

S.No. 8

12PBCZ02

(For the candidates admitted from 2012–2013 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

Second Semester

Biochemistry

PLANT BIOCHEMISTRY

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) Give a note on chloroplast structure.

Or

(b) Write any five differences between photo system I and II.

2. (a) Give an account on hydroponics.

Or

(b) Explain the formation of root nodules in leguminous plants.

3. (a) Describe the steps involved in Abscisic Acid biosynthesis.

Or

- (b) Explain any two methods of breaking seed dormancy.

4. (a) What are secondary metabolites? How do they differ from primary metabolites?

Or

- (b) Write a brief account on lignin.

5. (a) What are transgenic plants? Why they are required?

Or

- (b) Enumerate the applications of plant tissue culture.

SECTION B — (5 × 10 = 50 marks)

Answer ALL questions.

6. (a) Discuss the mechanism of the light reaction in photosynthesis.

Or

- (b) Write an essay on factors affecting transpiration.

7. (a) What are macronutrients? Discuss their role and deficiency symptoms.

Or

- (b) Define biogeochemical cycles. Explain the types with two examples each.

8. (a) Give a detailed account on physiological effects of gibberellins and cytokinins.

Or

- (b) Describe the biochemical changes occurs during seed germination.

9. (a) Write an essay on flavonoids.

Or

- (b) Discuss various methods of plant disease control.

10. (a) Explain the vector-mediated gene transfer method adopted in plant genetic transformation.

Or

- (b) Describe with suitable example, how transgenic plants exerts biotic resistance.