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**BR—277—2016**

**FACULTY OF SCIENCE**

**M.Sc. (First Year) (Second Semester) EXAMINATION**

**NOVEMBER/DECEMBER, 2016**

**(CBCS Course)**

**BIOTECHNOLOGY**

**Paper BT-VIII**

**(System Physiology)**

**(Tuesday, 22-11-2016)**

**Time : 10.00 a.m. to 1.00 p.m.**

*Time—Three Hours*

*Maximum Marks—75*

*N.B. :—* (i) Attempt *All* questions.

(ii) *All* questions carry equal marks.

(iii) Draw neat and well labelled diagrams wherever necessary.

1. Define enzymes. Describe in detail classification of enzymes. 15

*Or*

(a) Explain in brief effect of temp and pH on reaction rate. 8

(b) Write in detail about product inhibition. 7

2. Give the mathematical expression of Michaelis-Menten equation. 15

*Or*

(a) Describe in detail different types of enzyme inhibitors. 8

(b) Write in brief about significance of  $V_{\max}$  and  $K_m$ . 7

3. Describe in detail methods of immobilization. 15

*Or*

(a) Describe in detail enzyme activity. 8

(b) Write a note on covalent modification. 7

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4. Define photosynthesis. Describe in detail electron transport chain. 15

Or

(a) Describe in detail citric acid cycle. 8

(b) Explain in brief  $C_3$  pathway. 7

5. Write short notes on any *three* : 15

(a) LHC

(b) Glycolysis

(c) Active site

(d) Denovo pathway

(e) CAM.

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