Seat No.:	Enrolment No

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER- III • EXAMINATION - SUMMER 2015

	•	Code: 732801 Date: 30/04/20: Name: Flexible Manufacturing System	15
Tir	•	:30 pm to 5:00 pm Total Marks: 7	70
11130	1.	Attempt all questions. Make suitable assumptions wherever necessary.	
Q.1	(a)	What is route sheet? How computer is useful in route sheet design? Discuss advantage & disadvantage of computer aided Process Planning.	07
	(b)	What is Vehicle guidance technology in AGV? Which technology is popular now a days? Explain in detail.	07
Q.2	(a)	FMS is used in which kind of production system. Discuss the basic components of FMS.	07
	(b)	Why automation in material handing is required? Can conveyor belt replace robots in work space? Elaborate all types of conveyor belt with its salient feature.	07
		OR	
	(b)	What is the role of communication in automation? Discuss various communication standards in detail.	07
Q.3	(a)	Why DBMS is helpful in FMS. Discuss role of Information Technology in Manufacturing.	07
	(b)	What is PLC? Write methods for programming in PLC. OR	07
Q.3	(a) (b)	What is Composite part concept? Why it is necessary for group technology? Differentiate Conventional storage system and Automated storage system.	07 07
Q.4	(a)	How Kermit protocol in used in manufacturing? Explain advantage & disadvantage of it.	07
	(b)	What is Flexibility? Discuss various flexibilities associated with manufacturing. OR	07
Q.4	(a)	How inventory is saved by automated storage & retrieval system? Why it is the essential component of FMS.	07
	(b)	What is the system for part family identification (Production flow analysis).	07
Q.5	(a) (b)	What is the need of VARIANT CAPP. Explain flow diagram to implement it. Describe conveyor and types of conveyor	07 07
Q.5	(a) (b)	What is AGV? Discuss advantage and disadvantage of AGV. What is Rank order clustering? Explain advantage and limitations of it.	07 07

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