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10AE82

Eighth Semester B.E. Degree Examination, Feb./Mar. 2022
Avionics

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting at least 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. With neat diagram explain PFD. (10 Marks)
b. Describe the function of airspeed tape with neat diagram. (06 Marks)
c. Describe the difference between NORTH and TRUE NORTH. (04 Marks)

PART - B

- 5 a. List the frequencies, band and function used for aviation communication and navigation. (12 Marks)
b. Explain T^x and R^x with neat labeled diagram. (08 Marks)
- 6 a. Define bit, byte, word and instruction. (04 Marks)
b. Explain the architecture of μp . (10 Marks)
c. Explain cache memory and main memory. (06 Marks)
- 7 a. Write short notes on : (05 Marks)
i) HOTAS (05 Marks)
ii) Multi Function Keyboard (MFK)
b. Write short notes on : (05 Marks)
i) Touch screens (05 Marks)
ii) Direct Voice Input (DVI)
- 8 a. Give a brief description about Avionics equipment fit. (10 Marks)
b. Write short notes on : (05 Marks)
i) Electronic Warfare (EW) (05 Marks)
ii) Navigation system

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