

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (NEW) EXAMINATION – SUMMER 2021****Subject Code:3140111****Date:09/09/2021****Subject Name: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.
4. Simple and non-programmable scientific calculators are allowed.

	MARKS
Q.1 (a) What does meant by avionics ?	03
(b) Explain the need of avionics in Civil and military aircrafts.	04
(c) Explain few Integrated Avionics system and weapon system.	07
Q.2 (a) What is the major difference between in VOR and DVOR?	03
(b) Explain Fly-by-wire system with suitable block diagram.	04
(c) Explain Microwave landing system in brief with suitable sketch.	07
OR	
(c) Explain Distance measuring equipment and its errors in brief with suitable sketch.	07
Q.3 (a) Why does DME collocate with glide slop?	03
(b) Explain application of outer marker beacon NDB.	04
(c) Explain Instrument landing system in brief with proper sketch.	07
OR	
Q.3 (a) Explain sequence of marker beacons.	03
(b) Shortly differentiate between ILS and MLS	04
(c) Explain VOR navigation.	07
Q.4 (a) What is the advantage of early warning system over ground installed secondary radars.	03
(b) Differentiate between TCAS-1 and TCAS-2.	04
(c) Explain Global positioning system in brief.	07
OR	
Q.4 (a) Explain Head-up display with neat sketch.	03
(b) Explain function, principle and errors of radio altimeter.	04
(c) Define Doppler Effect. Explain Doppler radar in brief.	07
Q.5 (a) Discuss the errors of Speech recognition in brief.	03
(b) What is important of SELCAL?	04
(c) Shortly explain need of SATCOM.	07
OR	
Q.5 (a) Define-Skip Distance, Dead Space with respect to HF wave navigation.	03
(b) What are the types of ELT and why it is required on aircraft.	04
(c) Explain Flight Management System.	07
