(76) Seat No.:_____ Number of printed pages: 02

SARDAR PATEL UNIVERSITY
M. Sc. Pharmaceutical Chemistry (Semester-III) Examination
Saturday, 22/10/2016; Time-2:00 PM to 5:00 PM
SUBJECT CODE: PS03CPCH01
SUBJECT TITLE: Drug Design and Development

Maximum Marks: 70

Note: (1) All questions are compulsory.
(2) Figure to right indicates total marks of question.

Q-1 **Choose the correct option for the following:** 1× 8

1. **Lower the value of Partition Coefficient P shows**
   a. High Hydrophobicity
   b. Low hydrophobicity
   c. Content of Alcohol in solution
   d. None
2. **3D QSAR depends upon**
   a. Experimental Measure
   b. Theatrical Measure
   c. Both a & b correct
   d. None
3. **Drug optimization aims to**
   a. Maximize the interaction
   b. Minimize side effect
   c. Both a & b correct
   d. None
4. **Pharmacophore shows the functional group**
   a. Which are important
   b. Useless
   c. Both a & b correct
   d. None
5. **Alcohols and amines interact with binding sites by means of**
   a. Hydrophobic region
   b. Electrovalent bond
   c. Covalent bond
   d. Hydrogen bond
6. **If drugs are slowly metabolized and stay too long in the body can cause**
   a. Good therapeutic effect
   b. Diagnostic effect
   c. Side effect
   d. Can't say
7. **Desensitization may occur when an agonist is bound to its receptor for**
   a. Short period of time
   b. Long period of time
   c. Both a & b is correct
   d. None of above
8. **Agonist are the compounds**
   a. Class of receptor
   b. Activates the receptor
   c. Blocks the ligands
   d. Mimic the natural ligands

Q-2 **Answer the following (Any Seven).** 2 × 7

1. Describe molar refractivity.
2. Define Partition Coefficient.
3. Give the importance of pharmacophore.
4. What is the role of lead compound?
5. What is the self-destruct drug?

PTO...

6. Describe the method to make drug less toxic.

7. Elaborate the Endogenous compounds as drug.

8. What are receptors?

9. What is tolerance and dependence?

Q-3 A. Describe Craig plot. Elaborate the important information drawn out from the plot with suitable example. 6

B. Discuss the importance of 3D QSAR in the design of new drug. 6

OR

B. What is Topliss scheme? Discuss the flow diagram and give the rationale of the diagram. 6

Q-4 A. Explain the binding role of ester, amide and amines. 6

B. Discuss the major consideration on Drug development.

OR

Describe the rational approach of drug design. 6

B.

6

Q-5 A. Discuss the various methods for Making drugs more resistant to chemical and enzymatic degradation. 6

B. Write a note on Pro-drug. 6

OR

B. Highlight the various strategies adopted to make drug less resistance to drug metabolism. 6

Q-6 A. How does the message get received by the receptor? 6

B. Describe the various catalytic role of enzyme. 6

OR

B. Give the method to design antagonist and also show Antagonists interaction with the binding site. 6

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