647510 **MSC4OrgC401x** **Seat No :_____**

M.Sc.(Chem.) Semester - 4 (*CBCS*) Examination
August/September -2020 [NEW COURSE]
Organic Synthesis: A Disconnection Approach (Core)

Time: 2:00 Hours **Marks: 56**

Instructions:

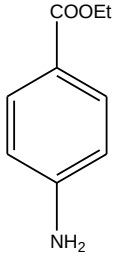
1. Figures to the right indicate marks.
2. There are five questions in the question paper.
3. Answer any four of the following questions.

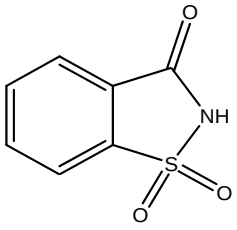
Q-1 (a): Answer the following . **04 Marks**

1. Explain Disconnection with suitable example.
2. What is Synthon and synthetic equivalent? Give a suitable example to explain.

(b): Answer any two questions out of given three. **10 Marks**

1. Write a note on Convergent and Linear synthesis using suitable example
2. Write Disconnection and plan the synthesis for Multistriatin.
3. Write Disconnection and plan the synthesis of the following:





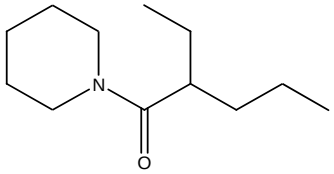
Q-2 (a): Answer the following **04 Marks**

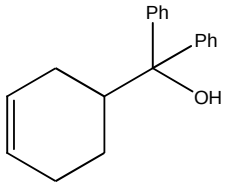
1. Define one group disconnection with a suitable example.
2. Define two group disconnection with a suitable example

Q-2 (b): Answer any two questions out of given three. **10 Marks**

1. Write Disconnection and plan the synthesis for following:

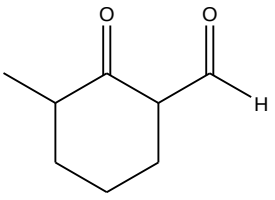
(a) **(b)**

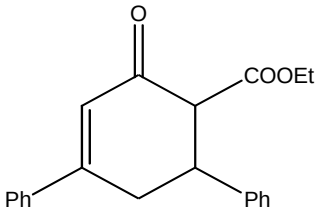




2. Write Disconnection and plan the synthesis for following:

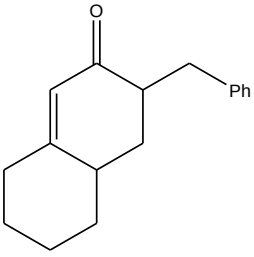
(a) **(b)**

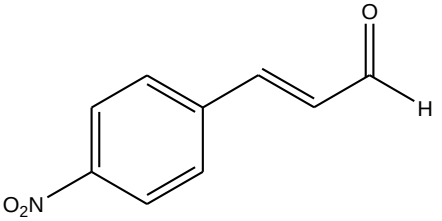




3. Do the disconnection and plan the synthesis for following:

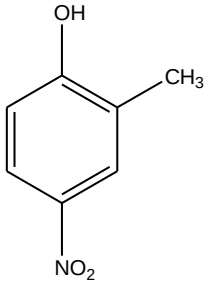
(a) **(b)**





Q-3 (a): Answer the following **04 Marks**

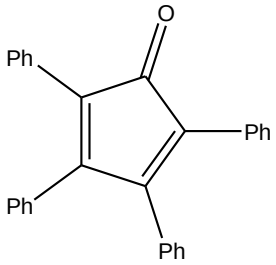
1. Explain: Umpolung reaction with suitable example.
2. Write Disconnection and plan the synthesis for following:

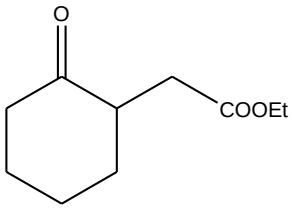


Q-3 (b): Answer any two questions out of given three. **10 Marks**

1. Write Disconnection and plan the synthesis for following:

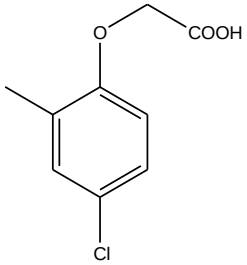
(a) **(b)**

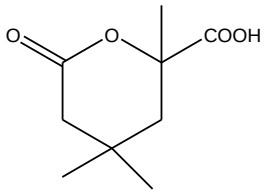




2. Write Disconnection and plan the synthesis for following:

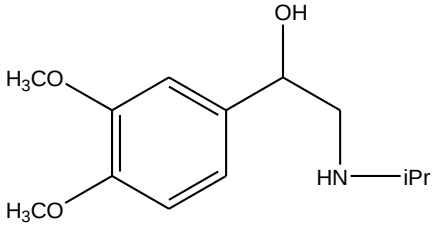
(a) **(b)**

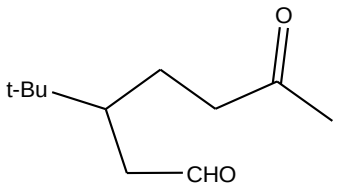




3. Write Disconnection and plan the synthesis for following:

(a) **(b)**





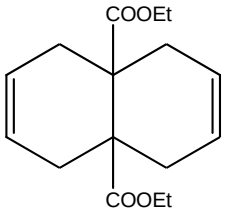
Q-4 (a): Answer the following **04 Marks**

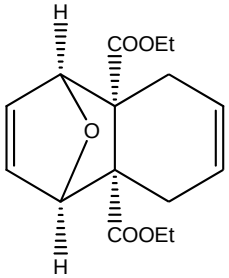
1. Discuss disconnection of Thiazole.
2. Discuss disconnection of Pyrroles.

Q-4 (b): Answer any two questions out of given three. **10 Marks**

1. Write Disconnection and plan the synthesis for following:

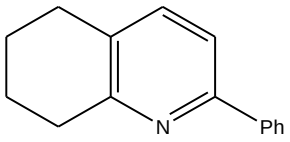
(a) **(b)**

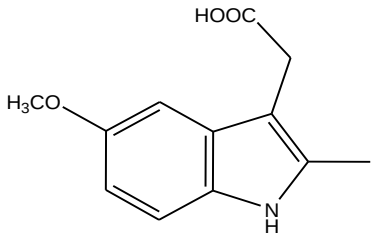




2. Discuss Disconnection of Nirogen Containing 5 membered and 6 membered saturated heteroyclic ring system
3. Write Disconnection and plan the synthesis for following:

(a) **(b)**



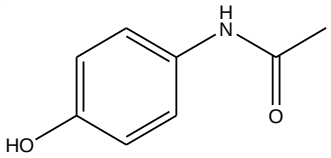


Q-5 (a): Answer the following **04 Marks**

1. Define Chemoselectivty with suitable example
2. What are the protecting groups? Which quality it should have?

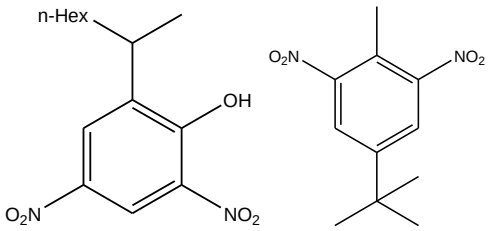
Q-5 (b): Answer any two questions out of given three. **10 Marks**

1. (i)Discuss chemo selectivity in the given example



(ii) Discuss selective reduction of Nitro group by using appropriate reagent in m-dinitrobenzene

2. Write a note on Ether and Amide as a protecting group
3. Write Disconnection and plan the synthesis for following:



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