Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV (New) EXAMINATION – WINTER 2015

Subject Code:2140103 **Date:04/01/2016**

Subject Name: Aircraft System instruments and Maintenance.

Time: 2:30pm to 5:00pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q-1	(a)	Enlist and explain rigging components of cable control system.	07
	(b)	With neat sketch how a pilot controls primary control surfaces by hydraulic system.	07
Q-2	(a)	Explain the system which provides oxygen and maintains temperature in passenger cabin.	07
Q-2	(b)	Explain fuselage pressurization system with neat sketch.	07
		OR	
	(b)	Explain how a pilot measures altitude from a particular pressure datum? explain working of that instrument.	07
Q-3	(a)	Explain pitot static system with neat sketch.	07
	(b)	Explain errors of the instruments operated by pitot static systems.	07
		OR	
Q-3	(a)	What are the factors which affects parameters and accuracy of gyro instruments. operated by vacuum system.	07
	(b)	Explain the fuel system of the aircraft where engine is mounted at higher level of fuel tanks.	07
Q-4	(a)	Enlist engine instruments of a single engine piston prop aircraft and explain their applications during flying.	07
	(b)	With neat sketch explain how attitude indicator works.	07
		OR	
Q-4	(a)	Explain principle of engine pressure ratio indicator with neat sketch.	07
	(b)	With neat sketch explain how a turbo prop engine works.	07
Q-5	(a)	With neat sketch explain engine lubrication system of any gas turbine engine.	07
	(b)	Differentiate between single and dual control system with neat sketch.	07
		OR	
Q-5	(a)	What are the applications of flaps spoilers and trim tabs?	07
	(b)	With neat sketch explain how Tachometer works.	

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