

(b) What is difference between Instrument Landing System (ILS) and Microwave Landing System (MLS). 7

8. Explain the need of Autopilot in the modern Aircraft and how it helps to get relief for the pilot during flight. Explain the longitudinal, lateral and direction autopilot control system used in the modern aircraft. 15

No. of Printed Pages : 04

Roll No. ....

**H-345**

**B. Tech. EXAMINATION, Dec. 2018**

(Eighth Semester)

(B. Scheme) (Re-appear Only)

(AER)

AER436B

AVIONICS

*Time : 3 Hours]*

*[Maximum Marks : 75*

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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.

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

### **Unit I**

1. (a) Explain the fiber optic in the Avionics technology used in Aircraft. **5**  
(b) What is difference in Avionics architecture of commercial and military aircraft ? Explain the environmental effects of Avionics technology. **10**
2. Explain the digital data buses MIL-STD-1553B, ARINC 429, ARINC-629 with their details uses in the Avionics technology. **15**

### **Unit II**

3. What is the role of Air Data Computer (ADC) in the sensor (Air data) used in Aircraft ? Explain Magnetic Sensing-Magnetic Heading Reference System (MHRS). **15**
4. Explain the meaning of inertial sensing used in the Aircraft. Explain Position Gyros and Rate Gyros with neat sketch. **15**

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### **Unit III**

5. What is the need and display in the Avionics technology ? Explain the difference between Head Down Display (HDD) and Head Up Display (HUD). **15**
6. (a) What do you mean by Airtraffic Control (ATC) Transponder and its applications. **7**  
(b) What do you mean by Traffic Collision and Avoidance System (TCAS) ? How can you identify the Friend and Foe (IFF) in Aircraft system ? **8**

### **Unit IV**

7. (a) What is the difference between Global Positioning System (GPS) and differential global positioning system used in the Aircraft navigational system. **8**

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**P.T.O.**