Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–III • EXAMINATION – SUMMER 2013

Subject Code: 130402 **Date: 04-06-2013**

Subject Name: Cell Biology

Time: 02:30 pm – 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)**	Enlist and explain in brief differences between prokaryotic and eukaryotic organization.	**07**
	(b)	Write a note on cell membrane organization.	**07**
Q.2	**(a)**	Discuss in detail about chemical composition, nature and functions of cytoplasm in cell.	**07**
	(b)	Give a detail account on evolution of life.	**07**
		OR	
	(b)	Define the term vacuoles. Give structural and functional details of it.	**07**
Q.3	**(a)**	What are the structural and functional characteristics of ribosome in cell?	**07**
	(b)	Give a detail account on Gas vesicle.	**07**
		OR	
Q.3	**(a)**	Define the term endospore. Write in detail about the formation of endospore.	**10**
	(b)	Describe the composition and difference between Gram positive and Gram negative bacterial cell.	**04**
Q.4	**(a)**	What do you mean by term plasmid? Give detail about it.	**07**
	(b)	Discuss in detail about Golgi apparatus structure and functions.	**07**
		OR	
Q.4	**(a)**	"Mitochondria- the power house of the cell." Justify the statement with explanation.	**07**
	(b)	Structurally and functionally differentiate between Rough Endoplasmic Reticulum and Smooth Endoplasmic Reticulum.	**07**
Q.5	**(a)**	Write a note on Glyoxysome.	**07**
	(b)	Lysosome is known as self suicidal bag, with suitable explanation comment on it.	**07**
		OR	
Q.5	**(a)**	Describe in detail about bacterial flagella.	**07**
	(b)	Explain about organization of Eukaryotic chromosome.	**07**