

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2024****Subject Code:3150109****Date:25-11-2024****Subject Name:Manufacturing Processes And Production Techniques****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) List out different types of adhesive bonded joints.	03
	(b) Explain any one type of sheet metal bending techniques.	04
	(c) What type of wooden material is used to manufacture airframe?	07
Q.2	(a) What is the purpose of a rivet cutter ?	03
	(b) Compare a bar folding machine and a cornice brake.	04
	(c) Enlist the hand tools for sheet metal work. Discuss any five in detail.	07
	OR	
	(c) Discuss the factors affecting sheet metal parts and joint design.	07
Q.3	(a) Explain embossing process with a neat sketch.	03
	(b) Explain characteristics of fabric materials used for airframe covering.	04
	(c) Explain different construction techniques of fabrication of fuselage.	07
	OR	
Q.3	(a) Briefly explain the Aircraft tubing repair.	03
	(b) What is the difference between cylindrical rolling and taper rolling?	04
	(c) Explain honeycomb sandwich construction by the Fabrication, Machining and forming of FRP.	07
Q.4	(a) Explain riveting process shortly.	03
	(b) Differentiate between turning and taper turning process.	04
	(c) Explain milling process with neat sketch.	07
	OR	
Q.4	(a) Explain soldering process.	03
	(b) Explain application of primer.	04
	(c) Explain different types of aircraft composite materials used for airframes.	07
Q.5	(a) Carry out the comparison of composite material with metals in detail.	03
	(b) Explain the function of any four equipments used in Spray Painting.	04
	(c) Draw and explain geometry of welded steel tube fuselage structure.	07
	OR	
Q.5	(a) Draw any one type of rivet and give nomenclature.	03
	(b) Explain any two types of sheet metal shearing techniques.	04
	(c) Write advantages and disadvantages of composite materials over aluminum sheet metal use in aircraft construction.	07
