

Introduction to Biotechnology

Q.P. Code : 780500

(2½ Hours)

[Total Marks : 75

- N.B. :** (1) Attempt **all** questions
(2) **All** questions carry **equal** marks
(3) Draw **diagrams** wherever **necessary**

1. Do as directed. (Any **fifteen**)

15

- (1) Name the causative agent of Anthrax.
- (2) Give one example of a traditional fermented food.
- (3) Name one Biotechnology company of foreign origin.
- (4) Which single event marked the start of recombinant DNA technology?
- (5) Name one genetic food sold in the market.
- (6) Explain the term 'Biotechnology'.
- (7) State the significance of GM tomato.
- (8) What is meant by GM food?
- (9) State the significance of *Agrobacterium* in plant transgenesis.
- (10) Define 'Plantibodies'.
- (11) Name virus used for transfer of transgene to plants.
- (12) Define 'Molecular Pharming'.
- (13) What is meant by 'IPR'?
- (14) What is 'Red Biotechnology'?
- (15) Give one example of a bacterium used in food industry.
- (16) Define :- Associative growth.
- (17) State any one stage of vinegar production.
- (18) Give any one example of perishable food
- (19) _____ unit operation is involved in freezing.
 - (a) Addition of heat
 - (b) Removal of heat
 - (c) dicing
 - (d) Homogenization
- (20) What is starter culture.

TURN OVER

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2. (a) Describe the history of development of Biotechnology as a science. 8
 (b) Discuss plant and animal Biotechnology. 7

OR

- (c) Elaborate on differences between modern biotechnology from traditional biotechnology. 8
 (d) Explain how health care and agricultural sectors have been benefited from advances in Biotechnology. 7

3. (a) Elaborate on 'Golden Rice'. 8
 (b) Discuss different ethical concerns regarding GM technology. 7

OR

- (c) Elaborate on : BT cotton 8
 (d) Explain plant based edible vaccines. 7

4. (a) Discuss the role of Biotechnology in enhancement of food Quality. 8
 (b) Schematically describe production of Ethanol, using fermentation technology. 7

OR

- (c) Explain the role of various microorganism in food production. 8
 (d) Schematically describe production of any one Beverage studied by you, using fermentation technology. 7

5. Write short notes on any three of the following :- 15
 (a) Human Genome Project
 (b) Public perception of Biotechnology
 (c) Patents and Trade secrets
 (d) GM Papaya
 (e) Applications of fermentation Technology
