

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – SUMMER 2024****Subject Code:3152007****Date:21-05-2024****Subject Name:Manufacturing Technology****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) Explain the following terms related to casting: (i) Shrinkage allowance (ii) Machining allowance.	03
	(b) Explain the submerged arc welding process with diagram.	04
	(c) Explain with neat sketch the injection moulding process.	07
Q.2	(a) Define following terms: Deep drawing, Coining and Embossing.	03
	(b) Distinguish between Lapping, Honing and Buffing super finishing process.	04
	(c) Classify extrusion processes and explain forward and backward extrusion process.	07
	OR	
	(c) Distinguish between Plasma and Laser Beam welding processes.	07
Q.3	(a) Define Manufacturing processes and enlist various manufacturing processes.	03
	(b) Explain various types of pattern allowances with a neat sketch.	04
	(c) Explain the working principles of Oxy-acetylene gas welding and gas cutting processes. Also differentiate between nozzles used for Oxy-acetylene gas welding and gas cutting process, using sketch.	07
	OR	
Q.3	(a) Define Ingot, Bloom and Billet.	03
	(b) Distinguish between TIG and MIG welding processes.	04
	(c) Explain the types of forging defects and write name of four products which are manufactured using the forging process.	07
Q.4	(a) Write a short note on AJM.	03
	(b) Explain the Thermit welding process with diagram.	04
	(c) Write down classification of Drilling Machine. Explain upright Drilling machine with figure.	07
	OR	
Q.4	(a) Write the difference between thermosetting and thermoplastics.	03
	(b) Explain the types and importance of polarity in electric arc welding process with diagram.	04
	(c) Explain single point cutting tool Geometry.	07
Q.5	(a) Describe the different functions performed by cutting fluids during machining operations.	03
	(b) Differentiate between the quick return mechanisms of shaper machine and planar machine.	04

- (c) Explain the friction welding process. States advantages, limitation and application. **07**

OR

- Q.5** (a) Evaluate the following statements: EDM is not the last machining process on work piece material. **03**
- (b) Define function of following terms. I) head stock II) Tailstock III) carriage IV) feed mechanism. **04**
- (c) Discuss various work holding devices and tool holding devices, which are used on various conventional machine tools with their schematic diagrams. **07**
