

GUJARAT TECHNOLOGICAL UNIVERSITY
M.Ph Semester–III Examination Dec. - 2011

Subject code: 930101**Date: 10/12/2011****Subject Name: Advanced Medicinal Chemistry****Time: 10.30 am – 01.30 pm****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1. a. What is combinatorial approach ? Discuss about its importance in new drug discovery. What are its advantages over other drug discovery approaches ? (7)
b. Which are the different synthesis approaches used in Combinatorial Chemistry? (5)
c. Discuss in brief about the methods used to identify actives from compound library. (4)
- Q.2. a. Why peptides are gaining importance as a drug ? What are its pitfalls ? (4)
b. Which are the different methods used for synthesis of peptides ? Write in detail on method developed by Bruce Merrifield. (6)
c. Give detail account on Somatostatin and Relaxin. (6)
- Q.3. a. What are the rational behind use of microorganism for drug synthesis ? Explain in detail with suitable examples. What are the merits and demerits of this technique? (10)
b. Write a note Enzyme Immobilisation Technique. (6)
- Q.4. a. Write in detail about the resistant TB? How these can be prevented ? What are the recent developments in the therapy of TB? Give synthesis of Ethambutol and Isoniazide. (10)
b. What are the different molecular targets for the treatment hypertension ? Give suitable example for each class. Give synthesis of losartan. (6)
- Q.5. a. How resistance is developed in bacteria? What are the different methods of treatment used to overcome it ? Give chemical classification of antibacterials. Outline synthesis route of sparfloxacin (8)
b. What is atherosclerosis ? How it develops in human body ? What are the different treatment available ? What are recent advances in its treatment ? Give synthetic route for atorvastatin. (8)
- Q.6. Give detail account on recent advances in the therapy of following disease with their merits and demerits
a. Diabetes (Type I and II) (6)
b. AIDS (6)
c. Allergy (4)
- Q.7. a. What are neurodegenerative diseases ? How it occurs ? What are the different treatment available for these diseases ? Is permanent cure of these disease is possible ? Justify your answer. (10)
b. Give synthetic route for mefloquin and fluconazole (6)