

Roll No. :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

BFMS-460

M.Sc. (Final) Examination, 2023

BIOTECHNOLOGY

Paper - V

(Cell and Tissue Culture)

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) What is 'Subculture' ?
- (ii) Define the term Totipotency.
- (iii) What is 'Cybrid' ?

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- (iv) Give *two* examples of intergeneric hybrids.
- (v) What are 'Branch Point Enzymes' ?
- (vi) Name *two* steroids obtained from plants.
- (vii) Write the names of plants and their families from which we get quinine and scopolamine.
- (viii) Abbreviate 'EPSPS'.
- (ix) What are Monoclonal Antibodies ?
- (x) What is RTPCR ?

Section-B

2. Describe Aseptic Condition for tissue culture.

Or

Differentiate batch culture from continuous culture.

3. Explain advantages of Micropropagation.

Or

Describe Artificial Seeds.

4. Explain Tropane Alkaloids.

Or

Describe Biotransformation.

5. How can you produce disease-free plants ? Explain it with suitable examples.

Or

Explain the natural methods of gene transfer.

6. What are the measuring parameters of Growth ?

Or

What are MAC and HAC Vectors ?

Section–C

7. Illustrate with suitable diagram the technique of protoplast culture.
8. Write in detail the application of tissue culture in Agriculture.
9. Write an essay on commercially used plant alkaloids and steroids.
10. Give a detailed account of Transgenic Plants.
11. Write in detail the Artificial Media used for culture of animal cells and tissues.