



CBCS SCHEME

18AE821

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Eighth Semester B.E. Degree Examination, June/July 2023

Avionics

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Briefly explain the need for avionics in civil and military aircraft. (10 Marks)
- b. Explain briefly about the special purpose cables in aircraft electrical system. (10 Marks)

OR

- 2 a. List the various switching devices available and explain the following switches :
 - i) Pressure switches
 - ii) Toggle switches
 - iii) Rotary switches.(12 Marks)
- b. Explain split bus bar system used for electrical power distribution on board the aircraft. (08 Marks)

Module-2

- 3 a. Define control laws and with required neat diagram, explain how steady state error and lags in the system can be reduced in the response when an input command is given. (12 Marks)
- b. Explain about the roll rate command system with a neat diagram. (08 Marks)

OR

- 4 a. Briefly explain about Cooper Harper scale with neat sketch. (10 Marks)
- b. Explain basic operational principle of an inertial navigation system. (10 Marks)

Module-3

- 5 a. With a neat block diagram, explain about aircraft communication system. (10 Marks)
- b. Explain the different radio frequency hand on which the aircraft communications are usually carried out. (10 Marks)

OR

- 6 a. Describe types of failure warning annunciation. (06 Marks)
- b. Explain the basic stage used in receiver to produces an output from a radio wave. (06 Marks)
- c. Explain basic air data system with neat block diagram. (08 Marks)

Module-4

- 7 a. Write a short notes on the following :
 - i) RAM
 - ii) ROM
 - iii) PROM
 - iv) EPROM
 - v) EEPROM
 - vi) Cache memory.(12 Marks)
- b. Explain the principle of microprocessor with a neat diagram. (08 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42-8=50, will be treated as malpractice.

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OR

8 Explain the following :

- i) LED
- ii) LCD
- iii) EL and Plasma Panel
- iv) Touch screen.

(20 Marks)

Module-5

- 9 a. With the help of schematic diagram, briefly explain the different word format used in MILSTD 1553B data bus. (10 Marks)
- b. Give a brief description about Avionics equipment fit. (10 Marks)

OR

10 Write short notes on :

- i) Flight control system
- ii) Electronic warfare.

(20 Marks)

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