

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(BT) (2011 Onwards) (Sem.-3)
FOUNDATIONS OF BIOTECHNOLOGY
Subject Code : BTBT-302
Paper ID : [A1150]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A**Q1 Answer briefly :**

- a) What is the principle of Gel electrophoresis?
- b) Explain what is a monoclonal antibody.
- c) What are bio-fuels?
- d) Write a short note on Biofertilizers.
- e) What are Prebiotics?
- f) What is *in-vivo* gene therapy?
- g) What are restriction enzymes?
- h) What is density gradient centrifugation?
- i) Explain the need for safety in release of GMO's.
- j) Explain Fed batch culture.

SECTION-B

- Q2 Explain the application of biotechnology in waste water and sewage treatment.
- Q3 Give a detailed account of the different stages involved in the cell division.
- Q4 Write a short essay on the role of monoclonal antibodies in treatment of disease.
- Q5 Discuss the guidelines in terms of safety issues for the release of transgenic plants.
- Q6 Discuss how biotechnology has helped in the process of bioremediation of oil spills.

SECTION-C

- Q7 Discuss the application of enzymes in the food and detergent industry,
- Q8 Write a detailed essay on the scope of biotechnology in the next 10 years.
- Q9 **Write notes on :**
- a. Mechanism of Biogas production by microbes.
 - b. Bio-pharmaceuticals.