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A-120

SC

No of pages: 04

SARDAR PATEL UNIVERSITY
M.Sc. Semester-III (Organic Chemistry) Examination
Wednesday, 6th April 2016
PS03CORCO2: Organic Synthesis – A Disconnection Approach

Time: 2:30pm to 05:30pm

Total Marks: 70

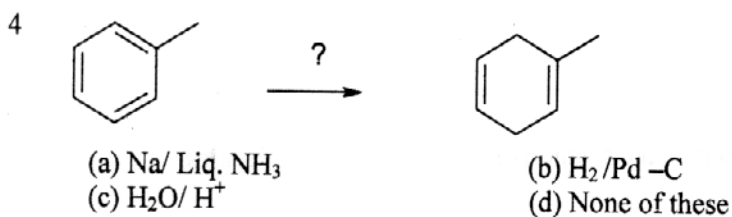
Q.1 Select the Correct answer in the following.

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- 1 An analytical operation which breaks a bond and converts a molecules in to a possible starting material is known as
(a) Protecting groups (b) Disconnection
(c) FGI (d) Leaving group

- 2 The synthetic equivalent for the synthon Ph^- is
(a) PhBr (b) PhOH
(c) PhLi (d) PPh_3

- 3 The reconnection is applicable in the disconnection for
(a) 1,3-dicarbonyl Compounds (b) 1,4-dicarbonyl Compounds
(c) 1,5-dicarbonyl Compounds (d) 1,6-dicarbonyl Compounds



- 5 The reagent used for allylic bromination is
(a) $\text{KBr} + \text{KBrO}_3$ (b) N-bromosuccinimide(NBS)
(c) Aq. Br_2 (d) NaOBr
- 6 An umpolung of aldehyde carbonyl group can be carried out by converting into
(a) 1,3- dithiane derivative (b) Hydrazone derivative
(c) Amine derivative (d) Acetal derivative
- 7 The reagent trimethyl silyl chloride is used for
(a) protection of ketone (b) protection of aldehyde
(c) protection of cyanohydrin (d) protection of amine
- 8 The Phthalamide derivative is used for the protection of
(a) Alcohol (b) Amine
(c) Phenol (d) Ketone

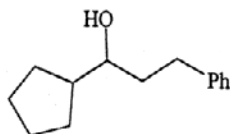
Q.2 Answer the following (Any Seven).

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- 1 Define the term with appropriate example: FGI
- 2 Define the term: synthon.
- 3 Giving suitable examples, explain the Illogical Electrophiles
- 4 Give the mechanism of Benzoin condensation with suitable example.
- 5 Write about the protection of ketone.
- 6 Explain the pinacol reduction with suitable example.
- 7 Describe the use of enamine in organic synthesis
- 8 Using umpolung approach, plan the synthesis for the following molecule.

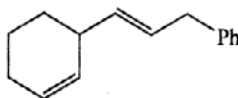
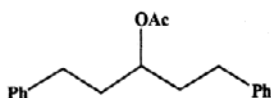


- 9 Do the disconnection and plan the synthesis for the following compound.



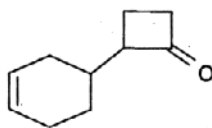
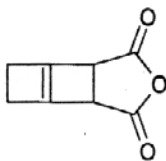
Q.3 A. Do the disconnection and plan the synthesis for the following molecules.

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B. Do the disconnection and plan the synthesis for the following molecules.

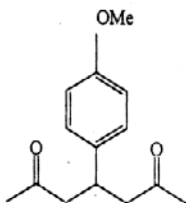
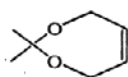
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OR

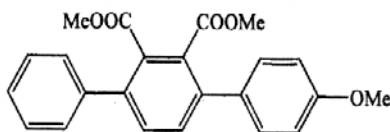
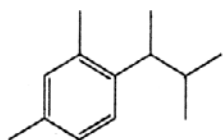
B. (i) Do the disconnection and plan the synthesis for the following compound.

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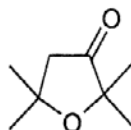
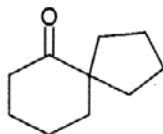
Q.4 A. Do the disconnection and plan the synthesis for the following molecules.

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B. Do the disconnection and plan the synthesis for the following molecules.

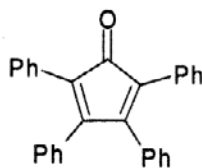
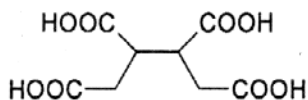
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OR

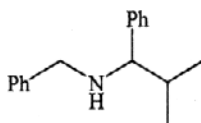
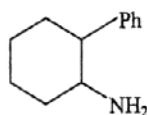
B. Do the disconnection and plan the synthesis for the following molecules.

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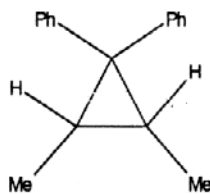
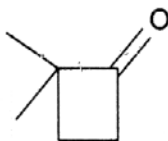
Q.5 A. Do the disconnection and plan the synthesis for the following molecules.

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B. Do the disconnection and plan the synthesis for the following molecules.

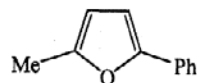
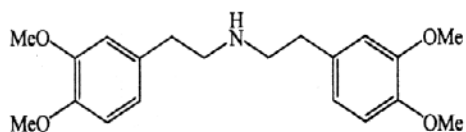
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OR

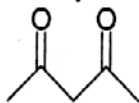
B. Do the disconnection and plan the synthesis for the following molecules.

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Q.6 A. Answer the followings.

(i) Do the disconnection & plan the synthesis for the following compound.



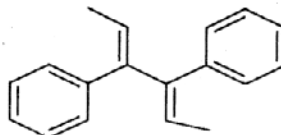
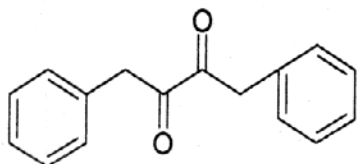
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(ii) Discuss the protection and deprotection of amines and aldehydes.

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B. Do the disconnection and plan the synthesis for the following molecules.

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OR

B. Give the synthesis of following pyrrole derivative used as intermediate in the synthesis of Mesoporphyrin IX.

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