

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
Bachelor of Engineering - SEMESTER - VII EXAMINATION - WINTER 2025

Subject Code: 3172015

Date: 28-11-2025

Subject Name: Industrial Design and Applied Ergonomics

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.**

	Marks
Q.1 (a) Write all main objectives of Ergonomics.	03
(b) Explain man-machine interaction giving related sketch and example.	04
(c) Explain the elements of design structure for industrial design in modern manufacturing systems.	07
Q.2 (a) State applications of ergonomics in engineering branches.	03
(b) List all ergonomic risk factors and explain any two.	04
(c) Explain various design consideration for a product of engineering.	07
OR	
(c) Explain methods of ergonomics controls with a suitable example.	07
Q.3 (a) Write all limitations of anthropometric data.	03
(b) Write use of computerized database for ergonomics production.	04
(c) Explain different situations of displays and control in an automobile.	07
OR	
(a) List all advantages of ergonomic design.	03
(b) Explain use of ergonomics in automated systems.	04
(c) Explain anthropometric data & their importance in ergonomics.	07
Q.4 (a) Explain need of Colour and light for visual effects.	03
(b) List various visual effects of color on engineering products.	04
(c) Explain psychology of seeing general influences of line and form.	07
OR	
(a) Explain Concept of unity with example.	03
(b) Explain concept of components style and house style in aesthetic concepts.	04
(c) Explain importance of colour on engineering equipment and give suitable examples.	07

- Q.5 (a)** Explain the industrial design in general practice. **03**
- (b)** Explain The nature and scope of aesthetics. **04**
- (c)** Explain the aesthetic expressions by suitable example of any product. **07**

OR

- (a)** What is product life cycle? Give one example. **03**
- (b)** Explain concept of order with variety. **04**
- (c)** Specify design equipments with rating the importance of industrial design. **07**
