

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII(NEW) EXAMINATION – SUMMER 2019****Subject Code:2170105****Date:18/05/2019****Subject Name:Advance Avionics****Time:02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

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

		<b>MARKS</b>
<b>Q.1</b>	(a) Enlist basic six avionics equipments which are located in cockpit.	<b>03</b>
	(b) Write a short note about SELCAL.	<b>04</b>
	(c) Explain Indian Navigation system in brief with suitable sketch.	<b>07</b>
<b>Q.2</b>	(a) Enlist ILLITIES which should be kept in mind while designing Digital avionics system.	<b>03</b>
	(b) Shortly explain Flight data and cockpit voice recorder.	<b>04</b>
	(c) What do mean by “Maintenance by WHO, WHEN and Where”?	<b>07</b>
	<b>OR</b>	
	(c) Explain Working principle of Emergency Locator Transmitter with its mounting requirements.	<b>07</b>
<b>Q.3</b>	(a) What is ATLAS? How it is useful in Digital avionics system maintenance?	<b>03</b>
	(b) Write a short note on Multifunction Display.	<b>04</b>
	(c) Explain Fault Detection Methodology in brief with suitable diagram.	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) How Built In Test equipment is useful for maintenance of avionics system?	<b>03</b>
	(b) Compare Digital Avionics System Design Architectures.	<b>04</b>
	(c) Explain Inertial navigation system in brief.	<b>07</b>
<b>Q.4</b>	(a) Explain graph of Mean time between Failure Vs Life cycle costs.	<b>03</b>
	(b) Enlist Environmental tests which are carried out on Avionics system.	<b>04</b>
	(c) Explain how the aircraft and its mission drive the avionics system design.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) What is the use of Central Fault Display System in Maintenance of avionics system?	<b>03</b>
	(b) What do you mean by keeping avionics cool?	<b>04</b>
	(c) Explain integration of Autopilot and flight director system in brief.	<b>07</b>
<b>Q.5</b>	(a) Draw a block diagram of Captain’s Audio selector panel.	<b>03</b>
	(b) Explain types of Emergency Locator Transmitter.	<b>04</b>
	(c) Explain Microwave Landing system in brief with neat sketch.	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) Write down main three components of Flight management system.	<b>03</b>
	(b) Draw a block diagram of HF radio equipment.	<b>04</b>
	(c) Explain EGPWS with its modes of Operation.	<b>07</b>

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