

TEST 2 EXAMINATION - OCTOBER 2018

B.Tech Semester (IIIrd)

COURSE CODE: 10B11BT312

MAX. MARKS: 25

COURSE NAME: BIOCHEMISTRY

COURSE CREDITS: 04

MAX. TIME: 1.5 HRS

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Marks and CO are indicated against each question in square brackets.

Q1. Why conversion of glucose into glucose 6 phosphate is required and also mention the enzyme which is responsible for this conversion. (1 mark) (CO II)

Q2. Define the role of following molecules in human metabolism. (2 marks) (CO III)

a) Folic acid b) Thymine pyrophosphate c) Mg^{2+} d) Ionic acid

Q3. Is arsenic toxic to human body? Justify your answer by a suitable example. (3 marks) (CO II)

Q4. What is the fate of pyruvate during anaerobic glycolysis in eukaryotic cells?

(3 marks) (CO IV)

Q5. Define the following in brief.

a) Structural characteristics of adenine and thymine (3 marks) (CO I)

b) Lesch-Nyhan syndrome (3 marks) (CO V)

c) Differentiate between glycolysis and gluconeogenesis (3 marks) (CO III)

d) Pyruvate dehydrogenase complex and substrate channeling (3 marks) (CO II)

Q6. Explain the three essential biochemical reactions and their enzymes for control of glycolysis.

(4 marks) (CO IV)