Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code : 40532

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2018

Seventh Semester

Aeronautical Engineering

AE6701 – AVIONICS

(Regulations 2013)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions

PART – A   (10×2=20 Marks)

1. What are the important requirements for civil avionics systems ?

2. State the steps involved in Avionics system design.

3. What do you mean by single point failure in data bus ?

4. State the important features of fourth generation Architecture.

5. Differentiate LED and LCD.

6. What are the advantages of Night Vision Goggles ?

7. State the principle of Gyroscope.

8. Differentiate stable & strap down INS.

9. Define true air speed.

10. Define the term "Phugoid mode" oscillations.

PART – B   (5×16=80 Marks)

11. a) Explain the Avionics systems which interface directly with the pilot. (16)

(OR)

     b) Explain the role of Avionics in Space systems with neat diagrams. (16)

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12. a) i) Explain the Pave pillar architecture with neat block diagram. (6)

ii) Explain the bus Architecture of MIL STD 1553. (10)

(OR)

b) Explain the protocol structure of ARINC 429 data bus. (16)

13. a) Explain the principle and working of HUD with neat diagrams. (16)

(OR)

b) Explain the following :

i) CRT. (10)

ii) HOTAS. (6)

14. a) Explain the theory of ILS with neat sketch. (16)

(OR)

b) Explain the theory of GPS with neat sketch. (16)

15. a) Explain the concept of Longitudinal Autopilot with neat sketch. (16)

(OR)

b) Explain the theory of Altitude warning system with neat sketch. (16)

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