



**DBK-003-1103006**

Seat No. \_\_\_\_\_

**M. Sc. (Sem. III) (CBCS) Examination**

**June - 2022**

**C(OP)-302 : Organic Synthesis :**

**A Disconnection Approach**

**Faculty Code : 003**

**Subject Code : 1103006**

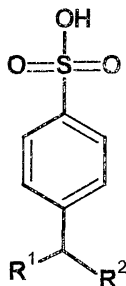
Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

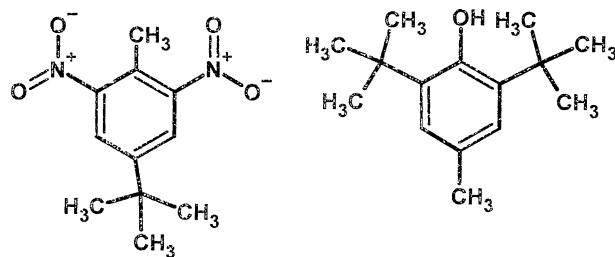
- Instructions :** (1) All questions carry equal marks.  
(2) Attempt any five questions.

1 Answer the following : 14

- (a) Define the term, "Disconnection Approach" and "Target Molecules".
- (b) Represent disconnection of Benzocaine.
- (c) Explain briefly order of events, considering following examples :

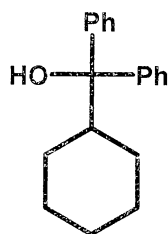


(d) Give retrosynthetic analysis of following molecules :

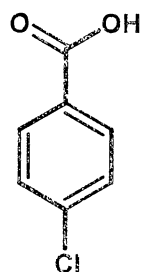


(e) Give suitable example and explain the term, "Umpolung".

(f) Write the disconnection and plan the synthesis of



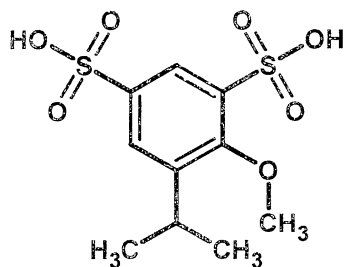
(g) Disconnect the following molecules and give its synthesis:



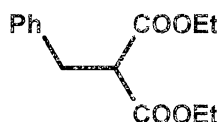
2 Answer the following :

14

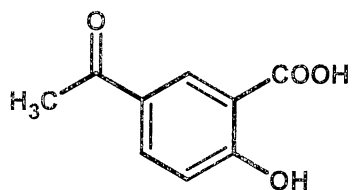
(a) Explain order of events, considering following example:



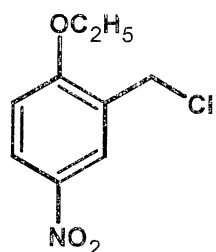
- (b) Define synthon and synthetic equivalent, derive both using following molecule as an example.



- (c) Define Functional Group Interconversion considering a suitable example.
- (d) Give retrosynthetic analysis and give synthesis of Piperonal.
- (e) Represent retrosynthetic analysis and give synthesis of following molecules:



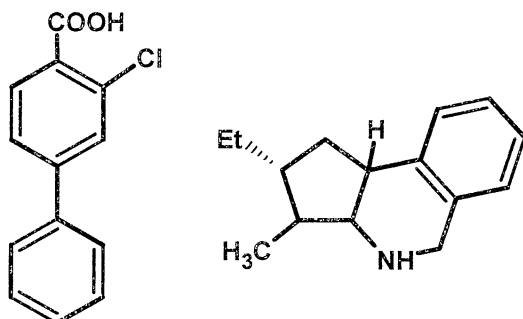
- (f) Giving suitable example, explain the term, "Illogical disconnection."
- (g) Give the disconnection and plan the synthesis of following molecule:



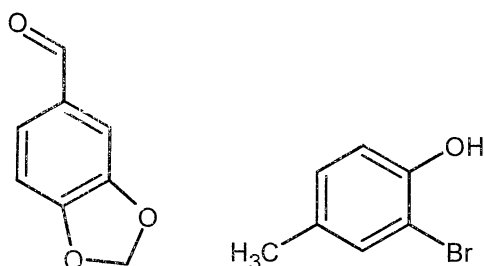
3 Answer the following :

14

- (a) Do the disconnection and plan for the synthesis of following :



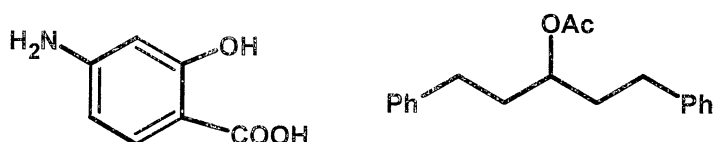
- (b) Give the retrosynthetic analysis and synthesis of following target molecules :



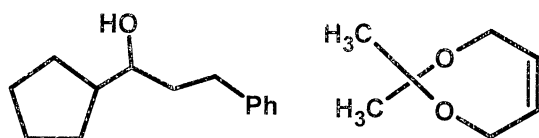
4 Answer the following :

14

- (a) Represent disconnection and plan for the synthesis of following molecules:

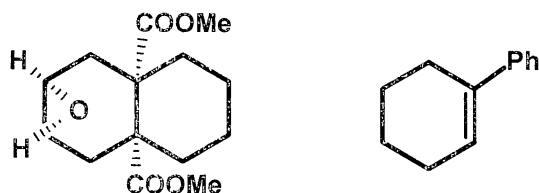


- (b) Disconnect the following TM and write its synthesis;



5 Answer the following : 14

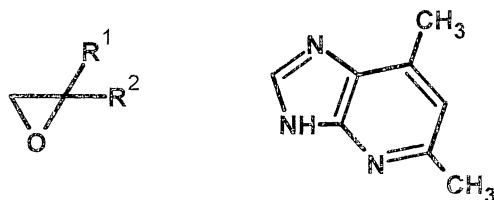
- (a) Give the retrosynthetic analysis and synthesis of following TM;



- (b) Define the term, Two-Group Disconnection and explain it with suitable example.

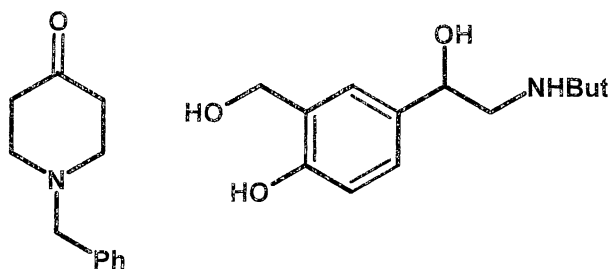
6 Answer the following : 14

- (a) Define the term, One group disconnection and explain it with suitable example.
- (b) Explain retrosynthetic analysis and write the synthesis of following Target molecules;

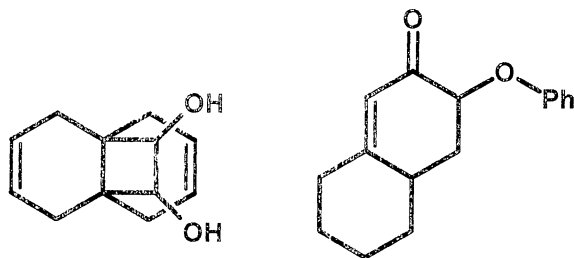


7 Answer the following : 14

- (a) Give the retrosynthetic analysis and synthesis of following target molecules;

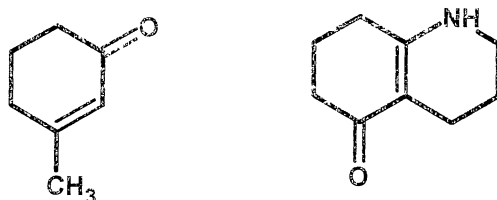


(b) Disconnect the following TM and write its synthesis;

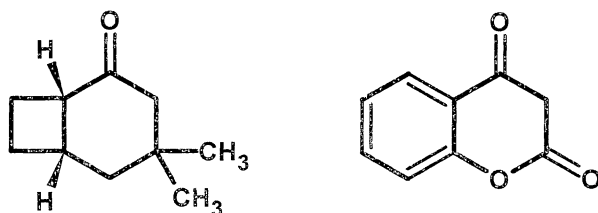


8 Answer the following : 14

(a) Disconnect the following TM and write its synthesis:

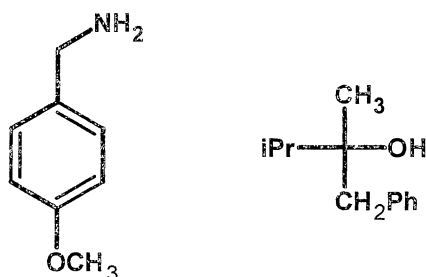


(b) Give the retrosynthetic analysis and synthesis of following target molecules;

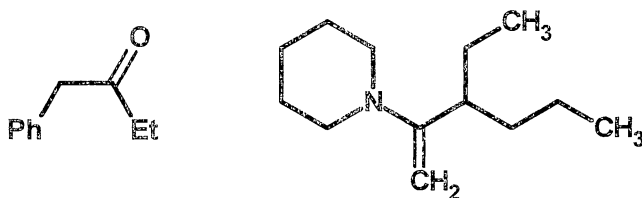


9 Answer the following : 14

(a) Explain retrosynthetic analysis and write the synthesis of following molecules;



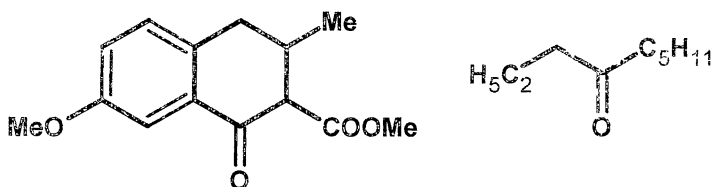
(b) Disconnect the following TM and write its synthesis;



10 Answer the following :

14

(a) Represent the retrosynthesis of following TM and plan its synthesis;



(b) Do the disconnection and plan its synthesis

