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**BOS 505**

**Third Semester M.Sc. Degree Examination, December 2018**  
**(CBCS)**  
**BOTANY**  
**Plant Tissue Culture**

Time : 3 Hours

Max. Marks : 70

I. Answer **any three** of the following (**Each answer not exceeding 5 pages**) :

**(3×10=30)**

- 1) Write a detailed account on isolation, culture and fusion of protoplasts.
- 2) Give a detailed account of aseptic techniques employed in plant tissue culture.
- 3) Discuss various steps employed in cryopreservation. Add a note on its importance in germplasm storage.
- 4) Describe the isolation of somaclonal variants. Add a note on its importance in plant improvement.
- 5) What are haploids ? How are they produced ? Describe their importance in plant breeding.

II. Write short notes on **any six** of the following (**Each answer not exceeding 3 pages**) :

**(6×5=30)**

- 6) Artificial seeds.
- 7) Applications of micropropagation.
- 8) Organogenesis and embryogenesis.
- 9) Synchrony in cell suspension cultures.
- 10) Secondary metabolites.
- 11) Application of endosperm culture.
- 12) Characterization of hybrids.
- 13) Meristem culture.

P.T.O.



III. Write short notes on **any five** of the following (**Each** answer **not** exceeding **1** page) : **(5×2=10)**

14) HEPA filters.

15) Triploids.

16) Gelling agents.

17) Macronutrients.

18) Suspension cultures.

19) Cybrids.

20) Embryo culture.

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