Roll No……..….. **Total No. of Printed Pages: 1**

Total No. of Questions: [09]

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?