

B.Tech. (Mechanical Engineering) 8th Semester**(G-Scheme) Examination, July-2022****INDUSTRIAL AUTOMATION****Paper- PCC-ME-402-G***Time allowed : 3 hours]**[Maximum marks : 75*

Note : Attempt any five question in all, selecting one question from each unit. Question No. 1 is compulsory. All Questions carry equal marks.

1. Write a short note on: 2.5×6=15

- (a) Simulation
- (b) Strategies of automation
- (c) Centrifugal feeder
- (d) Cellular manufacturing
- (e) Sensors Vs Amplifiers
- (f) Artificial intelligence

Unit-I

2. (a) Discuss principles and strategies of automation in production systems. 10

(b) Discuss the levels and types of automations. 5

3. (a) Discuss principal of material handling system and equipment used for it. 7.5

(b) Discuss material transport system used in an industry 7.5

Unit-II

4. (a) Discuss conveyor systems with type and application. 7.5
- (b) Discuss the strategies, equipment and methods used in storage system. 7.5
5. (a) Discuss part families, parts classification and coding used in group technology. 7.5
- (b) Discuss planning and implementation issues in FMS. 7.5

Unit-III

6. (a) Discuss environmental factor, Economic factor and sensor characteristic for choosing a sensor. 10
- (b) Discuss the need of sensors? 5
7. (a) Discuss the definition, operations and theorems of Boolean algebra. 7.5
- (b) Discuss the factors involvement of design of manufacturing. 7.5

Unit-IV

8. What is system modelling? Discuss the requirement before building models. 15
9. Discuss Fuzzy logics with application. 15