

M.Sc. Semester - 3 (CBCS) Examination

Oct/Nov-2021 (OLD COURSE)

ORGANIC SYNTHESIS- A DISCONNECTION APPROACH (CORE)

Time: 2:30 Hours

Marks: 70

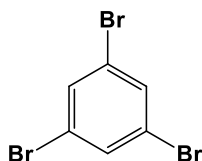
Instructions:

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

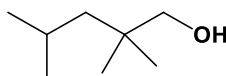
Q.1 Answer any **seven** of the following ten questions.

[14]

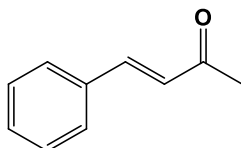
1. Define: (i) Synthons (ii) Synthetic equivalent
2. Give FGI chart for -CN function group.
3. What is FGR ? Explain the disconnection analysis the following TM using FGI.



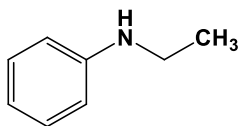
4. How will you disconnect compound having 1,6-diketone groups? Explain with one example.
5. Using FGI strategy, explain the disconnection analysis for the following TM.



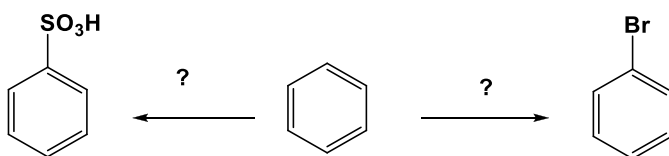
6. Using two group disconnection strategy, explain the retro-synthesis of the following TM:



7. Give the retro-synthesis of the following TM using C-X disconnection strategy.



8. What is protecting group? Give characteristics of good protecting group.
9. Give Synthons and Synthetic equivalent for following reaction:

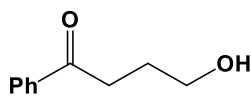


10. Explain disconnection strategy for cyclohexanone.

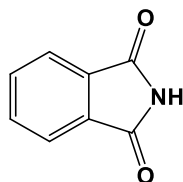
Q.2 Answer any **two** of the following three questions.

[14]

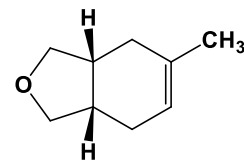
Explain the disconnection analysis & proposed synthesis of **any two** TM from the followings three question.



(1)



(2)

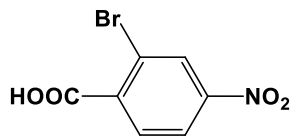


(3)

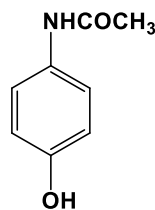
Q.3 Answer the following questions.

[14]

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



(1)



(2)

OR

Q.3 Answer the following questions.

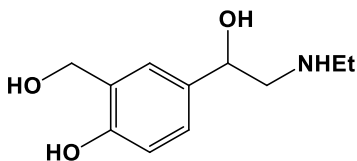
[14]

1. What is illogical disconnection? Explain with suitable example.
2. What are Protecting groups. Why it is required ? Enlist various protecting groups and their deprotection strategy with suitable example.

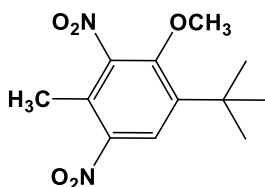
Q.4 Answer any **two** of the following three questions.

[14]

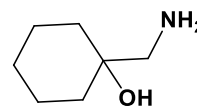
Explain the disconnection analysis & proposed synthesis of **any two** target molecules from the following.



(1)



(2)

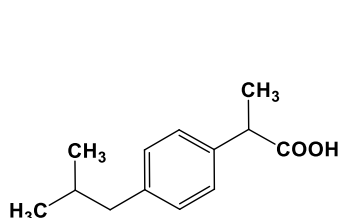


(3)

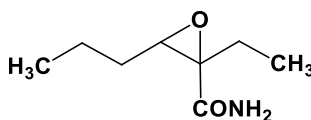
Q.5 Answer any **two** of the following four questions.

[14]

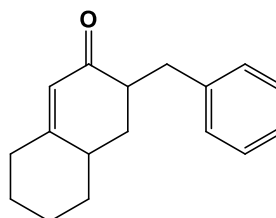
Give the disconnection strategy and synthesis of **any two** from following the following.



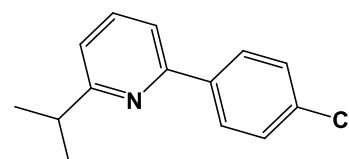
(1)



(2)



(3)



(4)
