

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2021****Subject Code:3172015****Date:27/12/2021****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.

- Q.1** (a) Define the terms: a) Industrial design b) Ergonomics **03**
 (b) What is Ergonomics? Explain with its objectives. **04**
 (c) Was ergonomics invented or discovered, or is it just a buzzword for what happens anyway? Discuss. **07**
- Q.2** (a) Advantages of ergonomic design. **03**
 (b) Classify Shapes and sizes of various controls industrial design. **04**
 (c) What is industrial design in engineering application in modern manufacturing systems? **07**
- OR**
- Q.3** (c) State Method of ergonomics control. **07**
 (a) Which fields are mostly referred in ergonomics? **03**
 (b) State guidelines for Designing the Display Devices. **04**
 (c) Write a report that explains to a design engineer why anthropometric data should be used in the design of human-machine systems. Give examples from everyday life to support your arguments. **07**
- OR**
- Q.3** (a) Factors for selection of controlling devices. **03**
 (b) List the types of display in ergonomics considerations. **04**
 (c) What is Anthropometric data? and its applications in ergonomic. **07**
- Q.4** (a) What you understand by Visual Effects of Line and Form? **03**
 (b) What is mechanism of seeing visual effects of line? Explain. **04**
 (c) Explain in brief psychology of seeing general influences of line and form. **07**
- OR**
- Q.4** (a) What are Aesthetic expressions? **03**
 (b) How do you explain concept of purpose style and environment? **04**
 (c) What is the importance of ergonomics and aesthetics for a product? Explain. **07**
- Q.5** (a) What is Aesthetic Concepts of unity? **03**
 (b) Explain color on engineering equipments. **04**
 (c) Explain any case study from the Point of View of Aesthetics. **07**
- OR**
- Q.5** (a) How do you use industrial design in general practice? **03**
 (b) Explain The nature and scope of aesthetics. **04**
 (c) Specify design equipments with rating the importance of industrial design. **07**
