

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (NEW) EXAMINATION – WINTER 2023****Subject Code:2141908****Date:29-01-2024****Subject Name: Manufacturing Processes -II****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.

- Q.1** (a) What are the factors playing major role in manufacturing process selection? **03**
- (b) Give broad classification of various manufacturing process. **04**
- (c) What are the different types of pattern used in metal casting process? **07**
Explain any two with neat sketch.
- Q.2** (a) Explain Following terms: **03**
Gate, Runner, Riser
- (b) Explain properties of molding sand. **04**
- (c) What is Pattern allowances? Explain shrinkage and draft allowance. **07**
- OR**
- (c) Explain Investment casting process with neat sketch. **07**
- Q.3** (a) List welding joints and explain any two with neat sketch. **03**
- (b) List the flames obtained during oxy acetylene gas welding and explain any one with neat sketch. **04**
- (c) Differentiate TIG and MIG welding processes. **07**
- OR**
- Q.3** (a) Differentiate Welding, Soldering and Brazing processes. **03**
- (b) Sketch and label four positions of welding. **04**
- (c) List the common defects that generally found in welding processes and explain any three with neat sketch. **07**
- Q.4** (a) Differentiate Bloom, Billet and slab. **03**
- (b) Define Rolling, Forging, Extrusion and Drawing processes. **04**
- (c) Explain Piercing and blanking process with neat sketch. **07**
- OR**
- Q.4** (a) Differentiate Direct and indirect extrusion. **03**
- (b) Differentiate hot working and cold working processes. **04**
- (c) What is rolling mill? Classify it and explain any three with neat sketch. **07**
- Q.5** (a) Differentiate thermoplastic and thermosetting plastic. **03**
- (b) What is ceramic? Explain various application of ceramic. **04**
- (c) Explain in detail metal matrix and ceramic matrix composite. **07**
- OR**
- Q.5** (a) Explain various properties of plastic. **03**
- (b) Explain injection molding with neat sketch. **04**
- (c) List step of powder processing method for manufacturing of ceramic matrix composites. **07**
