GANDHISCHOOLOFENGINEERING

BHABANDHA,BERHAMPUR

BRANCH:-ELECTRICALENGINEERING

SEMESTER:-4th

SUBJECT:-GTD

NameoftheFaculty-ER.SURABHI TRIPATHY &ER.SUBRAT BISHOYI

		Topictobe taken				Actualtopictaken		
Sl. No	**Topic/Module**	**No.ofperiod**	**Detailsofthetopics**	**Date**	**TopicNo.**	**TopicName**	**Date**	**Remarks**
1	**GENERATIONOF ELECTRICITY**	07	1.1Elementaryideaongeneration of electricity from Thermal, Hydel,Nuclear,Powerstation. 1.2Introductionto SolarPower Plant (Photovoltaiccells). Layoutdiagramofgenerating stations.	13.03.2023 TO 21.02.2023	1.1 1.2	Thermal,Hydel,Nuclear, Powerstation Solar Power Plant(Photovolt aiccells). Layoutdiagramofgenerating stations.	13.02.2023 14.02.2023 15.02.2023 16.02.2023 17.02.2023 20.02.2023 21.02.2023	
2	**TRANSMISSION OF ELECTRIC POWER**	05	Layoutoftransmission and distribution scheme. Voltage Regulation& efficiency of transmission. Stateandexplain Kelvin's law for economical size of conductor. Coronaandcoronalosson transmissionlines.	22.02.2023 TO 28.02.2023	2.1 2.2 2.3 2.4	Layoutoftransmissionand distribution scheme Voltage Regulation &efficiencyoftransmission ExplainKelvin's law for economicalsize of conductor Coronaandcoronalosson transmissionlines.	22.02.2023 23.02.2023 24.02.2023 27.02.2023 28.02.2023	

3	**OVERHEAD LINES**	07	Typesofsupports,sizeand spacing of conductor. Typesofconductormaterials. Statetypesofinsulatorandcross arms. Sag in overhead line with support at same level and different level.(approximateformulaeffectof wind, ice and temperature on sag) Simpleproblemonsag.	01.03.2023 TO 09.03.2023	3.1 3.2 3.3 3.4 3.5	Types of supports,sizeand spacing of conductor. Typesofconductormaterials. State types of insulator and cross arms. Saginoverheadlinewith supportatsameleveland different level. Simpleproblemon sag	01.03.2023 02.03.2023 03.03.2023 06.03.2023 09.03.2023 10.03.2023 13.03.2023	
4	**PERFORMANCE OF SHORT & MEDIUMLINES**	07	4.1.Calculationofregulationand efficiency.	10.03.2023 TO 20.03.2023	4.1	Calculationofregulationand efficiency. Shorttransmissionline. ,mediumtransmissionline	14.03.2023 15.03.2023 16.03.2023 17.03.2023 20.03.2023 21.03.2023 22.03.2023	
5	**EHV TRANSMISSION**	07	5.1EHVAC transmission. 5.1..1.Reasonsforadoptionof EHVAC transmission. 5.1.2.ProblemsinvolvedinEHV transmission. HVDC transmission. AdvantagesandLimitations of HVDC transmission system.	21.03.2023 TO 29.03.2023	5.1 5.1.1 5.1.2 5.2 5.2.1	EHVAC transmission. ReasonsforadoptionofEHVAC transmission ProblemsinvolvedinEHV transmission. HV DC transmission. Advantages and Limitations ofHVDCtransmissionsystem	23.03.2023 24.03.2023 27.03.2023 28.03.2023 03.04.2023 03.04.2023	

6	**DISTRIBUTION SYSTEMS**	07	IntroductiontoDistribution System. ConnectionSchemes of Distribution System: (Radial, RingMainandInterconnected system) DCdistributions. Distributorfed atoneEnd. Distributorfedatboththe ends. Ringdistributors. ACdistributionsystem. Methodofsolving AC distributionproblem. Threephasefourwirestar connected system arrangement.	30.03.2023 TO 07.04.2023	6.1 6.2 6.3 6.3.1 6.3.2 6.3.3 6.4 6.4.1 6.4.2	DistributionSystem.Radial, RingMainandInter connectedsystem DC distributions. DistributorfedatoneEnd Distributorfedatboththe ends. Ringdistributors ACdistributionsystem .MethodofsolvingAC distribution	04.04.2023 05.04.2023 06.04.2023 10.04.2023 11.04.2023 12.04.2023 13.04.2023	

7	**UNDERGROUND CABLES**	06	Cable insulation and classificationofcables. TypesofL.T.& H.T.cableswith constructional features. Methodsof cablelying. Localizationof cablefaults: MurrayandVarleylooptestfor short circuit fault / Earth fault.	10.04.2023 TO 17.04.2023	7.1 7.2 7.3 7.4	Cable insulation and classificationofcables Typesof L. T. &H.T. cables with constructionalfeatures. Methodsof cablelying. MurrayandVarleylooptestfor short circuit fault / Earth fault.	17.04.2023 18.04.2023 19.04.2023 20.04.2023 21.04.2023 26.04.2023	

8	**ECONOMIC ASPECTS**	06	Causesoflowpowerfactor andmethods of improvement of power factor in power system. Factorsaffecting the economics of generation: (Define andexplain) Loadcurves. Demandfactor. Maximumdemand. Loadfactor. Diversityfactor. Plantcapacityfactor. PeakloadandBaseloadon Powerstation.	18.04.2023 TO 03.05.2023	8.1 8.2 8.2.1 8.2.2 8.2.3 8.2.4 8.2.5 8.2.6 8.3	Causesoflowpowerfactorand methods of improvement of power factor in power Factorsaffectingthe economics of generation: Loadcurves. Demandfactor Maximumdemand. Loadfactor. Diversityfactor. Plantcapacityfactor PeakloadandBaseloadon Powerstation.	27.04.2023 28.04.2023 29.04.2023 01.05.2023 02.05.2023 03.05.2023	
9	**TYPESOFTARIFF**	03	Desirablecharacteristicofa tariff. Explain flatrate, block rate, twopartandmaximumdemand tariff.(SolveProblems)	04.05.2023 TO 09.05.2023	9.1 9.2	Characteristic of atariff. Explainflatrate,blockrate, two part and maximum demand tariff.	04.05.2023 05.05.2023 08.05.2023	

10	**SUBSTATION**	05	10.1LayoutofLT,HTandEHT substation. Earthing of Substation, transmissionanddistributionlines	10.05.2023 TO 18.05.2023	10.1	LayoutofLT,HTandEHT substation Earthing of Substation, transmissionanddistribution lines 11,33,66KVbusbarsystem	09.05.2023 10.05.2023 11.05.2023 12.05.2023 15.05.2023 16.05.2023 17.05.2023 18.05.2023	

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