

CBCS SCHEME

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18MA741

Seventh Semester B.E. Degree Examination, Jan./Feb. 2023

Facility Planning and Design

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Briefly explain the various factors influencing plant location. (10 Marks)
- b. Briefly explain the various objectives and principles of plant layout. (10 Marks)

OR

- 2 a. Briefly explain Richard Muther's approach to plant layout. (10 Marks)
- b. Briefly explain the various principles of material handling. (10 Marks)

Module-2

- 3 a. Explain with a neat diagram : i) ALDEP ii) PLANET. (10 Marks)
- b. Explain the salient features of : i) COFAD ii) CORELAP. (10 Marks)

OR

- 4 a. List the various methods of constructing the layout and explain qualitative layout evaluation technique. (10 Marks)
- b. What is efficiency index? Explain some of the important efficiency indices. (10 Marks)

Module-3

- 5 a. Explain the various factors to be considered for area allocation. (10 Marks)
- b. List the various objectives of plot plan. Explain the various factors to be considered in space planning. (10 Marks)

OR

- 6 a. Explain sequence demand straight line method and non-directional method. (10 Marks)
- b. Write short notes on establishing total space requirement and storage space determination at a location in a plant. (10 Marks)

Module-4

- 7 a. Explain the salient features of warehouse layout model. (10 Marks)
- b. Explain briefly the different methods of indoor storage. (10 Marks)

OR

- 8 a. List out the different types of facility location problems based on the distance between facilities. Explain them briefly. (10 Marks)
- b. Explain quadrangle assignment problem method used for solving location allocation problems. (10 Marks)

Module-5

- 9 a. Explain the different phases in the implementation of facilities plan. (10 Marks)
- b. What are the reasons for using simulation models in facility planning? How simulation models can improve the understanding of the facilities plan. (10 Marks)

OR

- 10 a. Give the salient features of : i) Conveyor model ii) Waiting line model. (10 Marks)
- b. Briefly explain the areas that should be examined in performing the facilities planning audit. Further, explain some of the common reasons for firms failing to conduct audit. (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.