

CBCS SCHEME

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BAE714A

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

Time: 3 hrs.

Max. Marks: 100

*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.	Illustrate and describe the comparison of operating parameters of turbojets, turbo prop and turbo fan engines.	10	L1	CO1
	b.	Explain different methods of thrust augmentation.	10	L1	CO1
OR					
Q.2	a.	With a neat sketch, explain pressure, temperature and velocity changes across engine.	10	L1	CO1
	b.	What are the types of burners? Explain with a neat sketch with their merits and demerits.	10	L1	CO1
Module – 2					
Q.3	a.	Write and discuss about the characteristics to be considered for selection of metals in gas turbine engine.	10	L1	CO2
	b.	Briefly explain the heat range of the different alloys.	10	L2	CO2
OR					
Q.4	a.	Explain the working of general of FADEC system with neat sketch.	10	L2	CO2
	b.	Explain typical oil system and their components.	10	L1	CO2
Module – 3					
Q.5	a.	Define wind milling and explain the process of wind milling of a turbojet engine.	10	L1	CO3
	b.	Explain fundamentals of starting process of a jet engine.	10	L2	CO3
OR					
Q.6	a.	Write about importance of engine performance monitoring and explain it's parameters.	10	L1	CO3
	b.	Explain transient performance of a aero gas turbine engine.	10	L2	CO3
Module – 4					
Q.7	a.	Draw and explain compressor MAP of axial flow compressor.	10	L2	CO3
	b.	Derive the equation for maximum mass flow rate through nozzle of a gas turbine.	10	L2	CO1

OR					
Q.8	a.	Draw and explain the combustor rig test.	10	L1	CO1
	b.	Explain the turbine testing and its performance evolution.	10	L2	CO3
Module – 5					
Q.9	a.	List the proof of concepts used in the process of engine testing explain preliminary flight ranging test in detail.	10	L2	CO3
	b.	Explain the typical data acquisition system.	10	L1	CO3
OR					
Q.10	a.	Explain about MASS and CUSUM plots.	10	L1	CO3
	b.	Write the notes on the following : (i) Pressure measurements. (ii) Temperature measurements.	10	L2	CO3

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