M.TECH. DEGREE EXAMINATIONS: NOV/DEC 2010

Third Semester

BIO TECHNOLOGY

BTY560: Pharmaceutical Biotechnology

Time: Three Hours   **Maximum Marks: 100**

Answer ALL Questions:-

PART A (10 x 2 = 20 Marks)

1. What are the biological sources for a drug discovery?
2. What are the missions of FDA?
3. Differentiate between bioavailability and bioequivalence of a drug.
4. What are the two most important sites for drug elimination in our body?
5. List out the advantages of capsules over tablets?
6. What are the typical ingredients of powders?
7. What do you mean by drug targeting?
8. Give two examples for materials for controlled release of drug.
9. What are laxatives? Give two examples for bulk laxatives.
10. List out the drugs used to treat coughs and colds?

PART B (5x16=80)

11. a) (i) Briefly trace the history of pharmaceutical industry.   (8)
    (ii) Write an essay on various stages of drug development process.   (8)

(OR)

  b) (i)   Write the time line for the development of a new drug with flow chart.   (8)
    (ii) Elaborate on various regulatory aspects of a pharmaceutical industry?   (8)

12. a) (i) Discuss various mechanism of drug action.   (12)
    (ii) List of various factors affecting the ADME process.   (6)
                              (OR)
  b) What is pharmacokinetics? Neatly explain the one-compartmental pharmacokinetic
     model.

13. a) Briefly discuss on the essential qualities and different types of packing materials used in
      pharma industry.   (OR)
  b) Discuss the various good manufacturing practices (GMP) in a pharmaceutical industry.

14. a) (i) Elaborate on basic components of a transdermal drug delivery system.   (10)
      (ii) How is transdermal drug delivery devices overcome the skin barrier?   (6)
                              (OR)
  b) Write a note on the preparation, advantages and disadvantages of liposome mediated
      drug delivery

15. a) Write the mechanism of action, antibacterial spectrum and therapeutic uses of
      beta-lactum antibiotics.   (OR)

  b) (i) Write the typical formula of chewable antacid tablets?   (4)
    (ii) Describe the different contraceptives and their mode of usage?   (12)

****