

Discipline:	ELECTRICAL	Semester: 4	Name of the Teaching Faculty: <u>Shri. Manjari Singh</u>	
Subject: GENERATION TRANSMISSION & DISTRIBUTION	No. of Days/Week Class Allotted: 4 <sup>th</sup>	Semester from date: 14.3.2022 to date 18.6.2022	No. of Weeks	
WEEK	Class Day	Theory Topics		
1 <sup>st</sup>	1st	GENERATION OF ELECTRICITY Elementary idea on generation of electricity from Thermal power Station.		
	2nd	Generation of electricity from Hydel power Station.		
	3rd	Generation of electricity from Nuclear power Station.		
	4th	Working principle of photovoltaic cells		
	5th			
2 <sup>nd</sup>	1st	Introduction to Solar power plant		
	2nd	Layout diagram of generating stations		
	3rd	Layout diagram of generating stations.		
	4th	TRANSMISSION OF ELECTRIC POWER: Lay out of transmission & distribution scheme		
	5th			
3 <sup>rd</sup>	1st	Voltage Regulation & efficiency of transmission		
	2nd	State & explain Kelvin's law for economical size of conductor.		
	3rd	State & explain Kelvin's law for economical size of conductor.		
	4th	Corona & corona loss on transmission lines		

# Theory Topics

WEEK	Class Day	Topic
4th	1st	OVERHEAD LINES: Types of supports, size and spacing of conductors
	2nd	Types of Conductor materials
	3rd	State types of insulator & cross arms
	4th	Types of insulator & cross arms.
	5th	
5th	1st	Sag in overhead line with support at same level & different level (approximate formula effect of wind, ice, & temperature on sag)
	2nd	Simple problem on sag.
	3rd	Simple problem on sag
	4th	PERFORMANCE OF SHORT & MEDIUM LINES: Classification of overhead transmission line & important terminology.
	5th	
6th	1st	Performance of single phase short transmission line
	2nd	Performance of 3 phase short transmission line & effect of load power factor on regulation & efficiency
	3rd	Medium transmission line: End condenser method
	4th	Nominal 'T' method.
	5th	

Discipline: <b>ELECTRICAL</b>	Semester: <b>4</b>	Name of the Teaching Faculty: <b>Dr. B. S. Bhat</b>	Date of Issue: <b>11/11/2020</b>
Subject: <b>GENERATION TRANSMISSION &amp; DISTRIBUTION</b>	No. of Days / Total Class Hours: <b>2/24</b>	Semester From Date: <b>10/3/2020</b> To Date: <b>15/8/2020</b>	No. of Weeks: <b></b>

WEEK	Class Day	Theory Topics
8th	1st	Nominal $\pi$ method.
	2nd	Nominal solution of problems on medium & short transmission line.
	3rd	<b>EHV TRANSMISSION</b> Necessity for EHV AC transmission
	4th	Advantages of EHV AC transmission; Problems involved in EHV transmission.
	5th	
9th	1st	<b>HVDC transmission system</b>
	2nd	Comparison of HVAC & HVDC transmission system.
	3rd	Disadvantages of HVDC transmission system
	4th	Application of HVDC transmission system.
	5th	
9th	1st	<b>DISTRIBUTION SYSTEMS:</b> Introduction to Distribution system.
	2nd	D.C. Distribution calculation: DC distributor fed at one end - Concentrated loading
	3rd	uniformly loaded distributor fed at one end
	4th	Distributor fed at both end - Concentrated loading
	5th	

WEEK	Class Day	Theory Topics
10th	1st	Ring distributor
	2nd	AC distribution calculation
	3rd	Method of solving AC distribution problems.
	4th	Four wire star connected distribution system arrangement.
	5th	
11th	1st	UNDERGROUND CABLES; Construction of underground cables.
	2nd	Classification of underground cables
	3rd	Types of L.T & H.T cables with constructional features
	4th	Methods of cable laying
	5th	
12th	1st	Methods of cable laying
	2nd	Localization of cable faults: Murray & Varley loop test for short circuit fault / Earth fault
	3rd	ECONOMIC ASPECTS: Causes of low power factor.
	4th	Methods of improvement of power factor in power system.
	5th	

INDEX	ELECTRICAL	Semester: 4 <sup>th</sup>	Name of the Lecturer: Mr. J. P. Singh
GET: GENERAL	IN SUBJECT	No. of Days/Week Class Allotted: 4 <sup>th</sup>	Semester Exam Date: 10/12/2019 to 14/12/2019
WEEK	Class Day	Theory Topics	
16 <sup>th</sup>	1st	Factors affecting the demand factor & Load Curves on demand factor	
	2nd	Maximum demand and Load factor	
	3rd	Diversity factor and plant capacity factor	
	4th	Peak load & base load on power station.	
	5th		
16 <sup>th</sup>	1st	TYPES OF TARIFF: Desirable characteristics of a tariff	
	2nd	Explain flat rate & block rate.	
	3rd	Explain two part and maximum demand tariffs	
	4th	Numerical Problems Practice	
	5th		
19 <sup>th</sup>	1st	SUBSTATION: Lay out of L.T. Substation	
	2nd	Lay out of H.T & E.H.T Substation	
	3rd	Earthing of Substation	
	4th	Earthing of transmission & distribution lines.	