

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (NEW) EXAMINATION – WINTER 2023****Subject Code:3142509****Date:24-01-2024****Subject Name: Manufacturing Technology -I****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.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Write primary cutting motion in machine tools.	03
	(b) Write difference between Orthogonal and Oblique cutting.	04
	(c) Explain ASA system	07
Q.2	(a) Definitions: Back rake angle, Nose radius	03
	(b) Write effect of cutting parameters.	04
	(c) Write the concept of tool life.	07
	OR	
	(c) Write types of chips and explain them.	07
Q.3	(a) Definitions: Feed, Depth of cut	03
	(b) Draw the neat sketch of lathe machine diagram with working principle.	04
	(c) Write short note on Merchant circle diagram	07
	OR	
Q.3	(a) Write auxiliary attachment of lathe machine.	03
	(b) Write different operation of lathe machines.	04
	(c) Write difference between shaper and slotter machine.	07
Q.4	(a) Write working principle of shaper machine	03
	(b) Explain the drilling operations.	04
	(c) Draw a neat sketch of drilling machine.	07
	OR	
Q.4	(a) Write advantage and limitations of broaching.	03
	(b) Explain broaching machine working principle.	04
	(c) Write short note on different types of milling operations, milling	07
Q.5	(a) Definitions of Speed, feed and depth of cut in grinding	03
	(b) Explain the grinding machine principle.	04
	(c) Write safety Precautions associated with sawing and Broaching machine.	07
	OR	
Q.5	(a) Explain trueing and dressing for grinding wheel.	03
	(b) Explain Dressing of grinding wheels.	04
	(c) Explain any one alignment and practical test.	07
