Roll No. | | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 08

M.Sc.(Ph. Chem) (Sem.–3)

DRUG DESIGN AND DEVELOPMENT

Subject Code : MSPC-205

M.Code : 20511

Date of Examination : 16-12-22

Time : 3 Hrs. **Max. Marks : 80**

INSTRUCTIONS TO CANDIDATES :

1. **Attempt any FIVE questions out of EIGHT questions.**
2. **Each question carries SIXTEEN marks.**

1. What is lead compound? How lead compounds are generated and optimized in drug discovery? Write down Bohr Postulates. Derive the steady state Schrodinger equation.

2. a) What is QSAR? Discuss briefly fundamental of QSAR.

   b) Add a note of QSAR parameters related to chemical structure and biological activity.

3. a) When was concept of drug receptor introduced? Discuss various receptor theories.

   b) Explain covalent and non-covalent drug-receptor interactions, agonists and antagonists.

4. Explain multiple regression versus stepwise multiple regression. Give purpose of performing partial least square analysis. Discuss various parameters of validation of QSAR model.

5. a) Explain Logico structural approaches. Discuss uses and limitations of molecular modeling.

   b) Write in detail about molecular interactions and interactive graphics.

6. a) Write note on pharmacokinetics, environmental pharmacokinetics and modulation of pharmacokinetics by molecular manipulations.

   b) Describe role of bio-pharmaceutics in drug designing.

7. a) Give applications of oligonucleotides in antiviral and antitumoral chemotherapy.

   b) Write on peptidomimetics research and antisense nucleotide designing.

8. a) Discuss basic concept of prodrugs, common promoities and reversal of prodrugs.

   b) State role of prodrug approach in site specific drug delivery and reduction in drug toxicity.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.