

Seat No. : \_\_\_\_\_

**AJ-102**

**April-2015**

**M.Sc., Sem.-IV**

**CHE (O) 510 : Chemistry**

**(Selected Topics in Medicinal Chemistry)**

**Time : 3 Hours]**

**[Max. Marks : 70**

1. Answer the following questions :

- (A) (1) Write a note on "Lead Compound Identification". **4**  
(2) Write a note on "Literature of Medicinal Chemistry". **3**

**OR**

- (1) Write in brief about "Drug Receptor Interactions".  
(2) Write a note on "Pro Drug".

- (B) Write a note on Structure Activity Relationship studies. **7**

**OR**

Write a note on phases I, II and III of clinical trials in detail.

2. Answer the following questions :

- (A) What is biotransformation ? Write a note on phase I drug metabolism. **7**

**OR**

Write a note on "conjugation reactions assisted drug metabolism" in detail.

- (B) (1) Describe in brief "Pharmacokinetic parameters of elimination". **4**  
(2) Describe in brief "Drug distribution". **3**

**OR**

Write a note on "Aid of Pharmaceutics in drug development process".

3. Answer the following questions :

- (A) Write a note on various types of dosage forms in detail. **7**

**OR**

Classify various routes of administration and discuss any two in detail.

- (B) Give a brief overview for “Computers in Chemistry”. 7
- OR**
- (1) Discuss one modern method of pharmaceutical analysis. 4
- (2) Give the background and development of Indian Pharmacopeias in brief. 3
4. Answer the following questions : 7
- (A) Write a note on “Use of Nanomaterials for drug delivery”. 7
- OR**
- Give a brief overview of “Protein and Peptide drug delivery”.
- (B) Write a note on “Nanotechnology potential in oncology”. 7
- OR**
- Write a note on “Nanonephrology”.
5. Answer the following questions : 14
- (1) What is ANDA in drug development ?
- (2) What is “Soft drug” ?
- (3) What is efficacy ?
- (4) What is  $EC_{50}$  ?
- (5) What stands for “FDA” ?
- (6) What is HTS in drug discovery ?
- (7) What is QSAR ?
- (8) What is potency ?
- (9) What is combinatorial chemistry ?
- (10) What is “Induced fit” ?
- (11) What is “Scifinder Scholar” ?
- (12) What is Lead optimization ?
- (13) Give three important websites for online journals in chemistry.
- (14) What are Nanorobots ?
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