

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

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

Subject Code:2172002/2172010

Date:01/05/2018

Subject Name:Automated Manufacturing - I

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.

		MARKS
Q.1	(a) Give advantages of Automation.	03
	(b) Define automation and explain need of automation in current market.	04
	(c) Write difference between NC, CNC And DNC.	07
Q.2	(a) Explain basic component of NC System.	03
	(b) Explain Machine control unit for CNC.	04
	(c) Explain DNC with neat sketch.	07
	OR	
	(c) Explain recirculating ball screw mechanism with neat sketch.	07
Q.3	(a) Enlist different types of guide ways. Explain any one with neat sketch.	03
	(b) Explain servomotor with their application.	04
	(c) Explain control system with diagram.	07
	OR	
Q.3	(a) Define encoder and explain.	03
	(b) Explain hydrostatic and hydrodynamic bearing.	04
	(c) Explain different type of co-ordinate system with neat sketch.	07
Q.4	(a) What is AGV.	03
	(b) Explain different types of AGV.	04
	(c) Explain basic component of AS/RS and write advantages of AS/RS.	07
	OR	
Q.4	(a) Give meaning of G00, G02, G90, G91, M02, M05.	03
	(b) What is ATC?	04
	(c) Explain Selective Laser Sintering Technology.	07
Q.5	(a) Write Full Form of AGV, ASRS, CAPP, CNC, DNC.	03
	(b) Explain principle of CMM.	04
	(c) Explain CMM configuration and describe methods of operating and controlling a CMM.	07
	OR	
Q.5	(a) Give full form of SLA, SLS, FDM, LOM, NC.	03
	(b) Explain need of retrieval and generative type CAPP.	04
	(c) Explain types and advantages and disadvantages of CAPP.	07
