

No. of Printed Pages : 03

Roll No. ....

**H-345**

**B. Tech. EXAMINATION, May 2017**

(Eighth Semester)

(B. Scheme) (Main & Re-appear)

(Elective)

(AER)

AER-436-B

AERONAUTICAL ENGINEERING

Avionics

*Time : 3 Hours]*

*[Maximum Marks : 75*

---

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

---

**Note :** Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

(3-42/3) M-H-345

**P.T.O.**

### Unit I

1. (a) What is the main contribution of processors and memory devices in the Avionics technology. **8**  
(b) What is the need of this course ? Avionics in the Aeronautical Technology. **7**
2. Write short notes on any *two* of the following :
  - (a) Digital Data Buses MIL-STD-1553B
  - (b) Digital Data Buses ARINC-429
  - (c) Digital Data Buses ARINC-629. **15**

### Unit II

3. (a) Explain the utility and uses of pitot static probe. **9**  
(b) Explain the Magnetic Heading Reference System (MHRS) with neat sketch. **6**
4. Write short notes on any *two* of the following :
  - (a) Radar Altimeter (RAD ALT)
  - (b) Radar sensing for wheather
  - (c) Doppler Radar. **15**

M-H-345

2

### Unit III

5. Write short notes on any *two* of the following :
  - (a) Active Matrix Liquid Crystal Display (AMLCD)
  - (b) Headed Mounted Display (HMD)
  - (c) Integrated Standby Instrument System (ISIS). **15**
6. Discuss the following systems used in the modern aircraft-communication : **15**
  - (a) Taffic Collision and Avoidance System (TCAS)
  - (b) Identification of Friend and Foe (IFF System).

### Unit IV

7. Explain the TACAN Tactical Air Navigation and VOR TAC (VOR + TACTAN) Navigation System. **15**
8. Discuss the longitudinal, lateral and directional Autopilot Flight Control System in the modern aircraft with the neat sketch. **15**

(3-42/4) M-H-345

3

30