

**GUJARAT NATIONAL LAW UNIVERSITY
GANDHINAGAR**

Course: **Biotechnology**
Semester-V (Batch: 2012-17)



End Term Examination: Oct-Nov. 2014

Date: 1st November, 2014

Duration: 2 hours

Max. Marks: 40

Instructions:

- Read the questions properly and write the answers in the given answer book.
- The respective marks for each question are indicated in-line.
- Do not write any thing on the question paper.
- Indicate correct question numbers in front of the answers.
- Draw **diagrams only with pencil**.
- No questions or clarifications can be sought during the exam period, answer as it is, giving reason, if any.

- | | Marks |
|--|--------------|
| Q.1 Answer the following: | (4x1= |
| a. Expand BLAST. | 04) |
| b. Which U.S agency regulated GM crops? | |
| c. What are scaffolds? | |
| d. Expand RFLP? | |
| Q.2 Answer the any three of the following: | (3x2= |
| a. Differentiate between In-vivo gene therapy and Ex vivo gene therapy. | 06) |
| b. Write short notes on Byssal fibers. | |
| c. Write short notes on gene knock outs. | |
| d. Differentiate between LMO and GMO. | |
| Q.3 Answer any five of the following: | (5x4= |
| a. What is tissue engineering? What are the cell sources for tissue engineering? | 20) |
| b. What are terminator seeds? Explain the technology involved in it. | |
| c. What are SCP'S? What are its advantages and disadvantages? | |
| d. What is biomining? Describe the steps involved in mining of copper with bacteria. | |
| e. What are artificial seeds? How is it different from natural seeds? What are its advantages? | |
| f. What are the basic principles of the Belmont report? | |
| Q.4 Answer any two of the following: | (2x5= |
| a. How does plant biotechnology can be used for restoring the degraded lands? Describe. | 10) |
| b. Why is gene transfer in animals described as transfection and not transformation? Describe different transfection methods successfully used in animals. | |
| c. Differentiate r DNA, genetic engineering and cloning? Briefly discuss the applications of r DNA technique. | |

