Exam.Code:0438
Sub. Code: 3487

1059

M.Sc. (Biotechnology) Fourth Semester
MBIO-402: Drug Designing and Drug Delivery

Time allowed: 3 Hours Max. Marks: 80

NOTE: *Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.*

x-x-x

I. Attempt the following:-

a) What are efflux transporters?

b) What is pharmacodynamics?

c) What is interspecies allometric scaling?

d) What is QSAR?

e) Define sub acute toxicity?

f) What is IN DA?

g) Define randomized controlled trials?

h) What are prodrugs? (8x2)

UNIT – I

II. a) Discuss the physicochemical and biological factors affecting drug elimination.

b. Discuss the different contributors for developing 3D QSAR. (8,8)

III. a) Discuss the technique and significance of docking..

b) Discuss the method and implication of high throughput screening. (8,8)

UNIT – II

IV. a) Discuss the C vs T plot for intravenously administered drug.

b) Discuss the theories of coordinate complex formation. (8,8)

V. a) Discuss the significance and derivation of elimination half life and clearance as pharmacokinetic parameters.

b) Discuss the methods of studying chronic toxicity. (8,8)

UNIT – III

VI. a) Describe an overview of steps involved in new drug approval.

b) Discuss the methods and role of controlling bias in clinical trials. (8,8)

P.T.O.

VII. a) Explain the safety monitoring of drugs as post approval activity.

b) Describe the technique of trial drug packaging. (8,8)

UNIT – IV

VIII. a) Discuss the ligand appended approach to site specific drug delivery.

b) Explain the formulation and applications of nanoparticles in drug delivery. (8,8)

IX. a) Discuss the design and significance of diffusion controlled drug delivery systems.

b) Describe the novel approaches for peptide and protein delivery. (8,8)

x-x-x