

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-VII (OLD) - EXAMINATION – SUMMER 2018**

**Subject Code:171903**

**Date:03/05/2018**

**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) What do you mean by CIM? What are the benefits of CIM? Draw a CIM wheel. **07**  
(b) Define NC, CNC and DNC machine. List advantages of CNC machine over NC machine. **07**
- Q.2** (a) How do axes designated in CNC machine? Sketch and designate axes in a CNC lathe and in a vertical CNC milling machine. **07**  
(b) Which are the formats used for manual part programming? Explain word address format. Write word address format for milling and drilling operations. **07**
- OR**
- (b) Explain canned cycle with suitable examples. **07**
- Q.3** (a) What is Group Technology? Explain in brief various methods of grouping parts into part families. **07**  
(b) What is part classification and coding requirements in GT. Explain OPTIZ system of coding. **07**
- OR**
- Q.3** (a) State the main objectives of FMS. Explain various layouts used in FMS. **07**  
(b) Explain with neat sketch AS/RS system used in FMS. **07**
- Q.4** (a) Explain tool supply system in FMS. **07**  
(b) Define robot and discuss various applications of robot in industries. **07**
- OR**
- Q.4** (a) What are the different types of gripper used in robot? Explain any two in detail. **07**  
(b) List various configuration of industrial robot and explain any one configuration of robot with work envelope. **07**
- Q.5** (a) What is computer integrated production management system? Explain with neat flow chart. **07**  
(b) Explain Expert system with neat diagram. **07**
- OR**
- Q.5** (a) What are the objectives of MRP system? State the various input to MRP system. Draw an MRP structure. **07**  
(b) Explain with neat diagram retrieval of CAPP. **07**

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