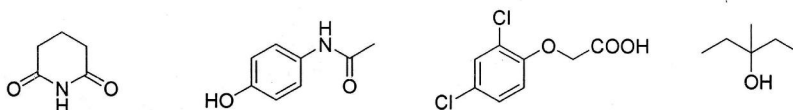
2. a) What do you understand by divergent synthesis? Explain with any suitable example. 1+1  
b) Explain the term logical and illogical disconnection in organic synthesis and synthesize the following molecule by logical as well as by illogical disconnection. 1+2+2



- c) Suggest at least three possible routes to synthesize the following molecules. 1+1+1



3. a) Disconnect the following molecules to give proper synthons and their corresponding reagents and outline their synthesis: 2x4



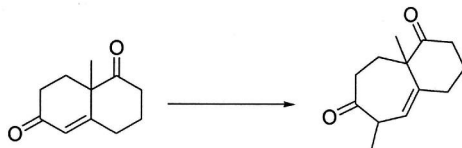
- b) Show the selectivity in the ring formation by Nazarov cyclisation. 2

**P.T.O.**

(2)

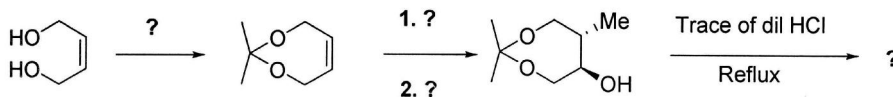
4. a) Outlines the steps for the following conversion:

6



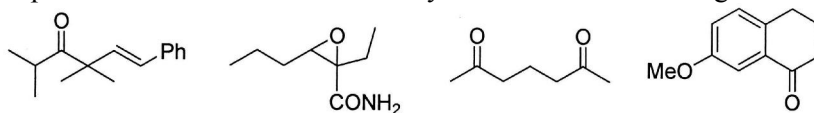
b) Complete the following reactions as necessary:

1+1+1+1



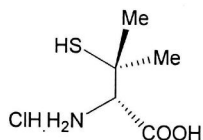
5. Suggest a proper disconnection and reasonable synthesis for the following molecules:

2.5x4



6. a) Outline the synthesis of the compound:

7



b) Write short notes on (*any one*):

3

- Multicomponent reaction in organic synthesis
- Metathesis

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