

Roll No.

Subject Code—6022

M. Tech. EXAMINATION

(First Semester)

(Main/Re-appear Batch 2011 Onwards)

MECH. ENGINEERING

MELP-713

Automation in Manufacturing

Time : 3 Hours

Maximum Marks : 70

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

1. What is Automation ? Classify the automated manufacturing systems ? What are the reasons of automation ?
2. What is a Sensor ? Explain desirable features of sensors ? Explain common sensors used in automation ?

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3. What is an actuator ? Explain in detail different types of actuators and their applications ?
4. Discuss the working principles of Stereo Lithography technique with their applications, their strengths and limitations.
5. What is material Handling System ? Explain various types of material handling equipment with features and application.
6. What are the modern developments in automation ? Discuss in detail about implementation of Automation in any Manufacturing Industry ?
7. Discuss the analysis and design of orienting and escapement devices.
8. Write short notes on any *two* of the following :
 - (a) Automotive assembly machines
 - (b) Electro hydraulic and digital control devices
 - (c) Rapid tooling.

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