

# CBCS SCHEME

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17AE81

**Eighth Semester B.E. Degree Examination, July/August 2022**

## **Avionics**

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. Describe the function of isolation relay, static inverter and TRU. (10 Marks)  
b. Explain vital services, essential services and non essential services. (10 Marks)

**OR**

- 2 a. Explain special purpose cables. (10 Marks)  
b. Illustrate switch contact arrangement. (10 Marks)

### Module-2

- 3 a. Illustrate the structure of stable platform and strap down system. (12 Marks)  
b. Describe Gyroscope. (08 Marks)

**OR**

- 4 a. Explain basic elements of a FBW flight control system with neat diagram. (10 Marks)  
b. Describe hard-over failure for Quadruplex sensors. (10 Marks)

### Module-3

- 5 a. Describe different display unit that are present in electronic flight instrument system. (10 Marks)  
b. Illustrate display of air data with neat diagram. (10 Marks)

**OR**

- 6 a. Explain transmitter and receiver with neat diagram. (12 Marks)  
b. Describe Antenna, Amplifier and oscillator. (08 Marks)

### Module-4

- 7 a. Explain memories. (08 Marks)  
b. Illustrate the pinconfiguration of microprocessor. (12 Marks)

**OR**

- 8 a. Describe MFD, HUD, MFK and HOTAS. (10 Marks)  
b. Explain advantages of DVI, touch screen and LED. (10 Marks)

### Module-5

- 9 a. Describe MIL-STD 1553B Bus system with neat diagram. (12 Marks)  
b. Explain Manchester bi-phase encoding with diagram. (08 Marks)

**OR**

- 10 a. Explain any 3 types of transfer formatting used in MIL-STD 1553B. (10 Marks)  
b. Explain any two types of communication systems. (10 Marks)

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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.