

# CBCS SCHEME

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18AE/AS55

## Fifth Semester B.E. Degree Examination, Jan./Feb. 2021 Aircraft Systems and Instrumentation

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

1 Explain about the push pull rod system and also describe about the FBW with neat diagram. (20 Marks)

OR

2 Describe about the three axis autopilot system with neat diagram and also explain about the power assisted and fully powered system. (20 Marks)

### Module-2

3 Elucidate the operation and working principle of different types of hydraulic systems and also write notes on various components of hydraulic systems. (20 Marks)

OR

4 Discuss about the types of pneumatic system and also explain about the landing gear systems with neat diagrams. (20 Marks)

### Module-3

5 a. Describe about the lubrication systems for piston engines. (10 Marks)

b. Explain about the components of turbofan engine with neat diagram. (10 Marks)

OR

6 Give detail description about the starting and ignition systems and sequence with neat diagram. (20 Marks)

### Module-4

7 Explain about the basic air cycle and vapour cycle system with neat diagram. (20 Marks)

OR

8 With clear diagram discuss about the deicing and fire protection systems. (20 Marks)

### Module-5

9 Explain the working principle of ASI, VSI, Altimeter and Mach meter with clear diagrams. (20 Marks)

OR

10 With clear diagram, discuss about the aircraft engine pressure and RPM measurement. (20 Marks)

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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.