

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2018****Subject Code:2162507****Date:30/11/2018****Subject Name:Allied Manufacturing Technique****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) Define following terms: - side of thread, depth of thread, base of thread.	03
	(b) State and explain the basic factors upon which the unconventional processes are classified.	04
	(c) Write difference between unconventional machining processes and conventional machining processes.	07
Q.2	(a) List out various work holding equipment used in capstan and turret lathe.	03
	(b) Explain bar stock feed mechanism of automatic lathe.	04
	(c) Explain in brief the steps for preparing a tool layout on turret lathe.	07
	OR	
	(c) Explain the essential parts of turret lathe. How does it differ from conventional lathe?	07
Q.3	(a) Write a short note on gear testing.	03
	(b) Classify the gear and write an application of gear.	04
	(c) Explain the production of screw threads by thread rolling with neat sketch.	07
	OR	
Q.3	(a) Write a general application of screw thread.	03
	(b) Explain gear hobbing with neat sketch.	04
	(c) Explain finishing and production of screw threads by grinding with neat sketch.	07
Q.4	(a) Explain internal and external thread chasers.	03
	(b) Discuss the thread cutting by hand operated tools.	04
	(c) On which principle the Electron Beam Machining process works? Describe EBM with relative merits, demerits and field applications.	07
	OR	
Q.4	(a) Explain sunderland method using rack type cutter.	03
	(b) Explain the various gears finishing process.	04
	(c) In which unconventional process Ruby Rod is used? Describe the process in detail with neat sketch.	07
Q.5	(a) Write dissimilarities of ECM and EDM.	03
	(b) Write a field application of LBW, PAW, EBM and ECG.	04
	(c) Explain wire cut EDM with neat sketch and also write demerits of wire cut EDM.	07
	OR	
Q.5	(a) Explain the fourth state of matter.	03
	(b) Explain the working principle of water jet machining.	04
	(c) Describe laser beam machining with neat sketch. Enumerate critical parameters of laser beam machining.	07
