



SARDAR VALLABHBHAI PATEL EDUCATION SOCIETY
MANAGED

N. G. PATEL POLYTECHNIC

ELECTRICAL ENGINEERING DEPARTMENT

ASSIGNMENTS

Course Name (With Code): Electrical Power Generation & Transmission (4330903)

Semester / Year: 3rd/2nd

Assignment Number: 1

Assignment CO Number: 4330903.1

Sr. No.	Questions related to Course Outcomes
Part – A	Questions carrying 3 Marks
1	Write the names of cycles in thermal power station and explain air and flue gas cycle with diagram in thermal power station.
2	Give the function of penstock, surge tank and draft tube for hydro power station.
3	Explain site selection of thermal power station.
4	Draw the electrical cycle of thermal power plant with diagram
5	Explain chain reaction in nuclear power station.
Part – B	Questions carrying 4 Marks
1	Explain disposal of solid and liquid nuclear waste
2	Explain Fuel and ash cycle with diagram for Thermal Power plant.
3	Draw & explain Impulse turbine for hydro power plant.
4	Write the names of all types of nuclear reactor and explain PWR (Pressurized water reactor) in brief.
5	Explain nuclear fusion and nuclear fission in nuclear power station.
Part – C	Questions carrying 7 Marks
1	List out major equipments and auxiliaries of thermal power plants and write down their functions in details.
2	Draw & explain the schematic diagram of Thermal power plant.
3	Explain following terms w.r.t. thermal power station. (i) Condenser (ii) Feed water pump (iii) Cooling tower and spray pond (iv) Electro static precipitator (v) Super heater (vi) Economizer (vii) Air preheater.
Prepared By: Mr. Nikunj G. Mistry	Signature of Head of Department

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Course Name (With Code): Electrical Power Generation & Transmission (4330903)		
Semester / Year: 3rd/2nd		
Assignment Number: 2		
Assignment CO Number: 4330903.2		
Sr. No.	Questions related to Course Outcomes	
Part – A	Questions carrying 3 Marks	
1	Define diversity factor, demand factor and utilization factor.	
2	What is load curve? What information is obtained from it?	
3	Define: Base load station and peak load station	
4	Explain load curve.	
Part – B	Questions carrying 4 Marks	
1	Maximum demand on a power station is 40 MW. Total connected load on the station is 100 MW. If average demand on the station is 25 MW, Calculate Load factor. 2) Demand factor.	
2	Explain following terms with equations: Load factor, Diversity factor, Plant use factor.	
3	Explain load curve and load duration curve.	
4	Compare base load and peak load power station.	
Part – C	Questions carrying 7 Marks	
1	A generating station supplies the power to the five substations each having maximum demand of 10 MW, 20 MW, 15 MW, 25 MW, and 5 MW respectively. The diversity factor between substation and power station is 1.2. If the connected load to the power station is 80 MW and the annual load factor is 40 %, calculate. (i) Maximum Demand on Power Station 07 2 (ii) Number of Units Generated per Annum (iii) Average Demand (iv) Demand Factor (v) Connected Load Factor.	
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Course Name (With Code): Electrical Power Generation & Transmission (4330903)

Semester / Year: 3rd/2nd

Assignment Number: 3

Assignment CO Number: 4330903.3

Sr. No.	Questions related to Course Outcomes
Part – A	Questions carrying 3 Marks
1	List types of Line supports and Draw any one.
2	State the advantages of the Bundled conductors.
3	State the causes of failure of insulators.
4	State the desirable properties of line insulators
5	Explain properties required for transmission line supports
Part – B	Questions carrying 4 Marks
1	Sketch and explain the suspension type insulators.
2	Weight of conductor of transmission line is 1.8 kilogram per meter length. Span of is 250 meters. Take maximum tensile strength of conductor is 3500 kg. Calculate sag assuming factor of safety 2.
3	Compare Pin type and Suspension type insulator.
4	State and explain methods of improving string efficiency.
5	What is sag? What are the factors affecting the sag in transmission line?
Part – C	Questions carrying 7 Marks
1	Comparison between Overhead and underground transmission System.
2	Define String efficiency and derive the equation of string efficiency.
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Course Name (With Code): Electrical Power Generation & Transmission (4330903)

Semester / Year: 3rd/2nd

Assignment Number: 5

Assignment CO Number: 4330903.5

Sr. No.	Questions related to Course Outcomes
Part – A	Questions carrying 3 Marks
1	Interpret the Necessity of EHV transmission and its advantages
2	State the limitations of EHV A.C. transmission system.
3	State the types of HVDC System.
4	State application of HVDC transmission system.
Part – B	Questions carrying 4 Marks
1	Comparison between H.V.A.C and H.V.D.C. transmission System
2	Explain Single diagram of HVDC transmission.
3	Explain Bi-polar HVDC system
Part – C	Questions carrying 7 Marks
1	List types of HVDC system and explain any two systems.
2	State the advantages & disadvantages of HVDC Transmission System.
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