

Roll No.

23058

**M.Tech 2nd Semester (M.E.)
(Manufacturing and Automation)**

Examination-May, 2014

AUTOMATION IN MANUFACTURING

Paper 908/M-604-A

Time : 3 hours

Max. Marks : 100

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 the examination.

Note : Attempt any **five** questions. All questions carry equal marks.

1. What is automation ? What are various basic elements of an automated system ? Explain in detail the principles and strategies of automation. 20

2. (a) Explain the principles and design consideration of the material handling system. 10

- (b) Explain any two material handling devices. 10

3. Explain the following :

- (a) Components of automated manufacturing system. 10
- (b) Flow lines of transfer mechanism. 10

4. Write short notes on the following :

- (a) Industrial control system 10
- (b) Computer process and its form. 10

5. (a) What are various orientation devices ?

10

- (b) What do you understand by product manufacture ability ? 10

6. (a) What is Schmit triggering device ? 10

- (b) What is the role of pneumatic sensors and amplifiers ? 10

7. (a) What is the role of robot in automation ?
What are various applications of robot for automation ? 10

(b) What is fuzzy decision and control ? 10

8. Write short notes on the following :

(a) Jet destruction devices 10

(b) Artificial neural network 10
