

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE SEM-III Examination-Dec.-2011

Subject code: 130402

Date: 24/12/2011

Subject Name: Cell Biology

Time: 2.30 pm -5.00 pm

Total marks: 70

Instructions:

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

- Q.1** (a) Give brief description about light reaction. **10**
(b) Draw a neat and labeled diagram of plant cell. **04**
- Q.2** (a) Explain structure of cell wall in Eubacteria and Archea Bacteria with a neat and labeled diagram. **07**
(b) Write a short note on the structure and function of flagella in bacteria. **07**
- OR**
- (b) Write a short note on various storage granules found in prokaryotes. **07**
- Q.3** (a) Explain passive mode of transport across plasma membrane. **07**
(b) Explain morphological types of chromosomes according to the position of centromere. **04**
(c) Define akaryotic, prokaryotic and eukaryotic cells with an example. **03**
- OR**
- Q.3** (a) Compare microtubules, microfilaments and intermediate filaments. **07**
(b) What is cytoplasm? Explain various theories regarding physical nature of cytoplasm. **04**
(c) Explain the process of germination of an endospore. **03**
- Q.4** (a) Write a short note on Nucleolus. **07**
(b) Write a short note on structure of Mitochondria. **07**
- OR**
- Q.4** (a) Explain compartmentalization of Golgi apparatus. **07**
(b) Write a short note on functions of Endoplasmic Reticulum. **07**
- Q.5** (a) Describe Hatch and Slack pathway for C₄ plants. **07**
(b) Differentiate between prokaryotic and eukaryotic ribosome. **07**
- OR**
- Q.5** (a) Discuss different types of lysosome. **07**
(b) Describe functions of peroxisome. **07**
