

Roll No. :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

BFMS-463

M.Sc. (Final) Examination, 2023

BIOTECHNOLOGY

Paper - VIII

(Industrial Biotechnology)

Time : 3 Hours]

[Maximum Marks : 75

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

Section-B

(Marks : 5 × 5 = 25)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **5** marks.

Section-C

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

Section-A

1. (i) Name the forces involved in chromatography.
- (ii) Name the techniques used for cell immobilization.
- (iii) Differentiate between Beer and Wine.
- (iv) Why is canning done ?
- (v) Define Cybrid.

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- (vi) What is Functional male sterility ?
- (vii) Define Synthetic seeds.
- (viii) What is the principle of micropropagation ?
- (ix) What material is used for greenhouses ?
- (x) Enlist the environmental parameters controlled in a green house.

Section–B

2. Write a note on Fed-Batch Culture. Explain.

Or

Write a note on vivid type of culture media used in industrial fermentation.

3. Write a note on methods of food preservation.

Or

Explain industrial production of beer and butanol.

4. Explain the processes used for crop yield and quality improvement.

Or

Write a note on applications of genetic engineering in raising insect and virus resistant plants.

5. What is molecular farming ? Discuss various types and the applications of molecular farming.

Or

Discuss production process, application and limitation of edible vaccines.

6. Write a note on hardening and acclimatization process.

Or

Write an inside into the commercial aspects and opportunities of Plant tissue culture.

Section-C

7. Write notes on the following :
 - (a) Types of fermentation
 - (b) Whole cell Immobilization
8. Explain industrial production of antibiotics. Add a note on Single cell proteins.
9. Write a detailed note on somatic hybridization and cybridization.
10. Write a detailed note on synthetic seed technology. Add a note on role of robotics in plant production.
11. Why is green houses and green home technology important ? Explain.