

M.Sc. Semester - 3 (CBCS) Examination

Oct/Nov. - 2018

ORGANIC SYNTHESIS- A DISCONNECTION APPROACH (CORE)

Time: 2:30 Hours

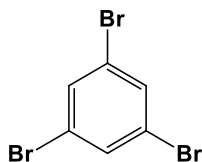
Marks: 70

Instructions:

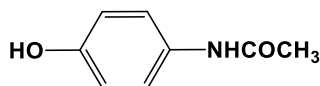
1. All questions are compulsory.
 2. Figures to the right indicate marks.
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Q.1 Answer any **seven** of the following ten questions. [14 Marks]

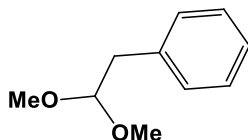
1. What is Retrosynthesis?
2. Define (i) Synthons (ii) Synthetic equivalent
3. Give examples of following synthon: (i) a^3 (ii) d^2
4. What is umpolung reagent? Give two examples.
5. What is FGR? Explain the disconnection analysis of the following TM using FGR.



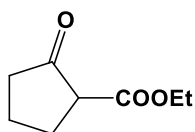
6. How will you disconnect compound having 1,2-diol groups? Explain with one example.
7. Using FGI strategy, explain the disconnection analysis for the following TM.



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



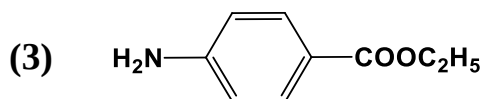
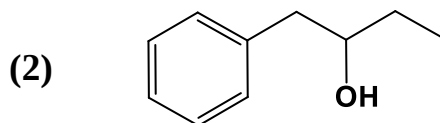
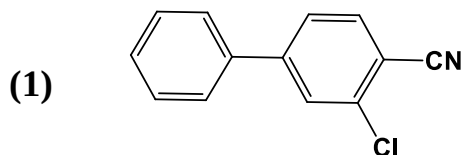
9. Discuss the retro-synthesis strategy for following 1,3-dicarbonyl TM.



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

Q.2 Answer any **two** of the following three questions. [14 Marks]

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



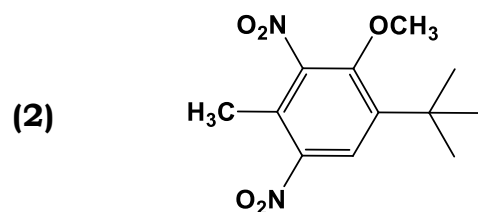
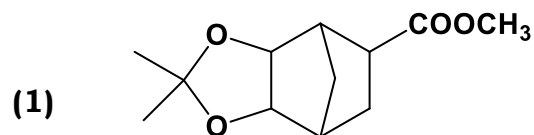
Q.3 Answer the following questions. [14 Marks]

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

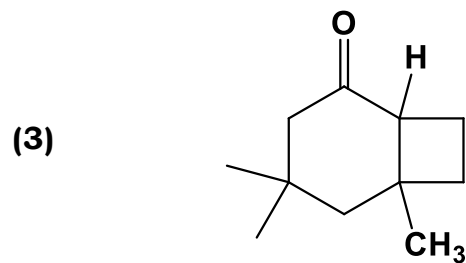
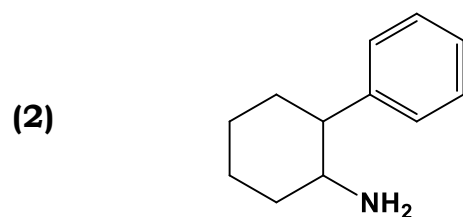
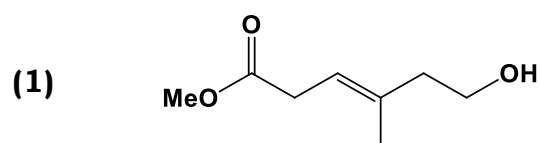
Q.3 Answer the following questions. [14 Marks]

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



Q.4 Answer any **two** of the following three questions. [14 Marks]

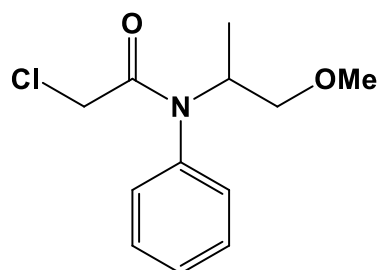
Explain the disconnection analysis & proposed synthesis of **any two** target molecules from the following.



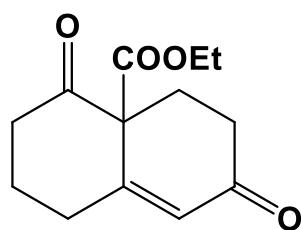
Q.5 Answer any **two** of the following four questions. [14 Marks]

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

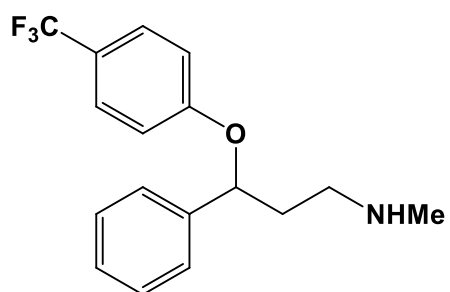
(1)



(2)



(3)



(4)

