

Enrolment No./Seat No_____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VII EXAMINATION – WINTER 2025

Subject Code:3170111

Date:01-12-2025

Subject Name:Aircraft General Engineering and Maintenance Practices

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) What is aircraft ground handling , and why is it important in aviation operations?	03
	(b) What is ground support equipment (GSE) , and how is it used in aircraft operations?	04
	(c) 1. How are safety protocols developed and implemented in maintenance operations? 2. How can human factors impact safety in maintenance tasks?	07
Q.2	(a) What is the role of tugs in aircraft ground handling?	03
	(b) What is the purpose of ground power units (GPU) in aircraft ground handling?	04
	(c) 1. What is the importance of safety maintenance in aviation? 2. What are the key components of a safety maintenance plan ?	07
	OR	
	(c) Explain FAR Air worthiness directives.	07
Q.3	(a) What is a checklist , and why is it important in the inspection process?	03
	(b) What role does feedback play in improving inspection processes?	04
	(c) Write a note on ATA.	07
	OR	
Q.3	(a) What are the typical tools and equipment used during inspections?	03
	(b) How do regulatory standards impact aircraft design and manufacturing processes?	04
	(c) 1. How do navigation systems work in an aircraft? 2. How are advanced materials like carbon fiber composites produced?	07
Q.4	(a) What are the safety standards governing the use of aircraft hardware?	03
	(b) How do bolts and nuts differ from screws in aircraft applications?	04
	(c) What are the common non-destructive testing (NDT) methods used in aviation? Explain	07
	OR	
Q.4	(a) What are the differences between standard and non-standard hardware in aviation?	03

- (b) How do **thermoplastics** and **thermosetting plastics** differ in aircraft applications? **04**
- (c) Explain in brief the starting procedure for a turbofan engine. **07**
- Q.5** (a) How do **control surfaces** function and what are their components? **03**
- (b) What is mooring? **04**
- (c) Write a short note on Maintenance and Servicing of aircraft Oxygen System. **07**
- OR**
- Q.5** (a) Explain standard operating procedure of Piston engine starting. **03**
- (b) Explain about leveling and towing ground operations. **04**
- (c) Explain pressurization of fuselage. **07**
