

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST 2 EXAMINATION- Apr 2018
B.Tech. Dual Degree/M.Tech/ Ph.D.

COURSE CODE: 14M11BT215
COURSE NAME: Metabolic Engineering
COURSE CREDITS: 3

MAX MARKS: 25
MAX. TIME: 1.5 Hrs.

Note: All questions are compulsory. Attempt all questions of a particular section at one place. Answer each question to the point.

- Q1.a). Give two examples of precursors of alkaloids. (2 marks)
- b). Explain the transport method of alkaloids in the biological systems. (3 marks)
- Q2. Why metabolic engineering is considered as directed improvement/evolution strategy? (3 marks)
- Q3. Explain a metabolic strategy for elevated production of lysine using fermentation process. Also explain how this metabolic pathway is regulated by feedback regulation. (3 marks)
- Q4. Explain a gel based proteomic work flow for identification of novel expressed enzymes of metabolic pathway. (6 marks)
- Q5. Define the following terms in brief. (8 marks)
- a) Peptide mass fingerprinting
- b) Biosynthetic pathways of cholesterol