

# C. U. SHAH UNIVERSITY

## Winter Examination-2021

**Subject Name: Disconnection Approach**

**Subject Code: 5SC03DAC1**

**Branch: M.Sc. (Chemistry)**

**Semester: 3**

**Date: 13/12/2021**

**Time: 02:30 To 05:30**

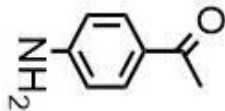
**Marks: 70**

**Instructions:**

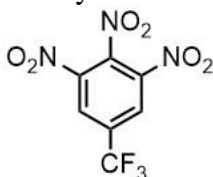
- (1) Use of Programmable calculator and any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

### SECTION – I

- Q-1 Attempt the Following questions (07)**
- a. What do you mean by a<sup>1</sup> synthon **01**
  - b. Write an example of d<sup>2</sup> synthon **01**
  - c. Write retrosynthetic analysis of the following molecule **01**



- d. Write one example of FGI **01**
  - e. What do you mean by stereoselectivity? **01**
  - f. Write retrosynthetic analysis of butylated hydroxy toluene **01**
  - g. Write the synthetic equivalent for the carbocation synthon **01**
- Q-2 Attempt all questions (14)**
- a. Write the criteria for the good discussion and write synthesis and retrosynthetic analysis of following molecules **07**

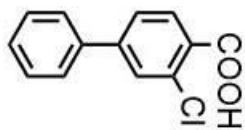


- b. Write the reagents for the following synthon and also write the name of the reaction **07**  
 $R^+$ ,  $RCO^+$ ,  $NO_2^+$ ,  $Cl^+$ ,  $Br^+$ ,  $SO_3H^+$

**OR**

- Q-2 Attempt all questions (14)**
- a. Discuss guideline 1,2,3 for the retrosynthetic analysis **07**
  - b. Write retrosynthetic analysis of synthesis of the following molecule **07**





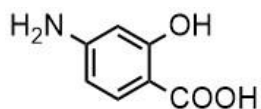
**Q-3**

**Attempt all questions**

**(14)**

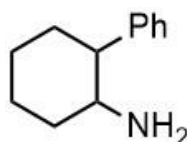
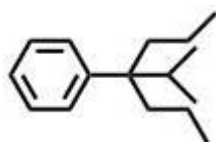
- a. Explain the disconnection analysis and synthesis of the following molecule

**07**



- b. Explain the disconnection analysis and synthesis of the following molecule

**07**



**OR**

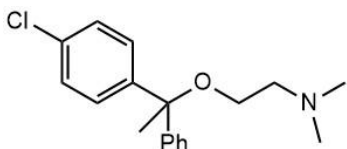
**Q-3**

**Attempt all questions**

**(14)**

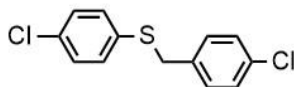
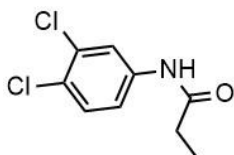
- a. Explain the disconnection analysis and synthesis of the following molecule

**07**



- b. Explain the disconnection analysis and synthesis of the following molecule

**07**



## SECTION – II

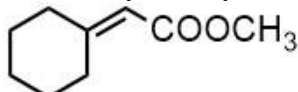
**Q-4**

**Attempt the Following questions**

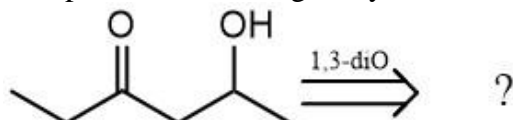
**(07)**

- a. Write only retrosynthetic analysis of the given molecule

**01**



- b. Write one example of 1,3-diCO **01**  
 c. Write the full form of THP protecting group **01**  
 d. How do you protect -CHO group? **01**  
 e. How do you protect -COOH group? **01**  
 f. Write the full form of MEM protecting group **01**  
 g. Complete the following analysis **01**



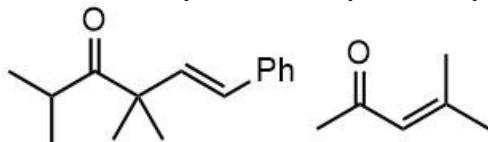
**Q-5**

**Attempt all questions**

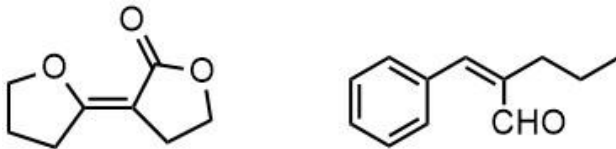
**(14)**



a. Discuss retrosynthetic analysis and synthesis of the given molecules **07**



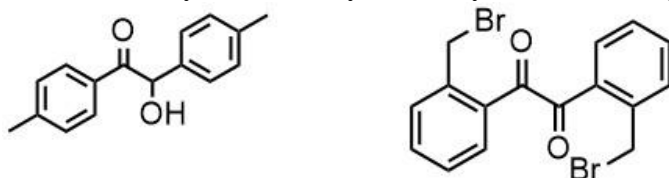
b. Explain retrosynthetic analysis and synthesis of the given molecules **07**



**OR**

**Q-5 Attempt all questions (14)**

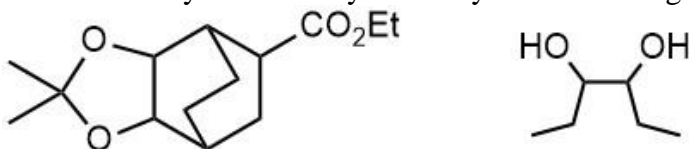
a. Discuss retrosynthetic analysis and synthesis of the given molecules **07**



b. Discuss the use of Mannich reaction with proper examples **07**

**Q-6 Attempt all questions (14)**

a. Discuss retrosynthetic analysis and synthesis of the given molecules **07**

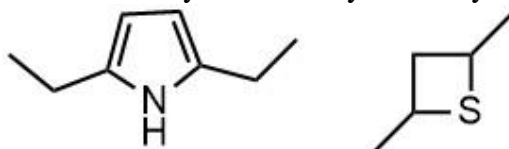


b. Explain the use of protecting group in the synthesis of Asp-Phe-OMe **07**

**OR**

**Q-6 Attempt all Questions (14)**

a. Discuss retrosynthetic analysis and synthesis of the given molecules **07**



b. Explain retrosynthetic analysis and synthesis of the given molecules **07**

