

Seat No. : _____

MO-136

March-2019

M.Sc., Sem.-IV

510 : Organic Chemistry (Selected Topics in Medicinal Chemistry)

Time : 2:30 Hours]

[Max. Marks : 70

1. (A) Answer the following :

- (i) Why new drug development is essential ? Discuss it. 7
- (ii) Write note on SAR and QSAR. 7

OR

Answer the followings :

- (i) What are preclinical and clinical phases ? Discuss the importance of computational chemistry in drug discovery. 7
- (ii) What is Hard drug and Soft drug ? Write a note on importance of physio-chemical parameters like lipophilicity and partition coefficient for API (Drug). 7

(B) Answer any **four** of the followings : 4

- (i) What is FDA in drug development ?
- (ii) Abbreviate the terms : ED_{50} , LD_{50} and IC_{50} .
- (iii) What stands for NCE ?
- (iv) What is prodrug ?
- (v) What is a generic drug ?
- (vi) Define terms : API.

2. (A) Answer the following :

- (i) Write a note on "Route of drug administration". 7
- (ii) Write a note on "ADMET". 7

OR

Answer the followings :

- (i) Write a note on types of Drug action.
- (ii) Write a note on mechanism of Drug action.

- (B) Answer any **four** of the followings : 4
- (i) Give difference between pharmacodynamics and pharmacokinetics.
 - (ii) Define term pharmaceuticals.
 - (iii) What is enzyme ?
 - (iv) What is biotransformation of drug ?
 - (v) What is drug receptor ?
 - (vi) Define term therapeutics.
3. (A) Answer the following :
- (i) Write a note on methods of pharmaceutical analysis. 7
 - (ii) Give a brief overview on “Computer in Chemistry”. 7
- OR**
- Answer the followings :
- (i) Give a brief note on dosage forms and types of dosages.
 - (ii) Discuss the quality control of drugs pharmacopeias.
- (B) Answer any **three** of the followings : 3
- (i) What is e-resources ?
 - (ii) What is the definition of dosage forms ?
 - (iii) What is 3rd generation dosage form ?
 - (iv) What are excipients ?
 - (v) Give difference between drug and medicine.
4. (A) Answer the following :
- (i) Write a note on importance of Nano-particle in treatment of cancer. 7
 - (ii) Write a note on role of protein and peptide for delivery of Nanomedicine. 7
- OR**
- Answer the followings :
- (i) Give a brief note on importance of Nanotechnology in surgery.
 - (ii) Write a note on importance of Nano-particle in drug delivery.
- (B) Answer any **three** of the followings. 3
- (i) What is a Nano robot ?
 - (ii) What is drug delivery ?
 - (iii) What is nanonephrology ?
 - (iv) Give difference between Nano & Micro particles.
 - (v) What is the unit of nanoparticle ?