



Sixth Semester B.E./B.Tech. Degree Examination, June/July 2025
Automation in Manufacturing

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
 2. M : Marks, L: Bloom's level, C: Course outcomes.

Module – 1			M	L	C
Q.1	a.	Define Automation. Explain its various types.	10	L2	CO1
	b.	Explain the reasons for automation of system.	10	L2	CO1
OR					
Q.2	a.	List and explain the strategies for automation.	10	L2	CO1
	b.	Explain the basic categories of manufacturing cost.	10	L2	CO1
Module – 2					
Q.3	a.	Illustrate the basic elements of an automated system with a neat sketch.	10	L2	CO2
	b.	Explain the levels of automation with a neat sketch.	10	L2	CO2
OR					
Q.4	a.	Illustrate the advanced automation functions.	10	L2	CO2
	b.	Explain the following Statistical Quality Control (SQC) tools. i) Fish bone Diagram ii) Pareto Analysis	10	L2	CO2
Module – 3					
Q.5	a.	Explain the components of manufacturing system.	10	L2	CO3
	b.	Illustrate the elements of Just In Time in production.	10	L2	CO3
OR					
Q.6	a.	With a block diagram, explain the retrieval type of Computer Aided Process Planning (CAPP)	10	L2	CO3
	b.	Illustrate Lean and Agile Manufacturing.	10	L2	CO3
Module – 4					
Q.7	a.	Define Inspection. Explain the Automated Inspection Process.	10	L2	CO4
	b.	Illustrate the role of Co-ordinate Measuring Machine.	10	L2	CO4
OR					
Q.8	a.	List and explain Optical Inspection Techniques.	10	L2	CO4
	b.	Illustrate the basic function of Machine Vision System with a neat sketch.	10	L2	CO4

Module – 5					
Q.9	a.	Define Group Technology. Explain in benefits.	10	L2	CO5
	b.	Illustrate the various types of layouts.	10	L2	CO5
OR					
Q.10	a.	Explain the need and cell design process of cellular manufacturing.	10	L2	CO5
	b.	Illustrate the basic components of Flexible Manufacturing System (FMS).	10	L2	CO5

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