# H345

## B. Tech. EXAMINATION, 2020

(Eighth Semester)

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

(AER)

AER436B

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.

### Unit I

1.  Explain the importance of the following avionics technology in avionics technology in aviation :                                    **5×3=15**
    (a)   Processors
    (b)   Memory devices
    (c)   LRU
    (d)   Fiber Optic Buses
    (e)   Softwares.

2.  (a)   Explain ARINC 429 with the help of a neat diagram.                7
    (b)   Explain the avionics architecture of commercial aircraft. How is it different from military aircraft architecture ?                8

## Unit II

**3.** (a) Explain the following briefly :                                      **4×3**

      (i)   Air Data Sensing

      (ii)  Magnetic Sensing

      (iii) Inertial Sensing

      (iv) Radar Sensing.

    (b) Explain the role of ADC in Air data sensing.                **3**

**4.** Write notes on the following :

    (a) RADALT                                                    **6**

    (b) Working of position gyro, rate gyro and accelerometer.     **9**

## Unit III

**5.** Distinguish between the following :                                 **15**

    (a) Earlier and Modern flight deck

    (b) HDD and HUD.

**6.** Write notes on the following :                                      **15**

    (a) Satellite Communication

    (b) AMLCD

    (c) ATC transponder.

## Unit IV

**7.** Write notes on the following :

    (a) MLS

    (b) Automatic Flight Control System.                           **6,9**

**8.** What do you mean by navigation ? Explain the working principles of VOR, TACAN and VORTAC.                                               **15**