



Reg. No. :

Name :

Fourth Semester M.Sc. Degree Examination, July 2018

Branch : CHEMISTRY

**CH 242 (b) – Organic Chemistry – IV
(2016 Admission)**

Time : 3 Hours

Max. Marks : 75

SECTION – A

Answer **any two** among (a), (b) and (c) from **each** question. **Each** sub question carries **2** marks.

1. a) Give an example for organo zinc compound. Write the synthesis also.
b) How do you convert acid chloride to a ketone by dialkyl cadmium compounds ?
c) Suggest a method of preparation of benzene tri carbonyl chromium.
2. a) What are tweezers ? Give an example.
b) Why carbon nanotube is stronger than graphite ?
c) What are the biomaterials needed for protein bio synthesis ?
3. a) Give an example for solid supported organic transformations.
b) What are the sources of 'lead' molecules in drug discovery ?
c) Define combinatorial organic synthesis.
4. a) Suggest a method of synthesis of adenine.
b) Starch is soluble in hot water but cellulose insoluble in water. Why ?
c) The half-life degradation period of ethylene is more than 50 years. Explain.

P.T.O.



5. a) What are scavengers resins ?
b) Give an example for biocatalyst. Which transfer ketone to alcohol ?
c) Give an example for organic transformation carried out in water.

(2×10=20 Marks)

SECTION – B

Answer either (a) or (b) from **each** question. **Each** sub question carries 5 marks.

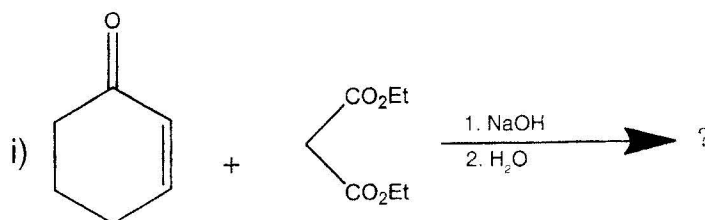
6. a) Explain the preparation and synthetic utilities of Gilman reagent.
b) What is Tebbe's reagent ? Explain two reactions involving the above reagent.
7. a) Explain hydrogen bonding and ionic bonding in host – guest systems.
b) What are calixaranes ? How they are prepared ?
8. a) Explain how pharmacophores are identified in a drug candidate ? Suggest the modification to improve the activities.
b) Describe the synthesis of chloramphenicol.
9. a) Suggest a method of synthesis of one tripeptide.
b) What are stereo regular polymers ? Explain with examples.
10. a) Explain the organic reactions involving ionic liquids.
b) Describe the principles of microwave mediated organic transformations.

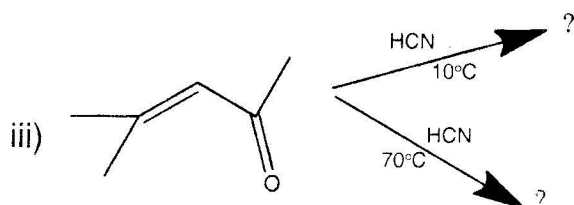
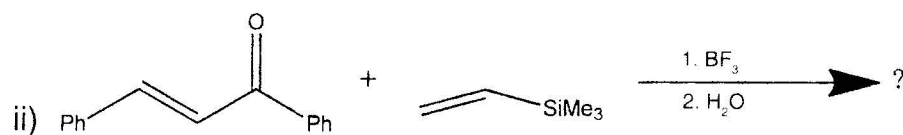
(5×5=25 Marks)

SECTION – C

Answer **any three** questions. **Each** question carries 10 marks.

11. Complete the following reactions and explain the formation of the product. (3+3+4)





12. Write notes on following :

(3+4+3)

- i) Cryptans
- ii) Cyclodextrins
- iii) Helicates.

13. Explain the applications of Hammett equation in drug design.

14. Illustrate protein sequencing by Edman's method.

15. Describe twelve principles of Green Chemistry.

(10×3=30 Marks)

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