

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2023****Subject Code:3161922****Date:13-12-2023****Subject Name: Advanced Manufacturing Processes****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.
4. Simple and non-programmable scientific calculators are allowed.

	MARKS
Q.1 (a) Write classification of Unconventional Machining Processes	03
(b) write application of Electron beam Machining (EBM) and Laser Beam machining.	04
(c) Explain Electric Discharge Machining (EDM) in detail with neat diagram and its working Principle.	07
Q.2 (a) Application of Wire cut EDM.	03
(b) Discuss Process parameters and its effect of Ultrasonic Machining (USM).	04
(c) Explain Abrasive Jet Machining (AJM) Process in detail with neat diagram.	07
OR	
(c) Explain Chemical machining Process in detail with neat sketch.	07
Q.3 (a) Application of Electro - Chemical machining	03
(b) Write process parameter and its effect on MRR and surface finish of EDM process.	04
(c) Explain Electro Chemical grinding (ECG) Process in detail with neat diagram.	07
OR	
Q.3 (a) Write history of RP systems	03
(b) Benefits of Resin Transfer Moulding (RTM)	04
(c) Explain Water Jet Machining (WJM) Process in detail with neat sketch.	07
Q.4 (a) What is Prototyping? Enlist advantages of Rapid Prototyping	03
(b) Write application of LOM processes	04
(c) Explain Stereo lithography process in detail with neat sketch.	07
OR	
Q.4 (a) Write a note on 3D Printer.	03
(b) Give the classification of Rapid Prototyping processes	04
(c) Explain Fused Deposition Modelling process in detail with neat sketch.	07
Q.5 (a) Write Glass Compositions and its Properties	03
(b) Discuss Glass Forming Processes	04
(c) Explain any Glass process and write Application of Glass	07
OR	
Q.5 (a) Write Advantages of Filament Winding.	03
(b) Classification of composites	04
(c) Explain Wet/Hand Lay-up Process in detail with neat diagram	07
