GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–IV EXAMINATION – SUMMER 2025

Subject Code:3140111   **Date:21-05-2025**
Subject Name:Avionics
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 do mean by avionics?	03
	(b)	What is role of avionics?	04
	(c)	Enlist avionics systems and their applications in civil and military	07
Q.2	(a)	Explain Flight Data Recorder and Cockpit Voice Recorder.	03
	(b)	Differentiate between primary ground and secondary surveillance radar.	04
	(c)	Explain principle and application of Radio Altimeter. How does it different than pressure altimeter?	07

OR

	(c)	What is function of Emergency Locator Transmitter? How does an airborne pilot find crash site?	07
Q.3	(a)	Briefly explain basic functions of autopilot system.	03
	(b)	Why does DME collocate with glide slop?	04
	(c)	Explain application of outer marker beacon NDB.	07

OR

Q.3	(a)	Differentiate between ILS and MLS.	03
	(b)	Explain usage of Selective Calling System in radio communication.	04
	(c)	What is the major difference between in VOR and DVOR?	07
Q.4	(a)	What is the advantage of early warning system over ground installed secondary radars?	03
	(b)	Differentiate between GPS and IRNSS with respect to air navigation.	04
	(c)	Explain few Integrated Avionics system and weapon system.	07

OR

Q.4	(a)	Explain Flight Management System in brief.	03
	(b)	Explain Fly-by-wire system with suitable block diagram.	04
	(c)	Explain the system which protects an aircraft from head on enroot aircraft.	07
Q.5	(a)	Shortly explain Identification friend or foe (IFF).	03
	(b)	Explain HF wave Propagation.	04
	(c)	Explain Black Box-Flight Data.	07

OR

Q.5	(a)	Give short detail of Selective Calling System.	03
	(b)	Explain Global Positioning System in brief.	04
	(c)	Explain Traffic Collision Avoidance System.	07

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