GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER-VIII EXAMINATION - WINTER 2015

Subject Code:X81903	Date:07/12/2015
---------------------	-----------------

Subject Name: COMPUTER INTEGRATED MANUFACTURING

Time: 2:30pm to 5:00pm

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) Classify CNC machine tools on the basis of

07

- (1) Programming methods
- (2) Types of controllers
- (b) State various models of CIM. Explain any one in detail.

07

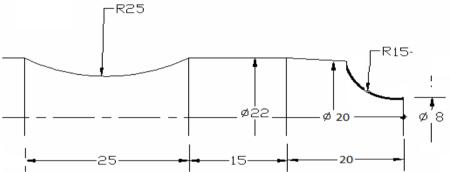
- Q.2 (a) What are canned cycles? What is the difference between a canned or cycle and subroutine? Discuss how a canned cycle can be useful in writing a part program.
 - (b) What are the different ways of defining circle, using geometry statements of APT language.

07

OR

(b) Write a CNC Turning program

07



- Q.3 (a) Describe with neat sketch AS/RS system used in FMS. 07
 - (b) What is group technology? Explain production flow analysis with 07 suitable example

OR

- Q.3 (a) Explain the types of flexibilities in FMS and discuss the factors on 07 which these flexibilities depend.
 - (b) Distinguish between FMS and FMC 07
- Q.4 (a) Classify various robots. Explain in brief economic evaluation of investment in robotic installation.
 - (b) Explain various sensors and actuators used in robots. 07

OR

- Q.4 (a) Draw a vertically articulated robot. Explain its working showing work 07 envelope, degree of freedom and discuss its applications.
- O.4 (b) Describe computer integrated production management.
- Q.5 (a) Explain retrieval type CAPP 07
 - (b) Differentiate between MRP_I and MRP_II 07

OR

- Q.5 (a) Explain OPTIZ system of coding. 07
 - (b) Explain JIT technique used in auto industries. 07