

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER- VII EXAMINATION – SUMMER 2026

Subject Code:3174108

Date:05-06-2026

Subject Name:Computer Integrated system

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.

- Q.1** (a) Define concurrent engineering. 03
(b) Explain Level of Automation. 04
(c) State the main objectives of FMS. Explain various layouts used in FMS. 07
- Q.2** (a) What is cellular manufacturing. 03
(b) List application of Group technology. 04
(c) Explain about part classification coding. 07
- OR**
- (c) Describe about the OPTIZ coding system 07
- Q.3** (a) Define the Production Flow Analysis. 03
(b) Write a note on Inventory management. 04
(c) Explain with neat diagram retrieval of CAPP 07
- OR**
- Q.3** (a) Explain in brief about Enterprise Resource Planning (ERP) 03
(b) Brief on Manufacturing Resource Planning-II 04
(c) Express about production planning process in discrete part manufacturing. 07
- Q.4** (a) Discuss Lean Production and Just-In-Time Production 03
(b) Enlist benefits of FMS. 04
(c) Explain with neat sketch AS/RS system used in FMS 07
- OR**
- Q.4** (a) Identify any four functions of the material handling systems in a FMS 03
(b) List major elements of FMS. 04
(c) Discuss types of Automated Guided Vehicle System (AGVS) and its Application. 07
- Q.5** (a) Enlist Industrial Robot Applications. 03
(b) Explain Different grippers used in Robot. 04
(c) Explain briefly the lead through programming method in detail and List out the capabilities and limitations of lead-through programming methods . 07
- OR**
- Q.5** (a) Short note on Sensors used in Robots. 03
(b) What is accuracy and repeatability in Industrial Robot. 04
(c) Explain with neat sketch working of SCARA Robot. 07
