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Seventh Semester B.E./B.Tech. Degree Examination, June/July 2026

Avionics and Systems

Time: 3 hrs.

Max. Marks: 100

LIBRARY

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.

2. M : Marks , L: Bloom's level , C: Course outcomes.

Module – 1			M	L	C
Q.1	a.	Describe about push pull rod conventional control systems in an aircraft with neat diagram.	10	L2	CO1
	b.	Illustrate the architecture of typical DFBW system using an appropriate block diagram.	10	L3	CO1
OR					
Q.2	a.	Elucidate the operation and working principle of aircraft pneumatic systems.	10	L2	CO1
	b.	Illustrate how aircraft hydraulic systems are applied to operate and control brake systems.	10	L3	CO1
Module – 2					
Q.3	a.	Explain the purpose of an aircraft fuel systems and describe the generalized fuel system of a jet engine with the help of neat sketch.	10	L2	CO2
	b.	Describe the components of a lubricating systems used in gas turbine engine.	10	L2	CO2
OR					
Q.4	a.	Explain the generalized basic vapor cycle system used in aircraft with the help of neat diagram.	10	L2	CO2
	b.	Illustrate with a neat sketch the working principle of Systron Donner fire detection in an aircraft engine bay.	10	L2	CO2
Module – 3					
Q.5	a.	Explain about the basic '7' types of flight instrument grouping in an aircraft.	10	L2	CO3
	b.	Discuss the operation and working principle of flight instrument like Altimeter and Mach meter with a neat diagram.	10	L3	CO3

OR					
Q.6	a.	Describe the function of accelerometers used in navigation systems instruments and their operation with aid of a neat diagram.	10	L2	CO3
	b.	Elucidate the working principle of Tachometer with a neat sketch.	10	L3	CO3
Module – 4					
Q.7	a.	Explain split bus bar system used for electrical power distribution on board the aircraft.	10	L2	CO4
	b.	Explain briefly about the special purpose cables used in an aircraft electrical system.	10	L2	CO4
OR					
Q.8	a.	Describe the coding scheme for aircraft cable installation with an example.	10	L2	CO4
	b.	Explain the importance of avionics system in civil and military aircraft.	10	L2	CO4
Module – 5					
Q.9	a.	Describe the characteristics and requirements of an airborne DVI system.	10	L2	CO5
	b.	Give a brief description about Avionics Equipment Fit.	10	L2	CO5
OR					
Q.10	a.	Explain the different elements of Electronic warfare in Avionics systems.	10	L2	CO5
	b.	Explain briefly the different word formats used in MIL-STD-1553 B with the help of schematic diagram.	10	L2	CO5
