

Roll No.

23058

**M. Tech. 2nd Semester (Mech. Engg.)
(Manufacturing & Automation)**

Examination – May, 2018

AUTOMATION IN MANUFACTURING

Paper : 908/M-604-A

Time : Three Hours] [Maximum 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 examination.

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

- 1.** Define the automation. What are the principles and strategies of automation ? What are various basic elements of an automated system ? 20
- 2.** Discuss the principles and design consideration of material handling system. Also explain the elevator and centrifugal type feeders. 20

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P. T. O.

3. (a) What are different fundamentals of transfer lines ? 10
- (b) Define the modeling. What is need of a modeling in automation ? 10
8. Write short notes on the following :
- (i) Automation productivity 10
- (ii) Logic devices 10
4. Explain the following :
- (i) Industrial control system. 10
- (ii) Continuous verses Discrete Control. 10
5. (a) What are different orientation devices ? Explain in detail. 10
- (b) Discuss cellular manufacturing. 10
6. Explain the following :
- (i) Pneumatic circuit for automatic die costing machine. 10
- (ii) Boolean algebra. 10
7. (a) Discuss the fuzzy decision and control. 10