

Code No: **RT41213****R13****Set No. 1****IV B.Tech I Semester Supplementary Examinations, February - 2019****AVIONICS****(Aeronautical Engineering)****Time: 3 hours****Max. Marks: 70***Question paper consists of Part-A and Part-B**Answer ALL sub questions from Part-A**Answer any THREE questions from Part-B*

PART-A (22 Marks)

1. a) Compare the CRT, LED, LCD characteristics. [3]
- b) What are the basic components in an audio system in an aircraft? [3]
- c) Explain the operation of Distance Measuring Equipment. [4]
- d) Explain working principle of a Gyro. [4]
- e) What are the modes in ground proximity warning system? [4]
- f) What are the features of ARINC-429? [4]

PART-B (3x16 = 48 Marks)

2. a) Draw and explain Head Up Display block diagram and discuss its special features. [8]
- b) Write short notes on
(i) civil aircraft typical sub systems (ii) Electronic Flight Instrumentation [8]
3. a) Explain audio transmitter and receiver working principles. [8]
- b) Draw the block diagram of VHF communication system and explain the working. [8]
4. a) What is VOR receiver? Explain the working principle with relevant diagrams. [8]
- b) Discuss how the ILS helps in aircraft landing in poor weather conditions. [8]
5. a) Describe GPS operation with relevant diagrams. [8]
- b) Write short notes on
(i) Navigation over earth (ii) Accelerometers [8]
6. a) Explain the significance of ATC surveillance system? Explain with neat sketch. [8]
- b) Explain the working principle of collision avoidance system. [8]
7. a) Write short notes on
(i) Fly By Wire (ii) Flight Director system [8]
- b) What is the need for Flight Management System? Explain with suitable diagrams. [8]