



CBCS SCHEME

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18AE821

Eighth Semester B.E. Degree Examination, June/July 2024

Avionics

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Define Bus bar. With a neat schematic, explain split-Bus bar system. (10 Marks)
b. Briefly explain special purpose cables used in power distribution. (10 Marks)

OR

- 2 a. Write short notes on : i) Circuit controlling derives
ii) Electrical diagrams and identification schemes. (10 Marks)
b. Explain the need for avionics in civil and military aircraft. (10 Marks)

Module-2

- 3 a. Explain the principle of inertial Navigation system with a neat schematic diagram. (10 Marks)
b. Explain the concepts and features of fly-by-wire system. Mention its advantages and disadvantages. (10 Marks)

OR

- 4 a. Explain pitch rate and roll-rate command control with a neat sketch. (10 Marks)
b. Explain the following : i) Concept of Copper-Harper scale
ii) Importance of compass swing. (10 Marks)

Module-3

- 5 a. Explain basic air data system with a neat diagram. (10 Marks)
b. Explain annunciation systems used in aircraft in brief. (10 Marks)

OR

- 6 a. Briefly explain the different equipments used in airborne communication systems. (10 Marks)
b. Write short notes on different types of oscillators and amplifiers used in aircraft systems. (10 Marks)

Module-4

- 7 a. With a neat schematic, illustrate the architecture of general microprocessor. (10 Marks)
b. Explain the different types of memories used in digital computers. (10 Marks)

OR

- 8 a. Explain the principle and operation of CRT, LCD and LED. (10 Marks)
b. Explain the principle of HUD with a neat schematic. (10 Marks)

Module-5

- 9 a. Write short notes on Avionics equipment fit. (10 Marks)
b. Explain the following : i) Navigation systems ii) Flight control systems. (10 Marks)

OR

- 10 a. Describe the architecture and word formats of MIL – STD 1553 Bus systems. (10 Marks)
b. Explain the following : i) Classification of RADARS ii) Electronic warfare. (10 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.