

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII (NEW) - EXAMINATION – SUMMER 2018

Subject Code: 2180208

Date: 30/04/2018

Subject Name: Computer Integrated Manufacturing in Automobile Industry(Department Elective II)

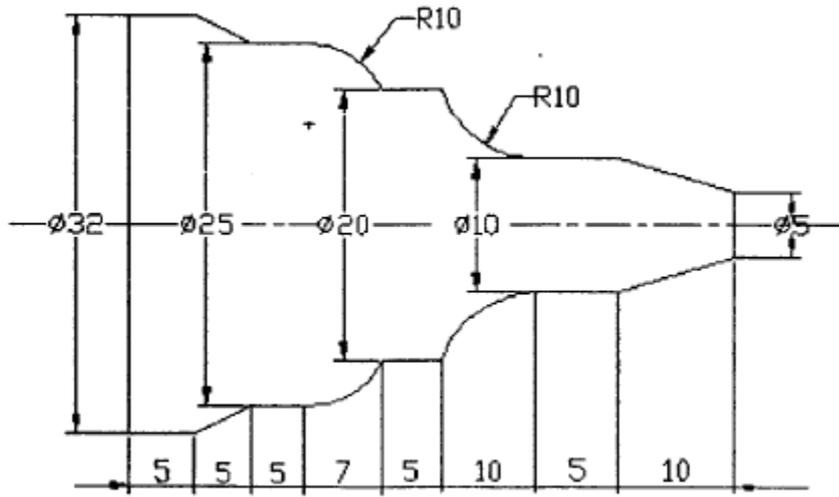
Time: 10:30 AM to 01:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

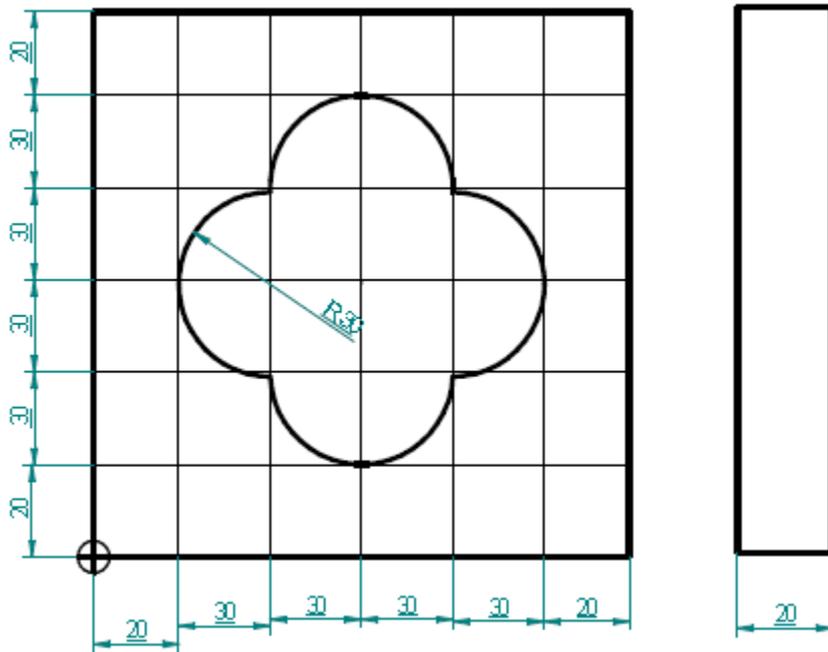
	MARKS
Q.1 (a) State Objectives and scope of Computer Integrated Manufacturing.	03
(b) Classify the CNC machine on the basis of :	04
i) Programming method	
ii) Type of Feedback System	
(c) What are the basic components of numeric control system? Draw and discuss the function of each components.	07
Q.2 (a) What is tool compensation? Explain tool length and cutter radius compensation.	03
(b) Explain OPTIZ classification and coding system.	04
(c) What is PLC? Explain major components of PLC. List Application of PLC.	07
OR	
(c) What is Group Technology? Explain the Concept of part family.	07
Q.3 (a) Define Robot. Enlist different elements of robot.	03
(b) Give difference between MRP-I and MRP-II.	04
(c) Explain Tool Supply system in FMS.	07
OR	
Q.3 (a) Discuss various applications of robots.	03
(b) Explain JIT technique in brief.	04
(c) What are the different types of grippers used in robot? Explain any two in detail.	07
Q.4 (a) Distinguish between variant and generative type CAPP.	03
(b) List different flexibilities associated with FMS. Explain any two in brief.	04
(c) Discuss concept of Computer Vision & Machine Intelligence.	07
OR	
Q.4 (a) Write a general syntax of G81 canned cycle.	03
(b) Describe Automated Assembly Line.	04
(c) Discuss Automated Guided Vehicles and cellular manufacturing.	07
Q.5 (a) What is quantitative analysis of assemble line?	03
(b) Name the relative merits and demerits of different types of robot configuration.	04
(c) Write a manual part Programme using appropriate G & M codes to turn a given below profile.	07



All Dimensions are in mm. Assume suitable data if necessary.

OR

- Q.5**
- | | | |
|-----|---|-----------|
| (a) | State main problems associated with manual process planning. | 03 |
| (b) | Describe concept of transfer line. | 04 |
| (c) | Prepare a Part Programme with appropriate G/M codes to mill the component as per given below drawing. | 07 |



All Dimensions are in mm. Assume suitable data if necessary.
