(i) **Printed Pages : 2** **Roll No. .....**

(ii) **Questions : 9** **Sub. Code : 2 5 9 5 2**

Exam. Code : 0 4 3 8

M.Sc. Bio-Technology 4th Semester

(2055)

DRUG DESIGNING AND DRUG DELIVERY

Paper : MBIO-402

Time Allowed : Three Hours] **[Maximum Marks : 80**

Note :— Attempt ***five*** questions in all. Question No. **1** is compulsory. Select ***one*** question from each unit.

1. (a) Why efflux transporters are named so.

   (b) What is docking ?

   (c) What is VOD ?

   (d) What are nanoparticles ?

   (e) What is subacute toxicity ?

   (f) Define subject blinding in clinical trials.

   (g) What is a push and pull pump ?

   (h) What are carrier appended drug delivery systems ?

   8×2=16

UNIT—I

2. (a) Discuss the physicochemical and biological factors affecting drug distribution. 8

   (b) Discuss the descriptors in 3D QSAR as followed in CoMFA. 8

3. (a) Discuss the allometric equation and its role in dose determination. 8

(b) Discuss the different aspects of structure based drug design. 8

UNIT—II

4. (a) Discuss the derivation of clearance and AUC from C vs T plot. 8

(b) Discuss the *methods* and *significance* of acute toxicity. 8

5. Discuss the different theories of coordination complexes. Discuss applications of coordinate complexes in drug delivery and therapeutics. 16

UNIT—III

6. (a) Give a description of drug approval process by FDA. 8

(b) Discuss different attributes of trial drug packaging. 8

7. (a) Explain the regulations regarding reporting of clinical trials. 8

(b) Describe the different clinical trials. 8

UNIT—IV

8. (a) Discuss the different types of prodrugs and their significance. 8

(b) Explain the role of liposomes in drug delivery. 8

9. (a) Discuss the different controlled drug delivery systems. 8

(b) Describe the challenges and ways to improve protein and peptide delivery. 8