

# CBCS SCHEME

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## Fifth Semester B.E. Degree Examination, June/July 2018 Aircraft Electrical Systems and Instrumentation

Max. Marks: 80

Time: 3 hrs.

Note: Answer any FIVE full questions, choosing one full question from each module.

### Module-1

- 1 a. What is the need of Flight control system? With neat sketch, explain power assisted flight control system. (10 Marks)  
b. Briefly explain Integrated Actuator Package. (06 Marks)

OR

- 2 a. With neat sketch, explain advanced actuation concept. (10 Marks)  
b. List the advantages of Fly-by-wire system. (06 Marks)

### Module-2

- 3 a. Explain basic types of Hydraulic pump. (08 Marks)  
b. Briefly explain Pneumatic system and its components. (08 Marks)

OR

- 4 a. With neat sketch, explain electronic Anti-Skidding system. (08 Marks)  
b. What is steering system and why it is used? List the function of steering system. (08 Marks)

### Module-3

- 5 a. What is the purpose of an aircraft fuel system? With neat sketch explain generalized fuel system of large transport aircraft. (10 Marks)  
b. With a typical example, explain fuel system for piston engine. (06 Marks)

OR

- 6 a. Explain Lubricating system for Piston Engine. (10 Marks)  
b. Write short note on Fuel Quantity Indicators. (06 Marks)

### Module-4

- 7 a. What are the salient requirements necessary for the successful functioning of an Air conditioning system? (08 Marks)  
b. Explain vapour cycle cooling system. (08 Marks)

OR

- 8 a. What are the different types of anti-icing systems? Briefly explain. (10 Marks)  
b. Write short note on system -- Donner. (06 Marks)

### Module-5

- 9 a. Explain typical Pitot-static system with neat schematic diagram. (08 Marks)  
b. Explain the working, functions and components of Distance measuring Equipment. (08 Marks)

OR

- 10 a. Define Gyroscope and Explain its properties. (06 Marks)  
b. Explain Radiation pyrometer with neat block diagram and list its advantages. (10 Marks)

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Important Note: 1. On completing the examination, candidates should hand over the remaining blank pages to the invigilator. 2. Any revealing of identification, appeal to evaluator and/or equations written etc. will be treated as malpractice.