



USN

10MA835

Eighth Semester B.E. Degree Examination, June/July 2019

Engineering System Design

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, selecting at least TWO questions from each part.

PART - A

- 1 a. Distinguish between designing and engineering. (07 Marks)
b. Bring out early developments and evolution that have taken place in television. (08 Marks)
c. Explain the iterative cycle of design process with example. (05 Marks)
- 2 a. Explain with a flow chart the process of design formulated on the basis of curiosity and the need. (10 Marks)
b. Explain how need analysis is carried out. What is the role of specification in need analysis? (10 Marks)
- 3 a. Explain the following with an example: i) Creative attitude ii) Creative process (10 Marks)
b. Briefly discuss the following: i) Mental fixity ii) Creativity by analogy with prior systems. (10 Marks)
- 4 a. Differentiate between Brainstorming and Synetics. (10 Marks)
b. Explain AIDA process with a suitable example. Give the step-by-step procedure to be carried out. (10 Marks)

PART - B

- 5 a. What do you understand by "physical realizability"? How it helps in embarking on the most feasible solution to a given design problem. (10 Marks)
b. Write notes on:
i) Quality of design
ii) Economics in design
iii) Concept of utility (10 Marks)
- 6 a. List some of the design parameter in your design to give a proper functional design with suitable example. (10 Marks)
b. List the some of the design for use, maintenance and production features of movie theatre. Suggest some improvements. (10 Marks)
- 7 a. Explain the role of "Break Even Analysis" in the process of decision making. (06 Marks)
b. Distinguish between fixed cost and variable cost. (04 Marks)
c. What do you understand by MTBF? Describe how it is useful in assessing the reliability of product. (10 Marks)
- 8 a. List the factors determining the communication from machine to man. Cost the factors that control the choice of the display. (10 Marks)
b. With a suitable sketch and example, explain Man-Machine interaction cycle. (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.