

Model Question Paper-1

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Fourth Semester B.E. Degree Examination Subject Title: Aircraft Systems and Instrumentations

TIME: 03 Hours

Max. Marks: 100

Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.

Module -1			*Bloom's Taxonomy Level	Marks
Q.1	a	With a neat diagram explain digital fly by wire system.	L2	06
	b	Explain power assisted and power operated system.	L2	08
	c	Describe the advantages and disadvantages of autopilot system	L1	06
OR				
Q.2	a	Describe about the primary & secondary flight controls with relevant diagrams.	L2	12
	b	With the help of neat sketch explain about auto pilot system.	L2	08
Module-2				
Q.3	a	With a neat sketch, explain about typical high pressure pneumatic system.	L2	10
	b	Explain basic brake control system with neat labelled diagram.	L2	10
OR				
Q.4	a.	Explain simple hydraulic system with neat sketch & briefly explain about simplified B767 aircraft.	L2	15
	b.	Write a short note on hydraulic fluid	L1	05
Module-3				
Q.5	a	What is the purpose of an aircraft fuel system? With a neat sketch explain the generalized fuel system for large transport aircraft.	L1,2	12
	b	What are some of the factors that influence the choice of the starting system?	L1	08
OR				
Q.6	a	Distinguish between fuel system of piston engine and jet engine.	L4	10
	b	How do you select ignition system in aircraft	L1	10
Module-4				
Q.7	a	With relevant sketch, briefly explain regarding air cycle cooling system.	L2	08
	b	Explain the most common types of fire detection system used on aircraft. Explain any one type with neat sketch	L1,2	12
OR				
Q.8	a	With relevant sketch, briefly explain regarding vapor cycle cooling system.	L2	08
	b	Write a short note on: i. Electrical anti icing ii. Pneumatic impulse de-icing system	L2	12
Module-5				
Q.9		With a neat sketch, explain the working operations of the following instruments. i. Thermocouple ii. Machmeter iii. Pitot static system iv. Gyroscope	L1,2	20

OR				
Q. 10		Explain the principle and operation for the following with neat labelled diagram: i. Accelerometer ii. Altimeters iii. Airspeed Indicator iv. Electrical tachometer	L1,2	20