

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – SUMMER 2024****Subject Code: 3150109****Date: 16-05-2024****Subject Name: Manufacturing Processes And Production Techniques****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) What is general principle of adhesive bonding?	03
	(b) What are the components of wooden wing ribs? Explain each in brief	04
	(c) What are the precautions need to take by manufacturer before and after the construction of wooden glider airframe?	07
Q.2	(a) List out different types of adhesive bonded joints.	03
	(b) Explain difference between Riveted Joint and welding joint.	04
	(c) Explain any two sheet metal fabrication techniques in detail.	07
	OR	
	(c) What is riveting? Explain Rivet terminology in detail.	07
Q.3	(a) Define Rolling, Pitching, Yawing.	03
	(b) Explain any two types of sheet metal sheering techniques	04
	(c) Explain any one bench mounted sheet metal sheering machine with neat sketch.	07
	OR	
Q.3	(a) What is difference between NC and CNC machine?	03
	(b) Explain usage of hand tools for sheet metal work.	04
	(c) How will you cover and reinforce a wooden wing with fabric covering?	07
Q.4	(a) What is welded joint? And how is it different than riveted joint?	03
	(b) Classify glues. Explain their applications.	04
	(c) Enlist Different sheet metal forming processes. Explain any Two.	07
	OR	
Q.4	(a) Explain Chemical Milling Process.	03
	(b) Classify glues. Explain their applications.	04
	(c) Explain different construction techniques of fabrication of fuselage.	07
Q.5	(a) Briefly explain the Aircraft tubing repair.	03
	(b) Carry out the comparison of composite material with metals in detail.	04
	(c) Explain Heat Treatment of aluminum and steel sheet metal components.	07
	OR	
Q.5	(a) Define Turning, Taper turning, Facing, Knurling	03
	(b) Explain the function of any four equipments used in Spray Painting.	04
	(c) Explain the process for preparation of surface of an airframe for painting.	07
