

S.No. 1734

12UBCS02

(For the candidates admitted from 2012-2013 onwards)

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

Third Semester

Biochemistry

SBEC — PLANT BIOCHEMISTRY

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define plasmodesmata. Write about its role in plant cell.
2. What is meant by Ascent of sap?
3. Write about the importance of phycobilins in plants.
4. What is meant by cranz anatomy? Add a note on it.
5. Define asymbiotic nitrogen fixation.
6. What is the role of nitrogenase enzyme in nitrogen fixation?



7. What are growth inhibitors in plants? Add a note on it.
8. Write about the physiological effects of cytokinins.
9. List out the medicinal value of any two seeds.
10. What are secondary metabolites? Give examples.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Discuss the factors affecting absorption of water.

Or

- (b) Explain the factors affecting transpiration.

12. (a) Add a note on non cyclic photophosphorylation.

Or

- (b) Describe the reactions of CAM cycle.

13. (a) Explain how phosphorus is cycled and assimilated in plants.

Or

- (b) Explain the root nodule formation in plants.

14. (a) Write about the physiological effects of ethylene.

Or

- (b) Explain the physiological role of auxin.

15. (a) Write about the medicinal value of any two plants.

Or

- (b) Explain the various methods involved in secondary metabolites identification.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE out of Five questions.

16. Write an account on mechanism of stomatal opening.
17. Explain the reactions of Calvin cycle.
18. Describe in detail the biochemistry of nitrogen fixation and ammonia assimilation.
19. Explain the biosynthesis, mode of action and physiological effects of gibberellins.
20. Elaborate the medicinal value of amla and turmeric.