Reg. No. : | | | | | | | | | | | | |

Question Paper Code: 1107034

B.E. / B.Tech. DEGREE EXAMINATIONS, NOV/ DEC 2024
Sixth Semester
Aerospace Engineering
U20AE701 – AVIONICS
(Regulation 2020)

Time: Three Hours Maximum: 100 Marks

Answer ALL questions

PART – A (10 x 2 = 20 Marks)

1. Define the term Avionics system?

2. List out some advantages of Avionics systems.

3. Differentiate between ARINC 420 and ARINC 629.

4. What is meant by AFDX?

5. Mention the advantage of HUD.

6. Why Direct Voice Input is needed?

7. Name three Hyperbolic Navigation systems.

8. Differentiate between ILS and MLS.

9. How does Air Data Computer aid in modern navigation.

10. What is the need for VSI?

PART – B (05 x 16 = 80 Marks)

11. (a) Explain the need for Avionics in civil, Military and space systems? (16)

(OR)

(b) With a schematic diagram, explain the function of a fully Integrated Avionics system. (16)

12. (a) Discuss in detail about MIL-STD-1553D. (16)

(OR)

(b) Explain data bus ARINC 629 topology and discuss its advantages over ARINC 420 data bus. (16)

13. (a) Describe with sketches, the working of CRT and LCD displays. (16)

(OR)

(b) Write short notes on. (16)
i) MFD ii) MFK iii) HOTAS

14. (a) Describe the GPS satellite constellation and explain with suitable sketches the concept of GPS navigation. (16)

(OR)

(b) Describe with sketches, Microwave landing systems and discuss the advantages of MLS over ILS. (16)

15. (a) Explain in detail with suitable schematic diagrams the operation of an Autopilot system. (16)

(OR)

(b) Explain about purpose and operation Mach warning systems. (16)

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