

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII (NEW) EXAMINATION – SUMMER 2024

Subject Code:3171508

Date:20-05-2024

Subject Name:Factory Automation

Time:02:30 PM TO 05:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Enlist the need of factory automation in the industry.	03
	(b) Explain the elements of automation system.	04
	(c) Write a short note on flow lines and transfer mechanism.	07
Q.2	(a) Enlist the function of material handling systems.	03
	(b) Explain the role of automatic identification method in material handling system.	04
	(c) Enlist the Principles of material handling system.	07
	OR	
	(c) Explain any three 'material handling equipment' with their function.	07
Q.3	(a) Write a full form of FMS.	03
	(b) Explain the term Manufacturing cell.	04
	(c) Write a short note on Group Technology.	07
	OR	
Q.3	(a) What are the importance of implementation of group technology in industry.	03
	(b) Enlist the quality control tools (methods).	04
	(c) Write a difference between Inspection V/S Quality control	07
Q.4	(a) Briefly explain the role of control technology in Automation.	03
	(b) Explain the term continues control in control technology in automation.	04
	(c) Write a difference between Process Industries V/S Discrete manufacturing industries.	07
	OR	
Q.4	(a) Write a full form of LAN.	03
	(b) Explain the term Discrete control in control technology in automation.	04
	(c) Write a short note on Building blocks of automation systems	07
Q.5	(a) Write a full form of SCADA.	03
	(b) Write a function of Distributed control system in automation.	04
	(c) Write a short note on SCADA.	07
	OR	
Q.5	(a) What is the outcome of inspection of the product in the industry.	03
	(b) Draw fishbone diagram with example with neat sketch.	04
	(c) Enlist different types of control charts. Explain any two of the them with neat sketch.	07
