This question paper contains **2** printed pages]

# W—43—2018

## FACULTY OF SCIENCE

## B.Sc. (Third Year) (Sixth Semester) EXAMINATION

## OCTOBER/NOVEMBER, 2018

**(New Course)**

BOTANY

Paper XIV

(Plant Metabolism, Biochemistry and Biotechnology)

**(Friday, 12-10-2018)** **Time : 10.00 a.m. to 12.00 noon**

*Time*—2 *Hours* *Maximum Marks*—40

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

(*ii*) *All* questions carry equal marks.

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

1. What is photophosphorylation ? Describe the process and significance of cyclic photophosphorylation. 8

*Or*

Write in brief :

(*a*) Ultrastructure and functions of chloroplast

(*b*) Lactic acid fermentation.

2. Define Nitrogen fixation. Describe symbiotic nitrogen fixation. 8

*Or*

Write in brief :

(*a*) Induced fit model of enzyme action

(*b*) Classification of enzymes.

3. What is micropropagation ? Describe technique and applications of micropropagation. 8

*Or*

Write in brief :

(*a*) Synthetic seeds

(*b*) Production of disease free plants.

P.T.O.

4. Define genetic engineering. Describe various cloning vectors used in genetic engineering. 8

*Or*

Write in brief :

(*a*) Transgenic plants

(*b*) Restriction endonuclease.

5. Write short notes on (any *four*) : 8

(*a*) Significance of Glycolysis

(*b*) Structure of ATP

(*c*) Holoenzyme

(*d*) Nitrification

(*e*) Explant

(*f*) *Agrobacterium tumefacines*.