

CBCS SCHEME

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21ME744

Seventh Semester B.E./B.Tech. Degree Examination, June/July 2025

Product Design and Ergonomics

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Define Product Design. Discuss about any four essential factors of product design in detail. (10 Marks)
b. Briefly explain Asimow's model in product design. (10 Marks)

OR

- 2 a. List and explain the seven phases of morphology of design structure in design projects. (10 Marks)
b. Write note on the following:
i) Role of allowance
ii) Aspects of process capability. (10 Marks)

Module-2

- 3 a. What is Ergonomics? Mention the objectives of ergonomics. (10 Marks)
b. Enumerate the general approaches of man-machine relationships. (10 Marks)

OR

- 4 a. Illustrate ergonomics in automated systems in detail. (10 Marks)
b. Discuss about anthropometric data and its applications in ergonomics. (10 Marks)

Module-3

- 5 a. Write note on the following:
i) Concept of unity in aesthetics.
ii) Concept of order with variety in aesthetics. (10 Marks)
b. Explain the aesthetic concept of purpose style and environment. (10 Marks)

OR

- 6 a. Discuss about aesthetic expressions in detail. (10 Marks)
b. Illustrate the observation style in capital goods. (10 Marks)

Module-4

- 7 a. Describe the visual effects of line in detail. (10 Marks)
b. Briefly explain the visual effects of form. (10 Marks)

OR

- 8 a. With a neat sketch, explain the mechanics of seeing. (10 Marks)
b. Summarize different visual coding methods. (10 Marks)

Module-5

- 9 a. Describe office systems and ergonomics. (10 Marks)
b. Briefly explain ergonomics of technology management. (10 Marks)

OR

- 10 a. Discuss about consumer ergonomics in detail. (10 Marks)
b. Illustrate ergonomics quality and safety. (10 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.