

P. P. SAVANI UNIVERSITY

Third Semester of M.Sc. Examination

December-2021

SSBT8030- Agricultural Biotechnology

07.12.2021, Tuesday

Time: 09:00 p.m. to 11:30 p.m.

Maximum Marks: 60

Instructions:

1. The question paper comprises of two sections.
2. Make suitable assumptions and draw neat figures wherever required.
3. Use of scientific calculator is allowed.

Section-I

Q.1 Very Short Questions (Attempt any five) [10]

- 1.1 Differentiate light and dark reactions of photosynthesis
- 1.2 Which region of light is to absorb by Chlorophyll-a & Chlorophyll-b?
- 1.3 Give importance of nitrogen in nature
- 1.4 Define nodule and its role in nitrogen fixation
- 1.5 Enlist stem cells involve in root development
- 1.6 Which phytohormone is to be first discovered?

Q.2 Write Short Notes (Attempt any two) [06]

- 2.1 Short note on CAM pathway along with all biochemical reactions
- 2.2 Give structure and function of nitrite reductase
- 2.3 Explain Axial and radial patterning of embryogenesis

Q.3 Detail questions (Attempt any two) [14]

- 3.1 short note on growth and development of meristem
- 3.2 Explain in detail about calvin cycle along with all biochemical reactions
- 3.3 Give an account on Gibberellins biosynthesis and metabolism

Section-II

Q.1 Very Short Questions (Attempt any five) [10]

- 1.1 Explain morphological marker
- 1.2 Differentiate dominant and co-dominant marker
- 1.3 Give full form of RFLP & AFLP marker
- 1.4 Define: Marker Assisted selection (MAS)
- 1.5 Give a name of causal organism for citrus canker disease
- 1.6 Define: Siderophore

Q.2 Write Short Notes (Attempt any two) [06]

- 2.1 Give classification of markers
- 2.2 Differentiate RFLP and AFLP marker
- 2.3 Shot note on terpenes compound

Q.3 Detail questions (Attempt any two) [14]

- 3.1 Define: marker. Give its classification and explain biochemical and molecular marker with 01 suitable example
- 3.2 Explain in details about *A. tumefaciens* mediated gene transfer method
- 3.3 Give an account on "Late blight Potato"