

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- FEB 2019

M.Tech. (Biotech.) /BTDD Xth Semester

COURSE CODE: 14M11BT215

MAX. MARKS: 15

COURSE NAME: Metabolic engineering

COURSE CREDITS: 03

MAX. TIME: 1.0 Hrs

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

- Q1.** Explain the processes of various enzymatic regulations for a metabolic pathway with suitable example. (2 marks) (CO-II)
- Q2.** What are anaplerotic reactions and how these reactions are required in maintenance of citric acid cycle. (3 marks) (CO-I)
- Q3.** Answer/explain the following questions. (CO-I)
- a) Phosphoanhydride bond has less stable resonance than its product. (1.5 marks)
 - b) How does energy from food get transferred to ATP for storage? (1.5 marks)
 - c) What are the common strategies used for metabolic engineering? (2 marks)
- Q4.** Explain the following in brief. (5 marks) (CO-I)
- a) Acetyl COA versatility under different metabolic states
 - b) Differentiate between primary and secondary metabolism