Seat No.:	Enrolment No.

Subject Code: 2150206

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER – V (NEW) EXAMINATION – WINTER 2015

Date:08/12/2015

	•	Name: Automotive Manufacturing	
	tructio	0:30am to 1:00pm Total Marks: ons: Attempt all questions. Make suitable assumptions wherever necessary.	70
	3.	Figures to the right indicate full marks.	
Q.1	(a)	Why pattern making is necessary in manufacturing of casting? Explain any two types of pattern with neat sketch.	07
	(b)	Explain investment casting process with neat sketch. State its advantages and applications.	07
Q.2	(a) (b)	Explain MIG welding for welding of sheet metal component. What are the design principles for designing of Jigs and fixtures? OR	07 07
	(b)	What is forging? Explain Forging Hammer and Forging Press with sketch.	07
Q.3	(a)	Define Drill bushes? Explain in brief different types of drill bushes with neat sketch	07
	(b)	Explain the manufacturing of seamless pipe and tubing with neat sketch. OR	07
Q.3	(a) (b)	What is fixtures? Explain milling fixtures and turning fixtures in brief. Explain the effect of residual stresses by considering any example of metal forming.	07 07
Q.4	(a) (b)	Explain submerged arc welding with its advantages and limitations. What is extrusion? Classify it and explain any two with neat sketch. OR	07 07
Q.4	(a)	What is sand testing in foundry? How Grain fineness Test and Permeability Test are carried out in foundry?	07
	(b)	What is welding defect? List the types of welding defects and explain each in brief.	07
Q.5	(a)	Explain CUPOLA furnace with neat sketch	07
	(b)	Explain USM process for manufacturing of any automobile part. OR	07
Q.5	(a)	Why super finishing process is essential in certain product? Explain centerless grinding process with neat sketch.	07
	(b)	Classify the cold working processes. Explain Coining and Embossing process with neat sketch.	07
