Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM – SEMESTER – VIII • EXAMINATION – WINTER -2022

Subject Code: BP808TT **Date: 28/12/2022**

Subject Name: Cell and Molecular Biology

Time: 02:30pm to 05:30pm **Total Marks: 80**

Instructions:

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

Q.1	**(a)**	Explain fluid mosaic model.	**06**
	(b)	How denaturation of proteins occur? How does it affect various properties of proteins?	**05**
	(c)	Define vectors. Describe the various cloning vehicles for vectors.	**05**
Q.2	**(a)**	Describe in detail mechanism of transcription and translation process for DNA synthesis.	**06**
	(b)	Define below terms: a) Cell b) Chromosomes c) Mitosis d) Endoplasmic reticulum e) Nucleus	**05**
	(c)	What is recombinant DNA technology? Give the basic principles of recombinant DNA technology and give appropriate examples of pharmaceutical products of recombinant DNA technology.	**05**
Q.3	**(a)**	Write a note on genome mapping.	**06**
	(b)	Biomedical importance of proteins. Give general properties of protens.	**05**
	(c)	Explain in detail structure organization of proteins.	**05**
Q.4	**(a)**	Define carbohydrates. Explain TCA cycle with labled diagram.	**06**
	(b)	Give the difference between cilia and flagella.	**05**
	(c)	Classify proteins. Describe briefly peptides.	**05**
Q.5	**(a)**	Write a note on DNA structure.	**06**
	(b)	Describe in detail transcriptional regulation.	**05**
	(c)	What is dominance? Explain its various types.	**05**
Q. 6	**(a)**	Describe in detail meiosis.	**06**
	(b)	Define photosynthesis. Give description of photoreduction in oxygen phototrophs & significance of photosynthesis.	**05**
	(c)	Describe in detail protein targeting.	**05**
Q.7	**(a)**	What is peptide bond? Describe biologically important peptides.	**06**
	(b)	Describe genetic code. Give salient features of the genetic code.	**05**
	(c)	Briefly describe the molecular events for regulation of G1/S transition phase and pathways of apoptosis.	**05**

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