

#### UNIT – I

2. (a) Discuss production system on the basis of facilities & support systems availability. 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 the design considerations of material handling system. 7.5

#### UNIT – II

4. (a) Discuss requirement of storage system. 7.5  
(b) Why automatic data capturing is required in storage system ? 7.5
5. (a) Discuss group technology and its application. 7.5  
(b) Discuss components, applications and benefits of flexible manufacturing systems. 7.5

#### UNIT – III

6. (a) What do you mean by evaluation of automatic production ? Explain. 10  
(b) What is Sensors, Actuators & Transducer ? 5

7. (a) Discuss the desirable features for selecting measuring devices used in automated system. 7.5  
(b) Discuss the definition, operations and theorems of Boolean algebra. 7.5

#### UNIT – IV

8. Discuss Fuzzy logics with application. 15
9. Discuss the modern techniques used in manufacturing automation for controlling purpose. 15

Roll No. ....

**3796**

**B. Tech. 8th Semester (Mechanical Engg.)  
Examination – May, 2023**

**INDUSTRIAL AUTOMATION**

Paper : PCC-ME-402-G

*Time : Three Hours ]*

*[ Maximum Marks : 75*

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*. All questions carry equal marks.

1. Write a short notes on : 2.5 × 6 = 15

- (a) Principles of automation
- (b) Simulation
- (c) Vibratory feeder
- (d) Group Technology
- (e) Sensors V s actuator
- (f) Artificial intelligence

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P. T. O.