647510 **MSC3ORSC0210** **Seat No :_____**

M.Sc.(Chem.) Semester - 3 (*CBCS*) Examination
Nov/Dec-2023 (OLD COURSE)
ORGANIC SYNTHESIS- A DISCONNECTION APPROACH (CORE)

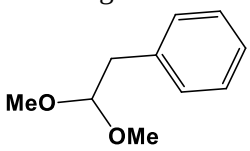
Time: 2:30 Hours **Marks: 70**

Instructions:

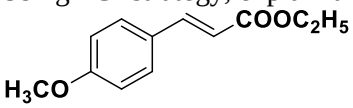
1. All questions are compulsory.
2. Figures to the right indicate marks.

Que.1 Answer any **seven** of the following ten questions. (14)

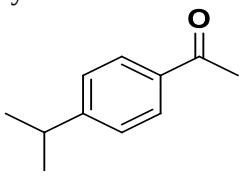
1) Enlist various protecting strategy for -NH_2 group.
2) Define (i) Synthon (ii) Synthetic equivalent.
3) What is disconnection analysis? What are the applications of retro-synthesis?
4) What is FGR strategy? Explain with one example.
5) Give examples of following synthon:(i) a^3 (i) d^2
6) How will you disconnect compound having 1,2-diol groups?
7) Using two group disconnection strategy, explain the retro-synthesis of the following TM:



8) Using FGI strategy, explain the disconnection analysis for the following TM.



9) Create disconnection analysis using the strategy *order of events* & propose synthesis for following TM:

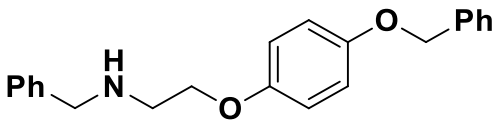


10) What is reconnect strategy? Explain with one example.

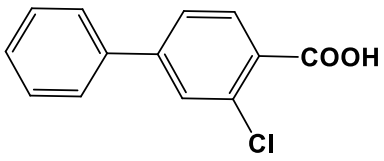
Que.2 Answer any **two** of the following three questions. (14)

Explain the disconnection analysis & proposed synthesis of **any two** TM from the followings three.

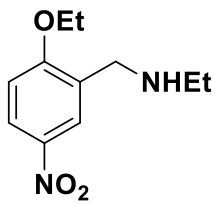
(1)



(2)



(3)



Que.3 Answer the following questions. (14)

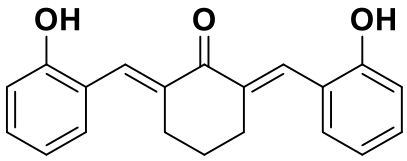
1. Enlist various synthon & synthetic equivalent for aromatic electrophilic and nucleophilic substitution reactions.
2. Explain disconnection strategy for carbonyl compounds having consonant & dissonant polarity with suitable example.

OR

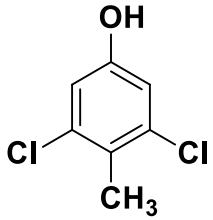
Que.3 Answer the following questions.

Explain the disconnection analysis and proposed synthesis of the following TM:

(1)



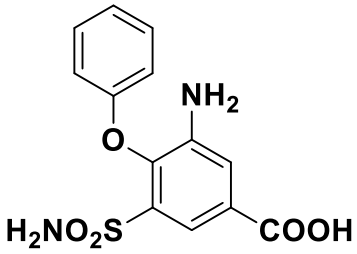
(2)



Que.4 Answer any **two** of the following three questions. (14)

Explain the disconnection analysis & proposed synthesis of **any two** target molecules from the following.

(1)



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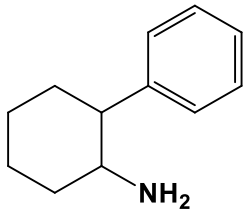
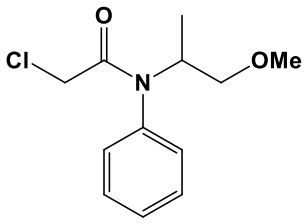
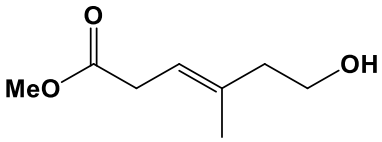


(3)

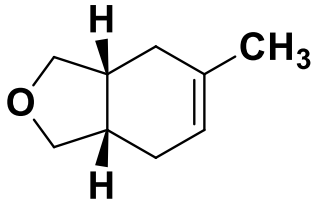


Que.5 Answer any **two** of the following four questions. (14)
Give the disconnection strategy and synthesis of **any two** from following the following.

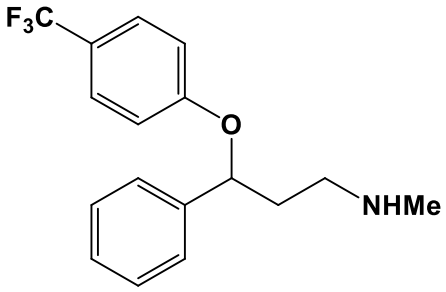
(1)



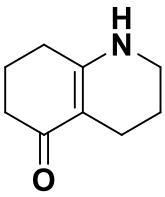
(2)



(3)



(4)



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