Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. – SEMESTER – II • EXAMINATION – WINTER • 2015

Subject Code: 2920201 **Date: 09-12-2015**

Subject Name: Drug Design and Discovery

Time: 10:30 am - 01:30 pm **Total Marks: 80**

Instructions:

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Discuss the importance of pharmacodynamics in drug discovery with suitable examples.	**08**
	(b)	Enumerate various statistical methods used for QSAR and discuss any two.	**08**
Q.2	**(a)**	What do you mean by force field? Describe various methods for energy minimization.	**08**
	(b)	Discuss the binding interactions between drug and enzyme and describe drug design based on enzyme inhibition.	**08**
Q.3	**(a)**	Discuss pharmacophore mapping in ligand based drug design.	**08**
	(b)	Write a note on molecular dynamics.	**08**
Q.4	**(a)**	Discuss the use of NMR spectroscopy in target identification.	**08**
	(b)	Write in detail about lead identification and lead optimization.	**08**
Q.5	**(a)**	What is a QSAR? Discuss various QSAR parameters.	**08**
	(b)	What is docking? Describe various docking methods.	**08**
Q. 6	**(a)**	Enumerate various physicochemical properties important for drug action and discuss any two of them.	**08**
	(b)	Describe the effect of optical and geometrical isomerism on biological action in detail.	**08**
Q.7	**(a)**	Discuss quantam mechanical approach as computation method.	**08**
	(b)	Write in detail about COMFA and COMSIA methods of QSAR.	**08**

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