

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V(NEW) EXAMINATION – SUMMER 2022****Subject Code:3150109****Date:02/06/2022****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) Why planking is required on the leading edge of wooden wing?	03
	(b) Explain any two types of sheet metal sheering techniques.	04
	(c) Explain factors affecting sheet metal parts and joints design in detail.	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) Explain sheet metal rolling technique with neat sketch.	03
	(b) Explain application of primer.	04
	(c) Explain Heat Treatment of steel sheet metal components.	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) Explain soldering process.	03
	(b) Explain application of Fabric covers for Aircraft.	04
	(c) Explain the geometry of welded steel tube fuselage structure with neat sketch in detail.	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) Explain the Aircraft tubing repair briefly.	03
	(b) Explain Extrusion process.	04
	(c) Explain advantages and disadvantages of using composite materials.	07
	OR	
Q.5	(a) Briefly explain the Aircraft tubing repair.	03
	(b) Define Turning, Taper turning, Facing, Knurling	04
	(c) Explain different types of aircraft composite materials used for airframes.	07
