

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharmacy - SEMESTER– VIII • EXAMINATION – SUMMER-2018

Subject Code:2280015

Date: 09/05/2018

Subject Name: Genetic Engineering and Gene Therapy

Time:10:30am to 01:30pm

Total Marks: 80

Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|-------------|----------------------------------------------------------------------------------------------------------------------|-----------|
| Q.1 | (a) Write applications of genetic engineering. | 06 |
| | (b) Explain gene organization in cell. | 05 |
| | (c) Explain synthesis of cDNA. | 05 |
| Q.2 | (a) Explain the methods used for isolation of RNA. | 06 |
| | (b) Explain about DNA modifying enzymes. | 05 |
| | (c) Write a note on transformation. | 05 |
| Q.3 | (a) Enumerate the types of vectors. Explain any one vector in detail with diagram. | 06 |
| | (b) Write in detail about gene cloning with neat labeled diagram. | 05 |
| | (c) Write short note on Transgenic plants. | 05 |
| Q.4 | (a) What is PCR? Explain applications of PCR in detail. | 06 |
| | (b) Write a short note on handling and quantification of nucleic acids. | 05 |
| | (c) Enumerate different of DNA sequencing. Explain any one method of DNA sequencing in detail with suitable diagram. | 05 |
| Q.5 | (a) What are monoclonal antibodies? How they are produced using the techniques of genetic engineering? | 06 |
| | (b) Explain PCR cycle in detail. | 05 |
| | (c) Explain about DNA vaccines against Cancer. | 05 |
| Q. 6 | (a) Write a note on Automatic DNA sequence. | 06 |
| | (b) Write about r-DNA technology in treatments of medical conditions. | 05 |
| | (c) Write short note on gene therapy for hematopoietic disorders, | 05 |
| Q.7 | (a) Write a note on antisense- oligonucleotide therapy. | 06 |
| | (b) Write short note on gene therapy for Neurological Diseases. | 05 |
| | (c) Discuss blotting techniques in detail. | 05 |
