

**Navrachana University**  
**School of Liberal Studies and Education, M. Sc.**  
**End-Semester Examination November 2017**  
**2017, Semester-III**  
**Advanced Synthetic Methods, Course Code: CH223**

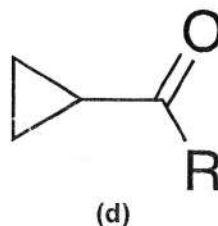
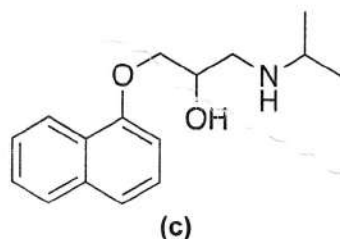
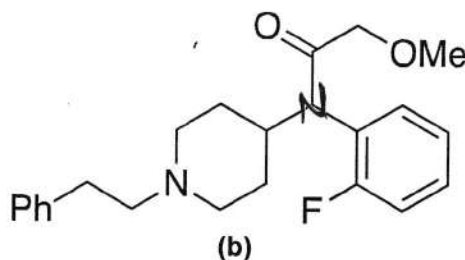
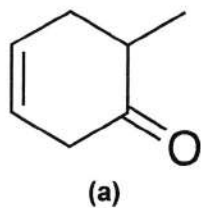
Date: 21/11/2017  
 Time: 3:30 to 5:30 pm

Marks: 40

**Instructions:**

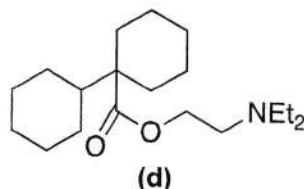
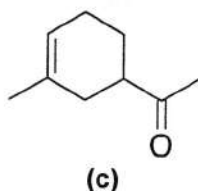
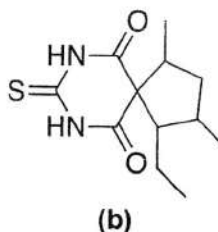
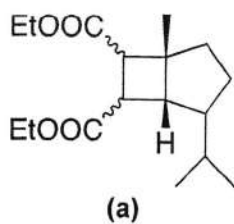
- Write each answer on a new page
- Use of a calculator is permitted/~~not permitted~~

- Q1. Write any six consecutive reaction steps involved in the synthesis of Aromandendrene OR Longifolene. (6 Marks)
- Q2. Write all the steps (in sequence) involved in the solid phase synthesis of oligonucleotide and explain any one in detail with reaction mechanism. (5 Marks)
- Q3. Disconnect the following molecule by known reliable methods and write out the synthetic scheme according to the disconnection analysis, adding reagents and condition (wherever is applicable). (any three) (3 x 3 = 9 marks)



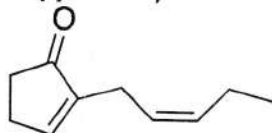
- Q4. Write a short note on electro-synthesis in organic chemistry. Give two examples of anodic oxidation and two examples for cathodic reduction reaction. (6 Marks)

Q5. Disconnect the following molecule by known reliable methods and write out the synthetic scheme according to the disconnection analysis, adding reagents and condition (wherever is applicable). (any three) (4 x 3 = 12 marks)



Q6. The important perfumery constituent *cis*-jasmane can be synthesized if a source of the *cis*-C5 side chain is available.

- (i) Draw the structure of the *cis*-C5 side chain required for the synthesis of *cis*-jasmane.
- (ii) Disconnect the *cis*-C5 side chain by known reliable methods and write out the synthetic scheme according to the disconnection analysis, adding reagents and condition (wherever is applicable). (2 Marks)



*cis*-jasmane

-----End of Question Paper-----