PRN:		Course Code :	AER4704C

Final Year **B. Tech** End Semester Examination Summer 2024

Aircraft Condition Monitoring

Day and Date: 29 MAY 2024, wed Max Marks: **100**

Time : 10:30AM To 01.30PM Duration: **03** hrs

Instructions: All questions are compulsory.

			Marks	Bloom's Level	CO
Q.1	**Attempt the following**				
	a)	What are different principles of Maintenance?	08	1	1
	b)	State and explain following terms in detail i. Mean Time to Failure ii. Mean Time Between failure iii. Mean Time to Repair	08	2	1
		OR			
	b)	What are different types of Maintenance Strategies? Explain in Detail	08	2	1
Q.2	**Attempt the following**				
	a)	Elaborate maintenance of Transformer in detail	08	2	1
	b)	What is Minor and Major work associated with corrective Maintenance?	08	2	2
		OR			
	b)	What are different causes of Insulation Failure?	08	3	2
Q.3	**Attempt any two from the following**				
	a)	Explain in detail different steps involved in condition monitoring	08	1	2
	b)	Explain different methods and instruments of conditioning monitoring.	08	2	3
	c)	Elaborate Wear Debris Analysis (WDA)	08	2	3
Q.4	**Attempt any two from the following**				
	a)	Explain the different criteria to select the machine to be monitored	08	1	4
	b)	Elaborate Failure modes and root causes in rotating Electrical Machines.	08	2	4
	c)	Explain Mechanical, Electrical and Environmental specifications of machine and corresponding failure modes.	08	3	4

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Q.5	**Attempt any Two of the following**				
	a)	Elaborate Local temperature measurement	09	3	4
	b)	Explain Bulk measurement approach of temperature measurement	09	2	4
	c)	Explain wear Debris detection in detail	09	3	4
Q.6	**Attempt any Two of the following**				
	a)	Explain different applications of Vibration Analysis	09	2	5
	b)	What is Fast Fourier Transformer (FFT)? State its applications	09	2	5
	c)	Elaborate Frequency Domain Analysis with suitable diagram.	09	3	5

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