



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

**HC-003-1104015**

**M. Sc. (Sem. IV) (CBCS) Examination**

**April - 2023**

**Organo-Pharmaceutical Chemistry : C(OP)-404**

*(Advanced Medicinal Chemistry)*

**Faculty Code : 003**

**Subject Code : 1104015**

Time :  $2\frac{1}{2}$  / Total Marks : 70

- Instructions :** (1) All questions carry equal marks and all are compulsory.  
(2) Draw suitable diagram / scheme wherever necessary.

- 1** Answer the following : (any seven) **14**
- (a) Define the term, Geographical Indication and write their example.
  - (b) Enlist criteria for potentability.
  - (c) Define the term : Combinational Chemistry and its advantages.
  - (d) Write the full form of QSAR, SAR, CoMFA.
  - (e) Enlist the step to prepare chemical library and write any two examples of tadpole shape molecules.
  - (f) Enlist Lipinski rules – five for drug design.
  - (g) Explain Fick's law of diffusion.
  - (h) Define, Polymorphism and explain hydrates and solvates.
  - (i) Define the term, ADME and Pharmacodynamics.
- 2** Answer the following : (any two) **14**
- (a) Enlist the parameter used for the study in QSAR and discuss any one parameter in detail.
  - (b) What is Craig's Plot ? How it is useful for QSAR study ? Explain with example.
  - (c) Write a brief note on 3-D-QSAR in drug discovery.

**3** Answer the following : **14**

- (a) Define the term patent and which types of inventions are not patentable in India ?
- (b) Write a note on IPR in detail.

**OR**

- (a) Which types of molecules are good as Drug molecule ? Plan the synthesis of Benzodiazepine where phenyl ring is unsubstituted?
- (b) Define, Biotransformation of drug and discuss important Phase I and II reactions.

**4** Answer the following : **14**

- (a) Explain the Mix and Split methods for the preparation of peptide-in combinational chemistry.
- (b) Write synthesis of Ticlodipene.

**5** Answer the following : (any two) **14**

- (a) Write synthesis of Clopidogrel.
- (b) Explain the term, Prodrugs and give its classification and give two examples.
- (c) Give synthesis of Oseltamivir Phosphate.
- (d) Write synthesis of (S)-Cetirizine.

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