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Eighth Semester B.E. Degree Examination, Dec.2018/Jan.2019
Avionics

Time: 3 hrs.

Max. Marks:100

**Note: Answer FIVE full questions, selecting
at least TWO questions from each part.**

PART – A

- 1 a. Explain split bus bar system used for electrical power distribution on board the aircraft. (08 Marks)
- b. What do you mean by Pole and Throw? Explain with the help of suitable sketches the possible arrangements. (06 Marks)
- c. Explain the importance of avionics systems in civil and military aircrafts. (06 Marks)
- 2 a. Explain the basic operational principle of an inertial Navigation system. (07 Marks)
- b. Explain the different In-flight alignment methods. (08 Marks)
- c. Explain the importance of compass swing. (05 Marks)
- 3 a. Explain roll rate command control with neat diagram. (08 Marks)
- b. Briefly explain the concept of Copper-Harper scale. (06 Marks)
- c. What are the common modes of failures in avionics systems? (06 Marks)
- 4 a. Describe types of failure warning annunciations. (07 Marks)
- b. Explain basic air data system with a neat block diagram. (08 Marks)
- c. State the color assigned to the display in EFIS and the type of information to which they correspond. (05 Marks)

PART – B

- 5 a. Explain the different radio frequency band on which the aircraft communications are usually carried out. (08 Marks)
- b. Explain basic stages used in receiver to produce an output from a radio wave. (06 Marks)
- c. Explain slot antenna with a neat sketch. (06 Marks)
- 6 a. With a neat sketch explain the architecture of a general microprocessor. (10 Marks)
- b. Explain the classification of a memory. (10 Marks)
- 7 a. Briefly explain the following: (i) CRT display (ii) Plasma panel. (10 Marks)
- b. With a neat sketch, explain the working principle of head up display. (10 Marks)
- 8 a. Briefly explain the different elements of electronic warfare. (10 Marks)
- b. With the help of schematic diagram, briefly explain the different word formats used in MIL STD 1553B data bus. (10 Marks)

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