

# SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act, 1956)

Course & Branch: B.E – Aeronautical

Title of the paper: Avionics

Semester: VII

Sub.Code: 526E10

Date: 28-03-2009

Max. Marks: 80

Time: 3 Hours

Session: FN

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## PART – A

(10 x 2 = 20)

Answer ALL the Questions

1. What are the interacting devices between the Pilot and Avionic equipments?
2. What is “Fault Tolerant Avionics”?
3. What is meant by “Language Compiler”?
4. What is “EPROM”?
5. What is “BITE”?
6. What is “RTZ” modulation?
7. What do you mean by “All glass cockpit”?
8. What is “HOTAS”?
9. What is “SQUELCH” in Radio Communication?
10. What is an Auto-Pilot?

## PART – B

(5 x 12 = 60)

Answer All the Questions

11. Write short notes on the following:-
    - (a) ARINC specifications
    - (b) Automatic Test Equipments (ATE)
    - (c) Ada
- (or)
12. What are the external world sensors in Avionics? Explain in detail.

13. Name the input and output devices of a Computer and explain them

(or)

14. Write short notes on the following:- (4 mark each)

(a) Applications Software

(b) Computer Memories

(c) Microprocessors

15. Explain in detail the salient features of MIL – STD – 1553 B digital databus used in modern military aircrafts.

(or)

16. Explain in detail the salient features of ARINC – 429 digital databus used in modern civil aircrafts.

17. Explain in detail the principle of operation of a head up display (HUD) system along with necessary diagrams.

(or)

18. Write short notes on the following (4 marks each)

(a) LCD (b) DVI (c) MFK

19. Explain in detail the principle of operation of Inertial Navigation System (INS) along with necessary sketches.

(or)

20. Write short notes on the following:- (4 marks each)

(a) AUTO-PILOT in ILS Coupling mode.

(b) Emergency Locator Transmitter (ELT)

(c) Electronic Counter Measure (ECM)