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VI Semester B.Sc. Degree Examination, September/October - 2022

**BIOTECHNOLOGY**

**Plant Biotechnology**

(F+R CBCS Scheme 2016-2017 Onwards)

**Paper : VII**



**Time : 3 Hours**

**Maximum Marks : 70**

**Instructions to Candidates :**

**Draw neat diagrams wherever necessary**

**SECTION - A**

**I Write short notes on the following:**

**(5 × 2 = 10)**

- 1) Filter sterilization.
- 2) Calliclones.
- 3) Sodium hypochlorite
- 4) CSIR
- 5) What can be patented?

**SECTION-B**

**II Answer any Four of the following**

**(4 × 5 = 20)**

- 6) Write a note on Gibberellins.
- 7) Explain meristem culture.
- 8) List the steps involved in in-vitro organogenesis.
- 9) Write a note on somatic hybridization.
- 10) Explain Plant breeder's Rights.

**[P.T.O.]**



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**SECTION - C**

**III. Answer any THREE of the following.**

**(3 × 10 = 30)**

- 11) Explain the different types of embryoculture Add a note on its applications.
- 12) Discuss in detail transgenic plants in Pest resistance with a suitable example.
- 13) Explain the different techniques of protoplast culture in detail.
- 14) Discuss the role of plant tissue culture in forestry.
- 15) Give an account on
  - a) Secondary metabolites
  - b) Immobilized plant cells.

**SECTION - D**

**IV. Answer the following in one word or a sentence each.**

**(10 × 1 = 10)**

- 16) Explant
  - 17) Expand 2, 4-D
  - 18) Thiamine
  - 19) Totipotency
  - 20) Somatic embryo
  - 21) Mericlone
  - 22) Macerozyme
  - 23) Osmoticum
  - 24) Heterokaryon
  - 25) Expand GATT.
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VI Semester B.Sc. Degree Examination, September/October - 2022

**BIOTECHNOLOGY**

**Industrial Biotechnology**

**(F+R CBCS Scheme 2016-2017 Onwards)**

**Paper : VIII**



**Time : 3 Hours**

**Maximum Marks : 70**

**Instructions to Candidates :**

**Draw Neat Labelled diagrams wherever necessary**

**SECTION - A**

**I. Write short notes on the following**

**(5 × 2 = 10)**

- 1) Cryopreservation
- 2) Solid State Fermentation
- 3) DownStream Processing
- 4) HOPS
- 5) Amylase

**SECTION - B**

**II. Answer any Four of the following**

**(4 × 5 = 20)**

- 6) Write a note on Radiation methods of sterilization
- 7) Give an account on importance of microbial enzymes in food.
- 8) Explain the production of Citric Acid.
- 9) Explain Single cell Oil
- 10) Write a note on mass culture of spirulina.

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**SECTION - C**

**III. Answer any THREE of the following.**

**(3 × 10 = 30)**

- 11) Explain different components of fermenter.
- 12) Give a detailed account on Industrial production of Penicillin
- 13) Describe the industrial production of enzymes. Add a note on their uses.
- 14) Write in detail about Fermented foods.
- 15) Write short notes on
  - a) Capsaicin Production
  - b) Microbial Polysaccharide.

**SECTION - D**

**IV. Answer the following**

**(10 × 1 = 10)**

- 16) What is inoculum
  - 17) Define Idiophase
  - 18) What are antifoam agents.
  - 19) What is submerged fermentation
  - 20) Define DYNO-MILL
  - 21) Expand HPLC
  - 22) Name the microorganism used in industrial production of glutamic acid.
  - 23) Mention the enzymes used in Leather Industry.
  - 24) What is Buttermilk.
  - 25) The bioactive component of saffron that gives colour.
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