

C.U.SHAH UNIVERSITY

Summer Examination-2020

Subject Name : Disconnection Approach

Subject Code : 5SC03DAC1

Branch : M.Sc. (Chemistry)

Semester : 3

Date : 25/02/2020

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)**
- Write a full form of FGI. **01**
 - Define: Target molecule **01**
 - Write the Benzoin condensation reaction. **01**
 - Define synthon with one example. **01**
 - Write the disconnection analysis and plan the synthesis of Trifluralin. **01**
 - Write the retro synthetic analysis for BHT. **01**
 - What are the reagents used for reimer tiemann reaction? **01**
- Q-2 Attempt all questions (14)**
- What strategy should be followed for adding two *o,p*-directing group; meta to each other on the aromatic ring? Explain by giving suitable example. **07**
 - Write a note on Wittig reaction and explain one disconnection analysis based on this reaction. **07**
- OR**
- Q-2 Attempt all questions (14)**
- Do the disconnection analysis and plan the synthesis. **08**

and

- The below structure is of coccinelline and based on that structure do the disconnection and plan the synthesis of required primary amine of coccinelline. **06**



Q-3 Attempt all questions (14)
a. Do the disconnection analysis and plan the synthesis. **07**

b. Do the disconnection analysis and plan the synthesis. **07**

OR

Q-3 Attempt all questions (14)
a. Do the disconnection analysis and plan the synthesis. **07**

b. Do the disconnection analysis and plan the synthesis. **07**

SECTION – II

Q-4 Attempt the following questions (07)
a. Write the disconnection of 1,4-diketone for unnatural Nucleophile. **01**
b. Define: Protecting group **01**
c. Write the basic characteristic of protecting group. **01**
d. Define the term: Regioselectivity **01**
e. Draw full form of THP. **01**
f. Write reaction scheme of Benzoin condensation. **02**

Q-5 Attempt all questions (14)
a. The diester (TM) required for the synthesis of the antibiotic pentaleno-lactone. **06**
Do the disconnection analysis and plan the synthesis of diester.

b. Write various protecting method used for synthesis of peptide ester chain. **08**

OR



- Q-5** **Attempt all questions** **(14)**
a. Do the disconnection and plan the synthesis **06**
- b. Explain the stereospecificity, stereoselectivity and regioselectivity of Diels-Alder reactions with example. **08**
- Q-6** **Attempt all questions** **(14)**
a. Do the disconnection analysis and plan the synthesis. **07**
- b. Do the disconnection analysis and plan the synthesis. **07**
- OR**
- Q-6** **Attempt all questions** **(14)**
a. Do the disconnection analysis and plan the synthesis. **07**
- b. Do the disconnection analysis and plan the synthesis. **07**

