JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2025

B.Tech-VI Semester (BI)

COURSE CODE(CREDITS): 18B11BI612 (3)                     MAX. MARKS: 15

COURSE NAME: Computer Aided Drug Design

COURSE INSTRUCTORS: Dr. Raj Kumar                        MAX. TIME: 1 Hour

*Note:* *(a) All questions are compulsory.*

*(b) The candidate is allowed to make Suitable numeric assumptions wherever required*

*for solving problems*

| Q.No | Question | CO | Marks |
|------|----------|-----|-------|
| Q1 | Choice of computer-aided drug design strategies may depend on existing knowledge. Discuss, how does structure-based drug design differ from ligand-based drug design? | 1 | 2 |
| Q2 | Identifying candidate molecules targeting therapeutic biomolecules and eliciting desired responses, is a crucial step in drug discovery. Discuss the role of high-throughput screening and virtual screening in drug discovery. | 1-2 | 3 |
| Q3 | There are several stages in the HIV life cycle. Discuss the role of the HIV protease enzyme in the life cycle of the virus, and how do protease inhibitors help in the treatment of HIV? | 1 | 3 |
| Q4 | List the names of some drug targets in COVID-19 disease. | 1 | 2 |
| Q5 | Discuss important characteristics of a good drug target. | 2 | 2 |
| Q6 | Short notes: <br> a) Clinical stage in drug discovery <br> b) Drug repurposing <br> c) Lead compound | 1-2 | (1X3=3) |