

GUJARAT TECHNOLOGICAL UNIVERSITY
ME – SEMESTER – II(New)• EXAMINATION – SUMMER - 2020

Subject Code:3720815**Date: 28/10/2020****Subject Name: Computer Integrated Manufacturing****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.

- Q.1** (a) Explain ten strategies for automation and process improvements. **07**
(b) Explain the automated manufacturing system with suitable examples. **07**
- Q.2** (a) What is CIM? Discuss various CIM components with neat sketch. **07**
(b) Explain the work transport systems for manual assembly line. **07**
- OR**
- (b) Explain line spacing for manual assembly line. **07**
- Q.3** (a) With a neat sketch explain the work part transfer mechanisms. **07**
(b) Explain Rank positional weight method for line balancing problem. How does it differ from Kilbridge and Wester method? **07**
- OR**
- Q.3** (a) Using neat sketch, explain the physical configuration of an automated assembly system. **07**
(b) List the function of parts delivery at work stations and explain the hardware used for the parts delivery system. **07**
- Q.4** (a) Explain the different industrial trucks used in material handling system. **07**
(b) Explain the types of flexibilities in FMS and discuss the factors on which these flexibilities depend. **07**
- OR**
- Q.4** (a) Explain the vehicle guidance technology for AGV. **07**
(b) Explain radio frequency identification method for Automated inspection. **07**
- Q.5** (a) Describe the steps of retrieval CAPP system. State the importance of GT in retrieval system. **07**
(b) Explain powder based RP processes. **07**
- OR**
- Q.5** (a) Explain how CIM can be implemented in manufacturing industry. **07**
(b) Explain the STL file errors in rapid prototyping. **07**
