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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST 2 EXAMINATION- Oct. 2019

M.Sc. Biotechnology (1st Semester)

COURSE CODE: 18MS1BT113

MAX. MARKS: 25

COURSE NAME: Biochemistry and intermediary metabolism

COURSE CREDITS: 02

MAX. TIME: 1.5 Hrs

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

- Q1. Name the target of drug chloroindole-carboxamides. (1 mark) (COI)**
- Q2. Define the significance of following. (9 marks) (COII, COIII)**
- a) Liposomes
 - b) Carnitine molecule in fatty acid catabolism
 - c) Differentiate between gluconeogenesis and glycogenesis
- Q3. Explain the metabolic steps which show the linkages between fatty acid metabolism and carbohydrate metabolism. (3 marks) (COIII)**
- Q4. Explain various steps of beta oxidation and explain how it is similar to various steps of TCA cycle? (3 marks) (COIII)**
- Q5. A genetic defect in the isoform of an enzyme expressed in liver causes the following symptoms: After eating a carbohydrate rich meal, elevated blood levels of glucose, lactate, & lipids. During fasting, low blood glucose & high ketone bodies.**
- a) Name the enzyme of liver which gets defective? (2 marks) (COI)
 - b) Explain the possible biochemistry of above mentioned symptoms. (3 marks) (COIII)
- Q6. Explain, how glycogen synthesis and glycogen degradation is regulated in terms of energy state of an individual? (4 marks) (COIII)**