

CBCS Scheme

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16/17MPD21

Second Semester M.Tech. Degree Examination, June/July 2018 Industrial Design and Ergonomics

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. List and explain the elements mainly required in designing any industrial product. (08 Marks)
b. Explain the meaning of industrial design and engineering design. Illustrate their role and relative importance in various products. (08 Marks)

OR

- 2 a. Outline briefly the evolution of industrial design. (08 Marks)
b. Define ergonomics and explain the general approach to man-machine relationship. (08 Marks)

Module-2

- 3 a. List and explain the control elements required between an operator and a machine. (08 Marks)
b. Discuss the effects of ergonomics with respect to work station design considering anthropometric data. (08 Marks)

OR

- 4 a. Define anthropometry. What is the role of anthropometry in the design of products and work system context? (08 Marks)
b. Explain the various types of anthropometric data. (08 Marks)

Module-3

- 5 a. With a neat sketch of an eye explain the mechanics of seeing. (08 Marks)
b. Explain the elements of visual design. (08 Marks)

OR

- 6 a. Explain the lighting design parameters considered in workspace design. (08 Marks)
b. Explain the effect of colours used on engineering equipments placed in the work environment. (08 Marks)

Module-4

- 7 What is the meaning of 'house style' or 'corporate style'? Describe the main requirements of sound house style. (16 Marks)

OR

- 8 a. Define aesthetics and explain the concepts used to implement aesthetics with an example. (08 Marks)
b. Describe the components used to illustrate style. (08 Marks)

Module-5

- 9 a. What is the purpose of analysis phase of the process of industrial design? (08 Marks)
b. State the typical market and production questions to be asked in the analysis phase. (08 Marks)

OR

- 10 Should customers be involved in the product design team? Why or why not? What benefits can accrue through their involvement? (16 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.