

M.Sc.(Chem.) Semester - 3 (CBCS) Examination
Oct/Nov-2021 (NEW COURSE)
Medicinal Chemistry (Elective-1 (New))

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Q.1(A) Answer the Following (4)**
1. Discuss rational approach for the drug discovery process.
- Q.1(B) Answer any two questions out of three. (10)**
- (1) Discuss Computer Aided Drug Design (CADD). 5
 - (2) What is drug? Discuss any drug discovery without lead compound. 5
 - (3) Explain the lead discovery through metabolism study. 5
- Q.2(A) Answer the Following (4)**
1. Define the following terms:
 - a) Pharmacophore
 - b) SAR
 - c) HTS
 - d) QSAR
- Q.2(B) Answer any two questions out of three. (10)**
- (1) Discuss Craig's plot and its application in lead optimization. 5
 - (2) How to increase potency of the lead compound by functional group modification? 5
 - (3) Discuss various physicochemical parameters in QSAR. 5
- Q.3(A) Answer the Following. (4)**
1. Enlist the mechanism of Drug absorption.
 2. Explain the route of drug administration.
- Q.3(B) Answer any two questions out of three. (10)**
- (1) Discuss any two physiological barriers that affect drug distribution. 5
 - (2) What is perfusion rate? Classify organ/tissue based on their perfusion rate. 5
 - (3) Explain passive diffusion in Drug absorption. 5
- Q.4(A) Answer the Following. (4)**
1. Describe Therapeutic window in detail.
- Q.4(B) Answer any two questions out of three. (10)**
- (1) Explain glutathione conjugation reaction in biotransformation process. 5
 - (2) Discuss full agonist, inverse agonist, partial agonist, antagonist with diagram. 5
 - (3) Explain any two cell-surface receptors with diagram. 5
- Q.5(A) Answer the Following (4)**
1. Discuss pool and split method for peptide synthesis.
- Q.5(B) Answer any two questions out of three. (10)**
- (1) Define Prodrug. What is the role of prodrug to improve taste and odour? 5
 - (2) Write a note on Furka's mix and spit method. 5
 - (3) Classify Prodrug with examples. 5
