

Discipline: Electrical  
 Semester: 4<sup>th</sup>  
 Subject: GTD  
 No. of days/Per week: 5  
 allotted: 5  
 Name of the teaching faculty: Priyanka Panda  
 Semester from: 10.03.2022 to 10.06.2022  
 No. of weeks: 14

Index class may

Theory/Practical Topics

07.03.22	1 <sup>st</sup>	<del>Generations of Electricity</del> : Elementary idea on electricity generated from Thermal
	2 <sup>nd</sup>	• Electricity generation from Hydel, Nuclear power stations.
	3 <sup>rd</sup>	Continue.
to	4 <sup>th</sup>	• Introduction to Solar Power Plant.
12.03.22	5 <sup>th</sup>	• Layout diagrams of generating stations.
14.03.22	1 <sup>st</sup>	<del>Transmission of Electric Power</del> : layout of transmission & distribution.
to	2 <sup>nd</sup>	• Voltage regulation & efficiency of transmission.
19.03.22	3 <sup>rd</sup>	• State and explain Kelvin's law for economical <sup>conductor</sup> size of a
	4 <sup>th</sup>	<b>Dola Purasima</b>
	5 <sup>th</sup>	<b>Hodi</b>
21.03.22	1 <sup>st</sup>	• Corona and Corona loss on transmission lines.
to	2 <sup>nd</sup>	<del>Overhead lines</del> : Types of supports, size and spacing of conductor.
26.03.22	3 <sup>rd</sup>	• Types of conductor materials.
	4 <sup>th</sup>	• State types of insulator and cross arms.
	5 <sup>th</sup>	• Sag in overhead line with support at same level.
28.03.22	1 <sup>st</sup>	• Sag in overhead line with support at different level.
to	2 <sup>nd</sup>	• Simple problem on Sag.
02.04.22	3 <sup>rd</sup>	<del>Performance of short &amp; medium lines</del> : Regulation and efficiency
	4 <sup>th</sup>	<b>Utkal Divas</b>
	5 <sup>th</sup>	<del>EHV Transmission</del> : EHV AC transmission introduction.
04.04.22	1 <sup>st</sup>	• Reasons for adoption of EHV AC transmission.
to	2 <sup>nd</sup>	• Solve Problems.
09.04.22	3 <sup>rd</sup>	• Advantages & limitations of HVDC transmission system.
	4 <sup>th</sup>	<del>Distribution Systems</del> : Introduction
	5 <sup>th</sup>	• Radial, Ring main and Inter Connected System.

Week	Class Day	Theory / Practical Topics
	1 <sup>st</sup>	• Distribution at Fed at one End & both the ends.
11.04.22	2 <sup>nd</sup>	• Ring distributors.
to	3 <sup>rd</sup>	<b>Maha Visuba Sankranti</b>
16.04.22	4 <sup>th</sup>	<b>Good Friday</b>
	5 <sup>th</sup>	• Method of solving AC distribution problem.
	1 <sup>st</sup>	• 3- $\phi$ 4-wire star connected system arrangement.
18.04.22	2 <sup>nd</sup>	<u>Underground Cables</u> : Classification and Cable Insulation.
to	3 <sup>rd</sup>	• Types & Constructional Features of L.T. and H.T. Cables.
23.04.22	4 <sup>th</sup>	• Methods of Cable Laying.
	5 <sup>th</sup>	• Murray and Varley loop test for short ckt / Earth fault.
	1 <sup>st</sup>	<u>Economic aspects</u> : Causes of low Power Factor & improvement method.
25.04.22	2 <sup>nd</sup>	• Load Curves & Demand Factor affecting the economics of generation.
to	3 <sup>rd</sup>	• Max <sup>m</sup> demand, Load Factor affecting economics of generation.
30.04.22	4 <sup>th</sup>	• Diversity Factor and Plant Capacity Factor.
	5 <sup>th</sup>	• Peak load and Base load on power stations.
	1 <sup>st</sup>	<b>Contique</b>
02.05.22	2 <sup>nd</sup>	<b>2d-UL-Extra</b>
to	3 <sup>rd</sup>	<u>Types of Tariff</u> : Desirable characteristic of a tariff.
07.05.22	4 <sup>th</sup>	• Explain Flat rate.
	5 <sup>th</sup>	
	1 <sup>st</sup>	• Block rate
09.05.22	2 <sup>nd</sup>	• Two part tariff.
to	3 <sup>rd</sup>	• Maximum demand tariff
14.05.22	4 <sup>th</sup>	• Solve problems
	5 <sup>th</sup>	• problems on tariff.

Week class day Theory / Practical Topics

**Geetha Purvina**

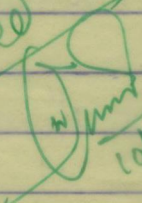
16.05.22 1<sup>st</sup>  
 2<sup>nd</sup> Substation: Introduction  
 to 3<sup>rd</sup> • layout of LT Substation  
 21.05.22 4<sup>th</sup> • HT Substation.  
 5<sup>th</sup> • EHT Substation

13.05.22 1<sup>st</sup> • Earthing  
 to 2<sup>nd</sup> • Earthing of Substation.  
 28.05.22 3<sup>rd</sup> • Earthing of transmission.  
 4<sup>th</sup> • Distribution lines earthing.  
 5<sup>th</sup> • Constructional Features of H.T. Cables

**Sabitri Amabanya**

30.05.22 1<sup>st</sup>  
 2<sup>nd</sup> • Explanation of Substation.  
 to 3<sup>rd</sup> • Vanley loop test for short circuit  
 04.06.22 4<sup>th</sup> Earth Fault.  
 5<sup>th</sup> • Precaution while earthing.

06.06.22 1<sup>st</sup> • Explanation of distribution lines earthing.  
 2<sup>nd</sup> • Revision  
 to 3<sup>rd</sup> Revision  
 11.06.22 4<sup>th</sup> Revision  
 5<sup>th</sup>

Verified  
  
 10/08/2022