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10AE82

Eighth Semester B.E. Degree Examination, Aug./Sept.2020

AVIONICS

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.**PART - A**

- 1 a. With neat diagram, describe about the Split Bus Bar system used for power distribution in the aircraft. (10 Marks)
b. Write short notes on special purpose cables and also give the details on need for Avionics in civil and military aircrafts. (10 Marks)
- 2 a. Describe about the Inertial Navigation System, with neat diagram. (08 Marks)
b. With a clear diagram, explain about the stable platform and also list down the importance of compass swing. (12 Marks)
- 3 a. Discuss in detail about the working principle of Roll Rate Command Fly by wire system with neat diagram. (12 Marks)
b. Write notes on Cooper Harper Scale and Common modes of failures and effect analysis. (08 Marks)
- 4 a. Bestow the basic flight instruments used in aircraft and also write short notes on basic six and 'T' type flight instrument grouping (12 Marks)
b. Explain about the Air data system, with neat diagram. (08 Marks)

PART - B

- 5 a. With neat block diagram, discuss about the Aircraft Communication System. (10 Marks)
b. Write short notes on :
i) Amplifier ii) Oscillator iii) Antennas. (10 Marks)
- 6 a. Discuss in detail about the architecture and working principle of 8085 Microprocessor , with neat diagram. (12 Marks)
b. Classify the types of memories with a tree diagram and explain. (08 Marks)
- 7 a. Write notes on :
i) Touch Screen ii) D V I iii) CRT and LED. (12 Marks)
b. Discuss about the working principle of three elements HUD used in military aircrafts. (08 Marks)
- 8 a. Write short notes on Avionics equipment fit and fire control system. (08 Marks)
b. Discuss in detail about the working principle of MIL - STD 1553 B data bus and its word formats. (12 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.