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**R—46—2017**

**FACULTY OF SCIENCE**

**B.Sc. (Third Year) (Fifth Semester) EXAMINATION**

**MARCH/APRIL, 2017**

**(New Course)**

**BOTANY**

**Paper IIX**

**(Plant Physiology)**

**(Wednesday, 29-3-2017)**

**Time : 10.00 a.m. to 12.00 noon**

*Time—2 Hours*

*Maximum Marks—40*

- N.B. :—*
- (i) All questions are compulsory.*
  - (ii) All questions carry equal marks.*
  - (iii) Draw neat and well labelled diagrams wherever necessary.*

1. Define transpiration and describe theories in detail. 8

*Or*

(a) Transpiration pull theory. 4

(b) Imbibition and plasmolysis. 4

2. Explain source, deficiency symptoms and their role of Nitrogen, Phosphorus and Potassium. 8

*Or*

(a) Munch-mass flow hypothesis. 4

(b) Ion exchange theory. 4

3. Describe measurement of growth and factors affecting growth. 8

*Or*

(a) Practical applications of Gibberellins. 4

(b) Methods of breaking seed dormancy. 4

P.T.O.

4. What are secondary metabolites ? Explain structure and biological functions of tannins and organic acids. 8

Or

(a) Biological functions of Alkaloids. 4

(b) Biological functions of proteins. 4

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

(i) Osmosis

(ii) Paratonic movement

(iii) Role of Zn

(iv) Photoperiodism

(v) Starch and Cellulose functions

(vi) Functions of proteins.