Eighth Semester B.E. Degree Examination, June/July 2016
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 the help of a schematic diagram explain split bar bus system.   **(10 Marks)**
    b. Explain the importance of avionics systems in civil and military aircrafts.   **(10 Marks)**

2   a. Explain the principle of inertial navigation system with a suitable schematic diagram.
                                                                                      (10 Marks)
    b. With a neat sketch, explain the structure of stable platform.   **(10 Marks)**

3   a. What are the concepts and features of fly by wire systems? With a neat sketch, list the elements a fly by wire flight control system.   **(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. Explain the primary flight display systems used in civil aircrafts with a neat sketch.
                                                                                      (10 Marks)
    b. With the help of a schematic diagram, explain the functioning of air data computers.
                                                                                      (10 Marks)

PART – B

5   a. With a help of schematic diagram, explain the working of superheterodyne receiver.
                                                                                      (08 Marks)
    b. Briefly explain the different equipments used in airborne communication systems.
                                                                                      (12 Marks)

6   a. With a neat sketch explain the architecture of a general microprocessor.   **(08 Marks)**
    b. Write short notes on : i) DRAM   ii) PROM   iii) EEPROM   iv) Flash memory.   **(12 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 element electronic wavefare.   **(10 Marks)**
    b. With the help of schematic diagram, briefly explain the different word formats used in MIL STD 1553 B data bus.   **(10 Marks)**

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