

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2024****Subject Code:3162110****Date:17-05-2024****Subject Name:Materials Processing****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.

		MARKS
Q.1	(a) What is Malleability? Explain how it can be calculated?	03
	(b) Differentiate between cold and hot working.	04
	(c) Write a short note on direct extrusion.	07
Q.2	(a) Name at least six components that are manufactured by forging processes.	03
	(b) Explain neutral point and angle of bite in rolling.	04
	(c) Draw and label diagram of open and closed die forging presses.	07
	OR	
	(c) Draw different rolling mills with neat sketch and label it.	07
Q.3	(a) List out variables of Shielded Metal Arc Welding process.	03
	(b) Differentiate between soldering and brazing process.	04
	(c) Explain with schematic Gas Tungsten Arc Welding processes.	07
	OR	
Q.3	(a) Draw and explain weld terminologies for a groove weld.	03
	(b) What are different positions used in welding? Explain.	04
	(c) Write a note on Gas Metal Arc Welding process.	07
Q.4	(a) Define welding as per AWS and Indian standards.	03
	(b) Explain limitations of TTT diagrams with reference to welding.	04
	(c) Explain CCT diagram of weldment with neat sketch.	07
	OR	
Q.4	(a) Write applications of die casting process	03
	(b) State the function of Runner, Riser and gating system in casting process	04
	(c) Write a short note on Investment Casting process.	07
Q.5	(a) List out advantages of match plate patterns.	03
	(b) State advantages and limitations of casting process.	04
	(c) Explain shell moulding process in detail.	07
	OR	
Q.5	(a) List out properties of glass ceramics.	03
	(b) Enlist advantages and limitations of Gas atomization process.	04
	(c) State comparative points between welding and casting processes.	07
