

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-V(NEW) EXAMINATION – SUMMER 2022

Subject Code:3151912

Date:09/06/2022

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) Define Manufacturing processes and enlist various manufacturing processes.	03
	(b) Discuss the factors that need to be considered for selecting the manufacturing processes.	04
	(c) Explain hot working and cold working process. State advantage and disadvantages of the processes.	07
Q.2	(a) State the purpose of coating on an arc welding electrode.	03
	(b) Explain the common welding defects by stating their causes and their remedies.	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		
	(c) Explain the working principle of Resistance welding. Differentiate between Spot and Seam Welding processes.	07
Q.3	(a) Why a down sprue is made tapered in a gating system ?	03
	(b) Explain various types of pattern allowances with a neat sketch.	04
	(c) What is gating system? what are its function? state types of gate with its advantages.	07
OR		
Q.3	(a) Explain Cupola furnace with a neat sketch.	03
	(b) What is pattern? List different patterns and explain each with a schematic diagram.	04
	(c) Describe the Shell mould casting process in terms of steps involved, its advantages and disadvantages with the help of a neat sketch.	07
Q.4	(a) Define Ingot, Bloom and Billet.	03
	(b) Distinguish between wire drawing and tube drawing with neat sketches.	04
	(c) Distinguish between thermoforming process and extrusion process for plastics.	07
OR		
Q.4	(a) Explain in brief Strain Hardening.	03
	(b) Distinguish between TIG and MIG welding processes.	04

- (c) Enlist types of super finishing processes. Discuss the selection criteria for appropriate super finishing process. **07**
- Q.5** (a) Define Forward slip, Backward slip and Neutral point for Rolling process. **03**
- (b) Explain calendaring process. **04**
- (c) Explain Injection moulding process for plastic, by stating its principle of operation, advantages, limitation and applications. **07**
- OR**
- Q.5** (a) With a neat sketch explain the piercing and blanking processes. **03**
- (b) State the significance of the superfinishing process. **04**
- (c) Explain Burnishing process with a neat sketch. **07**
