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10AE82

Eighth Semester B.E. Degree Examination, Jan./Feb. 2021

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. Define the 3 groups which usually categorize the importance of consumers service. (06 Marks)
b. Describe briefly the function of indicating lights on the control panel. (05 Marks)
c. List and explain types of electrical diagrams, produced for aircraft. (09 Marks)
- 2 a. Explain the structure of stable platform. (08 Marks)
b. Describe inertial alignment. (06 Marks)
Explain the importance of compass swing. (06 Marks)
- 3 a. With neat diagram explain quadplex actuation system and lane processing task. (08 Marks)
b. Explain the operation of failure detection algorithm. (12 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. With neat diagram explain the difference between civil cockpit and military cockpit. (10 Marks)
b. Describe the function of MFD, HUD, MFK and HOTAS. (10 Marks)
- 8 a. Describe information transfer format for RT to RT. (06 Marks)
b. Explain word formats of MIL – STD 1553B. (08 Marks)
c. Explain data encoding of MIL – STD 1553B. (06 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.