

Seat No./Enrollment No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BACHELOR OF ENGINEERING – SEMESTER 4 – EXAMINATION – SUMMER 2026

Subject Code: 3140309

Date: 19/05/2026

Subject Name: Psychological Processes

Time: 10:30 AM TO 01:00 PM

Total Marks: 70

Instructions:

- 1. Attempt all questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**
- 4. Simple and non-programmable scientific calculators are allowed.**

- Q.1**
- (a) What is Psychology? What are biological foundations of Behavior? **03**
 - (b) Explain the terms: (a) Synapse, (b) Neurotransmitter **04**
 - (c) Explain in details Biological and Socio Cultural Basis of Behavior with examples. **07**
- Q.2**
- (a) Define the terms: Sensation, Perception and Stimulus. **03**
 - (b) Draw and explain the structure and function of neuron. **04**
 - (c) Explain basic structure of eye with neat diagram. Describe principles behind color vision. **07**
- OR**
- Q.2**
- (c) Explain the process of taste, its four basic stimulus and smell with necessary diagrams. **07**
- Q.3**
- (a) 'Soldiers who are injured in battle may experience no pain', justify this sentence by Gate Control Theory of pain. **03**
 - (b) Explain sensory adaption with necessary example. **04**
 - (c) Explain Gestalt's Laws of Perceptual Organization. Identify Top-Down and Bottom-Up processing. **07**
- OR**
- Q.3**
- (a) Enlist and explain the function of skin. **03**
 - (b) Contrast absolute threshold and difference threshold. **04**
 - (c) Determine the importance of Perceptual illusion. Specifically explain visual illusion in detail. **07**
- Q.4**
- (a) Draw and explain three stage model of memory. **03**
 - (b) Explain fixed and variable ratio schedule in operant conditioning type of learning. **04**
 - (c) Define the term learning. Explain in detail principle of classical conditioning learning. **07**
- OR**
- Q.4**
- (a) Define the terms: Episodic memory, semantic memory and procedural memory. **03**
 - (b) Enlist and explain steps involved in Behavior Modification. **04**
 - (c) Explain principle of Operant conditioning type of learning in detail. **07**

Q.5	(a) Describe the concept of Mental Images.	03
	(b) Explain in brief Roots of Emotions.	04
	(c) Explain in detail Maslow's Hierarchy of ordering motivational needs.	07
	OR	
Q.5	(a) Explain cue-dependent forgetting in brief with an example.	03
	(b) Explain Cognitive approach to learning in brief.	04
	(c) Explain in detail Freud's Psychoanalytical Theory of Personality.	07
