

Dr. Uday

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS-2022

MSc-4 Semester (BT)

COURSE CODE: Drug Discovery and Development

MAX. MARKS: 25

COURSE NAME: 20MSWBT432

COURSE CREDITS: 02

MAX. TIME: 1hr30 min

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*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

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1. Topoisomerase poisons stabilize the enzyme-DNA complex. How this concept is beneficial in drug design? [2.5 Marks]
2. What is competitive inhibition? How antifreeze poisoning could be managed? [2 Marks]
3. Combinatorial library synthesis of drug like molecules. Explain with suitable example. [2.5 Marks]
4. Rational drug design, based on understanding three dimensional structures and physiochemical properties of drugs and receptors. [2 Marks]
5. What is homology modelling and how does it impact drug design? [2 Marks]
6. Briefly discuss Hammett substituent constant with benzoic acid as an example. [2]
7. If Benzene has a logP value of 2.13. What would be the logP value of Chlorobenzene? The substituent hydrophobicity value of Chlorine is 0.71. [2]
8. What is QSAR? Design a QSAR study by assuming a set of 25 synthetic molecules. [5 Marks]
9. Using Topliss how would you synthesis a more potent molecule. Use Benzenesulphonamide as an example and explain. [5 Marks]