

C. U. SHAH UNIVERSITY

Winter Examination-2022

Subject Name: Fundamentals of Biotechnology

Subject Code : 5SC01FBT1

Branch: M.Sc. (Microbiology)

Semester: 1

Date: 05/01/2023

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. Define a recombinant DNA technology. **01**
- b. Give any two example of restriction enzyme. **01**
- c. Define a gene therapy. **01**
- d. Define a patent. **01**
- e. Full form: YACs. **01**
- f. What is the role of aminopterin in hybridoma technique? **01**
- g. What is a Germline gene therapy? **01**

Q-2 Attempt all questions (14)

- A** Write about an Immobilized Enzyme. **07**
B Write about a hybridoma technique with application. **07**
- OR**

Q-2 Attempt all questions (14)

- A** Write a brief note on Gene therapy. **07**
B Write any three gene transfer methods. **07**

Q-3 Attempt all questions (14)

- A** Write about a designing and labeling of primer and probes. **07**
B Write a detail note on an agrobacterium gene transfer with function of VIR genes. **07**

OR

Q-3 (14)

Write a detail note on cDNA library.



SECTION – II

- Q-4** **Attempt the Following questions** **(07)**
- a. Define a probe. **01**
 - b. Define a Monoclonal Antibody. **01**
 - c. Define: Continuous cell culture **01**
 - d. Which media is used for growing the hybridoma cell? **01**
 - e. Write full form: GMP **01**
 - f. How does host bacteria protect their own DNA against restriction enzyme? **01**
 - g. What is a competence Cell ? **01**
- Q-5** **Attempt all questions** **(14)**
- A** Write a note on Intellectual Property Rights. **07**
 - B** Write about a biosafety. **07**
- OR**
- Q-5** **Attempt all Questions**
- A** Write a note on Recombinant Insulin Production. **07**
 - B** Write about a Good Manufacturing Practice. **07**
- Q-6** **Attempt all questions** **(14)**
- A** Write a detail note on Hepatitis B vaccine. **07**
 - B** Write a note on Southern Blotting. **07**
- OR**
- Q-6** **(14)**
- Write a detail note on Recombinant DNA technology

