

GOVERNMENT POLYTECHNIC ASTHAWAN NALANDA

LESSON PLAN

Branch -Electrical Engineering
 Semester- III
 Sub - Electrical power generation
 Sub code -1620304

UNITS	HOURS	PER IOD	TOPICS	METHODS
Unit 1 Basics of power generation	2	1	1.1 Importance of electrical power in day to day life. 1.2 Various source of energy	Pdf , lecture video
		2	Electrical ppwer generation method and comparison of source of power generation	Pdf, video , GD
Unit II Thermal power station	7	3	List of TPS and Selection of site for thermal power station lecture	Pdf, Lecture , Quizzes
		4	Block diagram of Thermal power station	Pdf , images , lecture
		5	Fuel and its effect	Pdf, PPT , Video , Advance lecture
		6	Operation of TPS components	Advance Lecture, online images , Quizzes
		7	Working and operation of TPS components	Advance Lecture Pdf, images, videos
		8	Numericals and problem solving class	PPT, Pdf
		9	MCQ test and discussion	MCQ Type
UNIT - III		10	Basic of Nuclear power fuel and its sources	PPT, Pdf, Lecture

Nuclear Power station	5	11	Block diagram of nuclear power station and its working	Pdf, Images, video
		12	MCQ, quizzes , question answer session	MCQ, Discussion
		13	Economic of nuclear power Station	pdf, Lecture
		14	List of Nuclear Power Station in india	Pdf
UNIT IV Hydro power station	5	15	List at hydro Power Station in India and selection of site	Pdf, student work
16		Layout of Hydropower Station	Pdf, Images	
17		MCQ Quizzes ,	online, oral, written	
18		Types of turbine	Pdf, video	
19		selection of turbine	Lecture, video	
UNIT V Diesel Power station	5	20	Diesel Power station applications	Hands out, pdf
21		Diesel electric plant -concept , block diagram	Pdf, information search	
22		different types of engine	Videos,pdf	
23		different types of engine working	Videos , pdf	
24		Maintenance and trouble shooting chart of diesel plant.	Pdf , information search	
Non-	9	25	Types of non conventional energy sources	Information search , pdf
		26	Solar energy - photovoltaic cell, construction and principles	Pdf, hands out, videos
		27	Wind energy	Pdf, assignment
		28	Biomass	Internet suffering, pdf

Conventional Energy source		29	Geothermal	Discussion, internet search
		30	Ocean, thermal electric conversion energy from tide,	Pdf, hands out, videos
		31	Advantage and limitation of tidal .	Pdf, discussion
		32	Fuel cell, construction working and application	Lecture, pdf, assignment
		33	Test and quiz	Online test,
UNIT VII Economics of power generation	9	34	Terms commonly used in system operation	Hands out, Lecture
		35	Connected load , firm reserve, hot reserve , spinning reserve	Hands out, pdf,
		36	Load curve , Load duration curve ,Integrated duration curve	Pdf, hands out, assignment
		37	Numericals on above topics	Lecturer , Board chalk
		38	Factor affecting the cost of generation	Lecturer, pdf
		39	Numericals on affecting paramerters of cost of generation	Board chalk , lecture
		40	Choice of size and number of generator unit , difficulties involved in it	Lecture, pdf
		41	Numericals on above problems	Board chalk method , lecture
		42	Doubt clear class	Discussion , lecture
UNIT VIII	6	43	Combined operation of power station	Lecture, pdf
		44	Comparison of various type of power station, advantage of interconnection.	Pdf, discussion, Advance Lecture method
		45	Base load & peak load ,load allocation	Lecture, Assignment, problem

Interconnected power system				practices
		46	Economic loading of interconnected station	Lecture advance method , pdf
		47	Load sharing and transfer of load between power station	Discussion,Lecture,
		48	Interconnection of power stations at state and national level	Discussion, information search, pdf
	Total=48			