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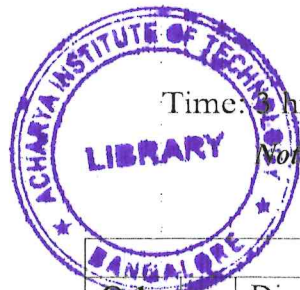
Fourth Semester B.E./B.Tech. Degree Examination, June / July 2026

Electrical Power Generation and Economics

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.	Discuss the factors considered for selection of site for hydro electric power plant.	06	L2	CO1	
	b.	Define : i) Hydrograph ii) Flow duration Curve and Mass Curve	08	L1	CO1	
	c.	Explain with a neat sketch, the working of high head power plant.	06	L2	CO1	
OR						
Q.2	a.	Explain the governing mechanism of water turbine with neat sketch.	08	L2	CO1	
	b.	What is meant by water hammer? Explain the function of surge tank.	04	L2	CO1	
	c.	How the hydro power plants are classified? Explain in detail.	08	L2	CO1	
Module – 2						
Q.3	a.	Explain the function of air-preheater and economizers in thermal power plant.	06	L2	CO2	
	b.	Write a short note on : i) Overfeed stokers ii) Underfeed stokers	06	L1	CO2	
	c.	Explain with the neat sketch, the working of modern steam power plant and explain the function of each component in it.	08	L2	CO2	
OR						
Q.4	a.	Discuss the advantages and disadvantages of a gas power plant.	06	L2	CO2	
	b.	Explain the layout of a typical gas power plant and explain the function of its components.	06	L2	CO2	
	c.	Discuss in brief the methods of improving thermal efficiency of gas turbine power plant.	08	L2	CO2	

Module – 3

Q.5	a.	Explain with a neat diagram, various parts of a nuclear reactor. Explain clearly the each part.	07	L2	CO3
	b.	List out the classification of the nuclear reactors.	06	L1	CO3
	c.	Explain with a neat sketch, pressurized water reactor.	07	L2	CO3
OR					
Q.6	a.	Mention the factors to be considered for the selection of site for nuclear power plant.	08	L2	CO3
	b.	Explain the various methods of nuclear waste disposal.	06	L2	CO3
	c.	Discuss the merits and demerits of nuclear power plant.	06	L2	CO3

Module – 4

Q.7	a.	Define substation and mention different types of substation.	07	L2	CO4
	b.	Write a short note on : i) Resistance grounding and ii) Reactance grounding.	06	L1	CO4
	c.	Explain the factors considered for substation site selection.	07	L2	CO4

OR

Q.8	a.	Explain earthing of transformer with neat sketch.	06	L2	CO4
	b.	Explain Gas insulated substation and mention its advantages.	08	L2	CO4
	c.	List out the advantages and disadvantages of outdoor substation over indoor substation.	06	L2	CO4

Module – 5

Q.9	a.	Explain the methods of determination of depreciation.	07	L2	CO5
	b.	Explain : i) 2 part tariff ii) Block rate tariff iii) Maximum demand tariff.	06	L2	CO5
	c.	Discuss various methods of power factor improvement.	07	L2	CO5

OR

Q.10	a.	What are the objectives and requirements of tariff?	06	L2	CO5
	b.	Write a short note on classification of costs.	07	L1	CO5
	c.	Explain the concept of load sharing and choice of size and number of generating plants.	07	L2	CO5
