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10AE82

Eighth Semester B.E. Degree Examination, June/July 2015

Avionics

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART - A

- 1 a. Bring out the requirements of avionics in civil & military aircraft. (06 Marks)
b. Explain split bus bar system used for electrical power distribution on board the aircraft. (08 Marks)
c. List different types of cables used for connecting on board electrical system and explain them. (06 Marks)
- 2 a. Explain basic operational principle of an Inertial Navigation system. (10 Marks)
b. With a neat schematic diagram, explain the working principle of stable platform. (10 Marks)
- 3 a. Explain Quadruplex actuation system, with neat diagram. (06 Marks)
b. With neat diagram, explain generalized dissimilar redundant flight control system architecture. (06 Marks)
c. Explain roll rate command control, with neat diagram. (08 Marks)
- 4 a. Explain 'basic T' and 'basic six' instrument grouping in flight, with neat diagram. (08 Marks)
b. State the color assigned to the display in EFIS and the type of information to which they correspond. (04 Marks)
c. Explain basic air data system, with a neat block diagram. (08 Marks)

PART - B

- 5 a. Explain the different radio frequency band on which the aircraft communications are usually carried out. (10 Marks)
b. Explain slot antenna, with neat sketch. (05 Marks)
c. With a neat diagram, explain the transmitter in a communication system. (05 Marks)
- 6 a. Explain the principle of μp , with neat diagram. (08 Marks)
b. List various types of memories and briefly explain. (12 Marks)
- 7 a. List the advantages and disadvantages of CRT, LED, LCD. (10 Marks)
b. Briefly discuss the following : i) DVI ii) HUD. (10 Marks)
- 8 a. Explain different transfer formats that are used in MIL - STD 1553 B, with neat diagram. (10 Marks)
b. Explain Integrated Avionic System architecture, with neat diagram. (10 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.