

Enrollment No: \_\_\_\_\_

Exam Seat No: \_\_\_\_\_

# C. U. SHAH UNIVERSITY

## Winter Examination-2020

Subject Name: Fundamentals of Biotechnology

Subject Code: 5SC01FBT1

Branch: M.Sc. (Microbiology)

Semester: 1

Date: 12/03/2021

Time: 11:00 To 02:00

Marks: 70

### Instructions:

- (1) Use of Programmable calculator and any other electronic instrument is prohibited.
  - (2) Instructions written on main answer book are strictly to be obeyed.
  - (3) Draw neat diagrams and figures (if necessary) at right places.
  - (4) Assume suitable data if needed.
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### SECTION – I

**Q-1**                      **Attempt the Following questions**                      **(07)**

- |    |  |   |
|----|--|---|
| a. | Which membrane is used in northern blotting?                             | 1 |
| b. | Give the name of cell which secretes the insulin.                        | 1 |
| c. | Give the full form of GLP.   | 1 |
| d. | Ability of plant cells to regenerate into a whole plant is called_____.  | 1 |
| e. | Define – Bioethics.  | 1 |
| f. | Which technique is used to produce large number of identical antibodies? | 1 |
| g. | Give the example of Natural Genetic Engineer.                            | 1 |

**Q-2**                      **Attempt all questions**                      **(14)**

- |   |  |   |
|---|--|---|
| a | What is Insulin? Briefly describe Insulin production and applications. | 7 |
| b | Write a detail note on Transgenic Plants.                              | 7 |

**OR**

**Q-2**                      **Attempt all questions**                      **(14)**

- |   |  |   |
|---|--|---|
| a | What is DNA library? Write a detail note on Genomic Library. | 7 |
| b | Briefly describe the Agrobacterium-Mediated transformation.  | 7 |

**Q-3**                      **(14)**

What is Enzyme? Write a brief note on Enzyme Immobilization with Advantage and disadvantages.

**OR**

**Q-3**                      **Attempt all questions**                      **(14)**

- |   |   |   |
|---|---|---|
| a | Briefly describe the Southern Blotting.         | 7 |
| b | Write down a short note on Monoclonal Antibody. | 4 |



- c Define: - (1) Vaccine. 3  
 (2) Gene Therapy.  
 (3) Probe.

## SECTION – II

- Q-4 Attempt the Following questions (07)**
- a. What is the difference between PTC & Animal culture? 1  
 b. Expand: WIPO 1  
 c. What is Cosmid? 1  
 d. Which enzyme used to convert m-RNA to cDNA? 1  
 e. Define –Geographical Indication. 1  
 f. Computer programmes can be patented? True/False 1  
 g. Which blot (laboratory method) used to detect specific protein molecules from among a mixture of proteins? 1

- Q-5 Attempt all questions (14)**
- a Write a detail note on Biosafety. 7  
 b Write a brief note on Patent with advantage. 7

**OR**

- Q-5 Attempt all questions (14)**
- a Write down the applications of Biotechnology in pharmaceuticals. 7  
 b Write briefly on m-RNA isolation methods. 7

- Q-6 Attempt all questions (14)**
- a Write a detail note on Vaccine development & their Applications. 7  
 b Write briefly on Gene therapy. 7

**OR**

- Q-6 Attempt all Questions (14)**
- a Briefly describe on DNA modifying Enzyme. 7  
 b Write a detailed note on Probe Labeling Methods (Any 2). 7

