

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-IV (NEW) EXAMINATION – WINTER 2020****Subject Code: 3140103****Date: 11/02/2021****Subject Name: Aircraft System, Instruments and Maintenance****Time: 02:30 PM TO 04:30 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) Explain Importance of seat ejection system	03
(b) Explain pitot static system with neat sketch	04
(c) Explain air cycle system for turbojet aircraft with suitable diagram.	07
Q.2 (a) Shortly explain only function of lubrication system in piston engine.	03
(b) Explain fuselage pressurization system with neat sketch.	04
(c) Explain vertical speed indicator, Its construction, operation and application with suitable diagram.	07
Q.3 (a) Explain errors of the instruments operated by pitot static systems.	03
(b) With neat sketch explain fuel supply system of low wing aircraft.	04
(c) Explain Aircraft Fire-protection system	07
Q.4 (a) Explain Importance of Cylinder head temperature gauge	03
(b) Explain about Hydraulic actuator with sketch	04
(c) What is Gyro Principle? Explain Construction and operation of Turn Coordinator	07
Q.5 (a) Explain Importance of De-Icing and Anti Icing System.	03
(b) Classify and shortly explain four types of Gas Turbine Engines.	04
(c) Explain systems of nozzle of a turbojet engine or low bypass turbofan engine with neat sketch.	07
Q.6 (a) Differentiate between cable and pushrod control mechanism of aircraft.	03
(b) Write a short note on Aircraft Manuals.	04
(c) Explain Flaps position indicator system with suitable diagram.	07
Q.7 (a) Only draw bell crank, control horn and turn buckles.	03
(b) Differentiate between breakdown and schedule maintenance.	04
(c) Explain difference between two stroke and four stroke engine.	07
Q.8 (a) Only draw eye end and pushrod assembly with nomenclature.	03
(b) What is the importance to monitor Engine Pressure Ratio?	04
(c) Enlist hydraulic components and Explain gear type pressure pump with figure.	07
