



CBCS SCHEME

15AE554

Fifth Semester B.E. Degree Examination, Jan./Feb.2021 Aircraft Electrical System & Instrumentation

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Explain EHA and EMA with neat sketch. (08 Marks)
b. With a neat sketch explain autopilot system. (08 Marks)

OR

- 2 a. Describe about the primary and secondary flight controls with relevant diagrams. (08 Marks)
b. Explain FBW and DFBWS. (08 Marks)

Module-2

- 3 a. Explain simple hydraulic system with neat sketch and explain briefly about simplified Boeing – 767 aircraft. (09 Marks)
b. With a neat sketch, explain electronic anti skidding system. (07 Marks)

OR

- 4 a. Explain typical high pressure and typical low pressure pneumatic system with relevant diagrams. (12 Marks)
b. Write a short note on hydraulic system fluids. (04 Marks)

Module-3

- 5 a. Briefly explain jet engine electronic ignition system with neat sketch. (10 Marks)
b. List the components used in lubricating oil system. (06 Marks)

OR

- 6 a. What are some of the factors that influence the choice of the starting system? (08 Marks)
b. Explain the lubricating system components used on gas turbine engines. (08 Marks)

Module-4

- 7 a. With neat diagram, explain generalized basic air cycle system and vapour cycle system. (12 Marks)
b. Write a short note on the fire extinguishing agent used in aircraft. (04 Marks)

OR

- 8 With relevant sketches, briefly explain about the different types of anti icing system. (16 Marks)

Module-5

- 9 a. Discuss and describe about the aircraft instrumentation grouping. (08 Marks)
b. Write a short note on Gyroscope. (08 Marks)

OR

- 10 a. What is tachometer? With neat sketch explain a mechanical tachometer. (08 Marks)
b. How are engine temperature measuring instruments classified? Explain any one type. (08 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.