

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

February / March 2023 Semester End Main Examinations

Programme: B.E.

Branch: Mechanical Engineering

Course Code: 20ME5DEFMS

Course: Flexible Manufacturing Systems

Semester: V

Duration: 3 hrs.

Max Marks: 100

Date: 07.03.2023

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may suitably be assumed.

UNIT - I

- 1 a) Describe the types of FMS layouts. **10**
b) List the advantages and disadvantages of FMS implementation. **10**

UNIT - II

- 2 a) Explain the steps in going from CAD to CAM to FMS ready data. **10**
b) Describe the classification of flexible manufacturing cell. **10**

UNIT - III

- 3 a) Elaborate the benefits of group technology affecting many areas of a company. **10**
b) List the primary quantity of JIT principles and list the benefits of JIT. **10**

UNIT - IV

- 4 a) Describe the retravel CAPP system with flow chart. **10**
b) List the MRP outputs and benefits. **10**

OR

- 5 a) Describe the CMM construction. **10**
b) Elaborate CMM application. **10**

UNIT - V

- 6 a) Describe the types of AGV's. **10**
b) Elaborate the basic components of a robotic system with flow chart. **10**

OR

- 7 a) Describe the tool strategies. **10**
b) Elaborate the identification system. **10**

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.