

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2020****Subject Code:3150109****Date:22/01/2021****Subject Name:Manufacturing Processes And Production Techniques****Time:10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any **FOUR** questions out of **EIGHT** questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

	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) Explain sheet metal rolling technique with neat sketch.	03
(b) Explain usage of hand tools for sheet metal work.	04
(c) Explain fabrication process of a welded steel tube truss type fuselage.	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
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
Q.5 (a) Why planking is required on the leading edge of wooden wing?	03
(b) Explain rivet terminology with neat sketch.	04
(c) Draw and explain geometry of welded steel tube fuselage structure.	07
Q.6 (a) Explain brazing process.	03
(b) What is Taper Turning? Explain any one with Neat Sketch.	04
(c) How will you cover and reinforce a wooden wing with fabric covering?	07
Q.7 (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
Q.8 (a) Enlist different types of adhesive bonded joints.	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
