

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER– III - EXAMINATION – SUMMER 2014

Subject Code: 130402**Date: 04-06-2014****Subject Name: Cell Biology****Time: 02.30 pm to 05.00 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)** What is the meaning of word Eukaryotes? Discuss its characteristic features of it in detail. **07**
- (b)** Comment: mitochondria are a power house of the cell. **07**
- Q.2 (a)** How prokaryotes are differentiate from eukaryotes? Elaborate your answer. **07**
- (b)** Describe in detail about eukaryotic chromosome organization. **07**
- OR**
- (b)** Draw a neat labeled diagram of prokaryotic cell. **07**
- Q.3 (a)** Enlist and explain important functions perform by cytoskeleton network in a living system. **07**
- (b)** Define the following term with suitable example and explanation: Mesosomes, Akaryotes, pili, cilia, cytosol, basal bodies, gas vesicle **07**
- OR**
- Q.3 (a)** Discuss in detail on Gram Positive and Gram negative bacterial cell wall. **10**
- (b)** Write a note on prokaryotic ribosome. **04**
- Q.4 (a)** Explain in detail about plasmid found in prokaryotic cells. **07**
- (b)** Describe in detail about cell membrane found in prokaryotic and eukaryotic cells. **07**
- OR**
- Q.4 (a)** What are the important physiological significances played by Golgi apparatus in prokaryotes and eukaryotes? **07**
- (b)** Differentiate structurally & functionally rough and smooth endoplasmic reticulum. **07**
- Q.5 (a)** Discuss in detail with structure and functions of eukaryotic nucleus. **07**
- (b)** Describe in detail about endospore formation in adverse condition for bacterial cell. **07**
- OR**
- Q.5 (a)** Comment: Lysosome is the organelle involved in cellular digestion. **07**
- (b)** Explain the structure and components of chloroplast with its importance in plant cell. **07**
