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Total No. of Printed Pages: 1

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B. Tech. (Aerospace Engg.) (Semester – 4th)
AIRCRAFT SYSTEMS AND INSTRUMENTATION
Subject Code: BASES1-404
Paper ID: [19113009]

Time: 03 Hours

Maximum Marks: 60

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:

- a. What is conventional flight control system type?
- b. What do you mean by power assisted and power actuated control?
- c. Where the brakes are fitted in airplanes?
- d. Give one example of hydraulic and pneumatic system in aircrafts.
- e. What is icing phenomenon?
- f. Name three types of landing gears.
- g. How the pressure is measured in the engine?
- h. What is different voltage for devices on board?
- i. What are the main components of fire protection system?
- j. What is a rate gyro?

Section – B **(5 marks each)**

- Q2. Explain working of ILS?
- Q3. Describe the working of retraction of landing gear.
- Q4. Describe the fuel system of a jet engine.
- Q5. Explain horizon indicator.
- Q6. What are the engine control system components?

Section – C **(10 marks each)**

- Q7. Explain the working of push pull rod system and compare it with hydraulic system
- Q8. Describe briefly all the important systems used in aircrafts.
- Q9. How many types of sensors and instruments are used in an aircraft? What is a flight computer?