Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– IV (NEW) EXAMINATION – SUMMER 2015

Subject Code: 2140405 **Date:26/05/2015**

Subject Name: CELL BIOLOGY AND INDUSTRIAL BIOTECHNOLOGY

Time: 10:30am-1.00pm **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)**	Differentiate between prokaryotic cell and Eukaryotic cell.	**07**
	(b)	Write the short note on cell cycles.	**07**
Q.2	**(a)**	Write notes on chemical composition of cell membrane.	**07**
	(b)	Write an essay on meiosis with a net diagram.	**07**
		OR	
	(b)	Write a short note on isolation and preservation of pure culture.	**07**
Q.3	**(a)**	Describe the Eukaryotic cell structure.	**07**
	(b)	Explain the basic idea on fermentation process.	**07**
		OR	
Q.3	**(a)**	Conceptualize the Gated ion channels.	**07**
	(b)	Enlist and explain the types of fermentation media.	**07**
Q.4	**(a)**	What do you understand by maturation promoting factor (MPF)?	**07**
	(b)	Why are lysosomes sometimes called suicide bags?	**07**
		OR	
Q.4	**(a)**	What do you understand by G protein – coupled receptors?	**07**
	(b)	Explain the determination of bacterial growth by turbid metric method.	**07**
Q.5	**(a)**	Apply the knowledge of fermentation process, find out the production of antibiotic – cephalosporin.	**07**
	(b)	What do you understand by Signal transduction?	**07**
		OR	
Q.5	**(a)**	Justified that statement “Mitochondria are the power house of the cell”.	**07**
	(b)	Apply the knowledge of fermentation process; find out the production of industrial enzymes.	**07**

****