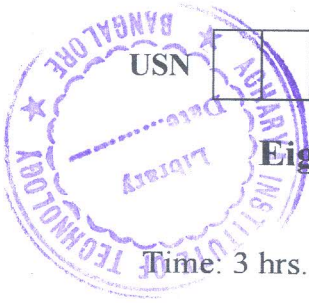


# CBCS SCHEME



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17AE81

## Eighth Semester B.E. Degree Examination, July/August 2021

### Avionics

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. With the help of neat labeled schematic diagram, explain the split Bus bar system used for power distribution in aircraft. (10 Marks)  
b. Explain the different circuit controlling devices and need for avionics in civil and military aircraft. (10 Marks)
- 2 a. With the help of neat labeled schematic diagram, explain Bus bar system used for power distribution in aircraft. (10 Marks)  
b. Explain briefly about special purpose cables in aircraft electrical system. (10 Marks)
- 3 a. Explain basic operational principle of an internal navigation system. (10 Marks)  
b. With a schematic diagram, explain the working of a stable platform system. (10 Marks)
- 4 a. Explain the basic concepts and features of a typical fly – by – wire control system, with a neat sketch. (10 Marks)  
b. Explain Cooper Happer scale and common modes of failures and effects analysis. (10 Marks)
- 5 a. List the basic flight instruments used on the Aircraft, represent with a schematic diagram, 'Basic Six' and basic 'T' type of flight instrument grouping. (10 Marks)  
b. Explain the Digital air data computer, used for On-Board Air Data Processing. (10 Marks)
- 6 a. Briefly explain the following: i) Notch Antenna ii) Slot Antenna. (10 Marks)  
b. Explain typical Avionics Subsystems, and Amplifier and Oscillator. (10 Marks)
- 7 a. Explain the principle of microprocessor with neat diagram. (10 Marks)  
b. Explain the following : i) Touch screen ii) LED iii) LCD iv) Plasma panel. (10 Marks)
- 8 a. Write a shot note on the following:  
i) RAM ii) ROM iii) Cache memory iv) EPROM. (10 Marks)  
b. Explain Civil cockpit and military cockpit. (10 Marks)
- 9 a. Briefly explain the following :  
i) Classification of Radars ii) Electronic support measures. (10 Marks)  
b. Explain electrical data bus system and communication system. (10 Marks)
- 10 a. Explain Navigation system and Flight control system. (10 Marks)  
b. Explain electronic warfare and fire control system. (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.