

## TDC Even Semester Exam., 2019

BIOTECHNOLOGY  
( Honours )

## ( 2nd Semester )

Course No. : BTCH-201

## ( Biochemistry—II )

Full Marks : 35

Pass Marks : 12

Time : 2 hours

*The figures in the margin indicate full marks  
for the questions*Answer **all** questions

1. (a) Describe the mechanism of light reception by chlorophyll molecules during photosynthesis. 3
- (b) Give comparative accounts of C3, C4 and CAM plants. 3
- (c) What do you mean by red drop? 1

**OR**

2. (a) Write the reactions of photorespiration. What is the significance of photorespiration? 3+2=5

(b) Differentiate between cyclic and non-cyclic photophosphorylation. 2

3. (a) Where does citric acid cycle take place? 1
- (b) Write the reactions of citric acid cycle. 5
- (c) Why is citric acid cycle also called TCA cycle? 1

**OR**

4. (a) Differentiate between glycolysis and TCA cycle. 1
- (b) Name different components of mitochondrial electron transport system with their functions. 4
- (c) Add a note on ATPase pump. 2
5. (a) Write about the reactions of pentose phosphate pathway. Add a note on its significance. 4+1=5
- (b) Add a note on significance of oxidative phosphorylation. 2

**OR**

6. Write short notes on the following :  $3\frac{1}{2} \times 2 = 7$
- (a) Hormones secreted by adrenal glands
- (b) Role of gibberellic acid

( 3 )

7. (a) With suitable examples, describe the general role of enzymes in metabolic cell processes. 5

(b) What do you mean by active site? Write the function of an active site. 1+1=2

**OR**

8. (a) Define coenzyme. 1

(b) Discuss the effects of the following on enzyme activity : 2×3=6

(i) Competitive Inhibitors

(ii) Noncompetitive Inhibitors

(iii) Substrate Concentration

9. (a) With schematic diagram, describe the process of isolation of enzymes. 4

(b) Write about the role of enzymes in the production of chemical compounds. 3

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