CBCS SCHEME

Seventh Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025
Basics of Flight Simulation

Time: 3 hrs.   Max. Marks: 100

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

Module-1

1	a. Briefly explain history of flight simulation.	(10 Marks)
	b. Explain various case of simulation.	(10 Marks)

OR

2	a. Differentiate between engineering and conventional flight simulation.	(10 Marks)
	b. Write short notes on role of simulate.	(05 Marks)
	c. List advantages of flight simulate.	(05 Marks)

Module-2

3	a. Illustrate organization of simulate.	(10 Marks)
	b. Briefly explain aircraft equation of motion.	(10 Marks)

OR

4	a. Elucidate aerodynamics and engine modes.	(10 Marks)
	b. Elucidate weather and data acquisition modes.	(10 Marks)

Module-3

5	a. Explain differential equation with example.	(10 Marks)
	b. Write a code for cannonball trajector.	(10 Marks)

OR

6	a. Describe numerical integration with example.	(10 Marks)
	b. Write short note on real time computation and flight data.	(10 Marks)

Module-4

7	a. Procure aircraft for equation.	(10 Marks)
	b. Write short notes about A/C propulsion system.	(10 Marks)

OR

8	a. Describe various forces acting on aircraft.	(10 Marks)
	b. Procure aircraft moment equations.	(10 Marks)

Module-5

9	a. Explain Laplace transform with example.	(10 Marks)
	b. Explain effect of PID control terms.	(10 Marks)

OR

10	a. Explain simulation concept of EFIS display.	(10 Marks)
	b. Write short note on GPS and inertial navigation system.	(10 Marks)

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