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Eighth Semester B.E. Deg							
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Eighth Semester B.E. Degree Examination, June/July 2017

Aircraft Systems and Instrumentation

Time: 3 hrs. Max. Marks:100

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

PART - A

- a. Describe about the primary and secondary flight controls with relevant diagrams. (10 Marks)b. With clear illustration, explain about the power assisted and fully powered flight control
 - system. (10 Marks)
- 2 a. Write notes on hydraulic actuators and pneumatic system. (07 Marks)
 - b. List out the use of bleed air. (03 Marks)
 - c. Discuss about the different types of retraction systems. (10 Marks)
- 3 a. With neat diagrams, explain about the different types of fuel feed system. (12 Marks)
 - b. Describe about the classification of fuel pumps and its working principle. (08 Marks)
- 4 Describe about the aircraft anti-icing system and deicing system with suitable diagram.

(20 Marks)

PART - B

- 5 a. Discuss and describe about the aircraft instrumentation grouping. (10 Marks)
 - b. Explain about the inertial navigation systems with neat block diagram. (10 Marks)
- 6 a. With neat diagrams, explain about the working principle of pitot static system. (10 Marks)
 - b. Write notes on:
 - i) AOA sensing,
 - ii) Mach meter. (10 Marks)
- 7 a. List out the properties of gyroscope. (02 Marks)
 - b. Write down the limitations of directional gyros. (04 Marks)
- c. Discuss the functioning of a turn and bank indicator. (14 Marks)
- 8 a. Explain the different types of instruments used for RPM measurement. (10 Marks)
 - b. Discuss about the several types of fuel flow indicators. (10 Marks)

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