Subject - Electrical Machine-I						
s. no	**sem**	**Subject**	**Subject code**	**Unit**	**Topic**	**Available URL**
1	III	Electrical Machine-I	PEE-2301	I	Energy Conservation Principle	https://www.youtube.com/watch?v=dR13Udc2LKI
				II	DC generator working principle	https://www.youtube.com/watch?v=PavO0gPdo5A
					Construction of DC Generator	https://www.youtube.com/watch?v=KSolWGJd79k
					EMF equation	https://www.youtube.com/watch?v=oKAIjagbSTQ
					armature reaction and commutation	https://www.youtube.com/watch?v=Gp3rhS0CSBA
					Types of DC Generator	https://www.youtube.com/watch?v=ZZPRcC545aQ
				III	DC Motor Working Principle,	https://www.youtube.com/watch?v=VAEe5MEQrjY
					Torque equation of dc motor	https://www.youtube.com/watch?v=2hYZERazRz4
					DC motor characteristics	https://www.youtube.com/watch?v=BLhT3nSOtF8
					D.C. MOTOR STARTER	https://www.youtube.com/watch?v=xl9ZgrkN7n8
					Swimburne Test	https://www.youtube.com/watch?v=yNS8RW2-B-g
				IV	Single Phase Transformer - Principle and Emf Equation	https://www.youtube.com/watch?v=PD8QWCyBR5M
					Practical Transformer on No Load	https://www.youtube.com/watch?v=Vv2vxtqt6DQ
					Transformer on Load	https://www.youtube.com/watch?v=tOX41hQa_44
					Open Circuit Test and Short Circuit Test on Transformer	https://www.youtube.com/watch?v=9hBmgdGjt1Y
					Efficiency of a Transformer	https://www.youtube.com/watch?v=GgckE4H5AJE
					Auto Transformer	https://www.youtube.com/watch?v=kX9wkvR85HE

				V	three phase transformer	https://www.youtube.com/watch?v=tEdU3sCbJbE
					Scott connection	https://www.youtube.com/watch?v=GHfqr1XqyIg
					comparison of three phase transformer	https://www.youtube.com/watch?v=w9kSZqJ0NPg
					Parallel Operation	https://www.youtube.com/watch?v=kUBPjfHjB60

Subject Name- ELECTRICAL CIRCUITS

Code	Course Title	Paper Code	Topics		Links
PEE-2302	ELECTRICAL CIRCUITS	PEE-2302	**INTRODUCTION TO CIRCUIT ANALYSIS**	Active and Passive Elements of Circuit	https://www.youtube.com/watch?v=YfcHgALC_F4
				ideal current source and voltage source	https://www.youtube.com/watch?v=4Su6lFBsdQk
				Unilateral and bilateral elements	https://www.youtube.com/watch?v=0fZePs1a6Lg
				loops, Nodes, Branches of a network, Analysis of networks by loop & node method.	https://www.youtube.com/watch?v=8X4xKeAxa_w https://www.youtube.com/watch?v=-ICIZ73PGpw
				BASICS TERMS IN NETWORK TOPOLGY, BRANCH, TREE, TWIG, LINK NODE, DEGREE OF NODE	https://www.youtube.com/watch?v=L54sGy74LZU&list=PLySVDJoIJATc7c13WQI7D_RqScOdz-gt0
				Tree, Incidence Matrix, and Cut set matrix, tie set matrix,	https://www.youtube.com/watch?v=9SsFl7voG9U
				star to delta and delta to star conversion	https://www.youtube.com/watch?v=evPImsaH2mE https://www.youtube.com/watch?v=5nPBIw3HvL0
			NETWORK THEOREMS	**Power factor**	https://www.youtube.com/watch?v=iDYWfBGwT1w
				Kirchhoff's Laws (KCL & KVL)	https://www.youtube.com/watch?v=V2yKWpzpavA
				Thevenin's Theorem	https://www.youtube.com/watch?v=UsLbB5k9iuY
				Norton theorem	https://www.youtube.com/watch?v=25tprx5eDik
				Maximum power transfer theorem	https://www.youtube.com/watch?v=dpImV7d08_8
				Superposition theorem	https://www.youtube.com/watch?v=wWihXHCOmUc

				Reciprocity theorem	https://www.youtube.com/watch?v=CaIcjb2U5hU
				Millimans theorem	https://www.youtube.com/watch?v=ZfY38I5wUAk
			Two port network	Z parameter	https://www.youtube.com/watch?v=AfszO1HZgzo
				Y parameter	https://www.youtube.com/watch?v=jWbWWoCY5n8
				ABCD parameter	https://www.youtube.com/watch?v=qnHaOwYfzgE
				g parameter	https://www.youtube.com/watch?v=3SM0Xb8ynXI
				h parameter	https://www.youtube.com/watch?v=bRXQfZMzVJY
			Poly phase circuit.	Concept of poly phase AC circuits	https://www.youtube.com/watch?v=owb-Y2QtK7Y
				Advantages of 3phase over single phase	https://www.youtube.com/watch?v=e7uzskt2LHI
				Star to delta transformation	https://www.youtube.com/watch?v=9b17eqCT4-g
				Delta to star transformation	https://www.youtube.com/watch?v=OV0qi7yzKAM
			Transients	Concept of transients	https://www.youtube.com/watch?v=Yhmj4Tzf6H4
				Transients analysis first order RC, RL	https://www.youtube.com/watch?v=KylJ2v1_c-o
				Transients analysis first order RLc	https://www.youtube.com/watch?v=B4TezoTORYA

Subject Name- ELECTRICAL AND ELECTRONICS MEASUREMENTS AND MEASURING INSTRUMENTS

Code	Course Title	Paper Code	Topics	CONTENTS	Links
PEE-2303	ELECTRICAL MEASUREMENTS	PEE-2303	INTRODUCTION OF MEASUREMENT	Classification of measurement	https://www.youtube.com/watch?v=gTyyGLjKujE
				Error and error analysis	https://www.youtube.com/watch?v=yLUqpb4UosQ
				Effect of temperature, internal friction, Stray field	https://www.youtube.com/watch?v=rjpBy8UrGxQ
				Method of Minimizing Hysteresis and Frequency variation	https://www.youtube.com/watch?v=HUrJXZGM97U
PEE-2303		PEE-2303	CLASSIFICATIONS OF MEASURING INSTRUMENTS	Indicating, Recording and Integrating	https://www.youtube.com/watch?v=qxqGlGjyYTU
				Theory and operation of ballistic Galvanometer	https://www.youtube.com/watch?v=uiu3uCtEKak
				D' Arsonal galvanometer	https://www.youtube.com/watch?v=d10unopo_EI
				Vibration Galvanometer	https://www.youtube.com/watch?v=ElqVi32Kjzs
				Flux meter	https://www.youtube.com/watch?v=QnHePBwsucQ
PEE-2303		PEE-2303	Electrical measuring instrument	Deflecting, controlling and damping forces	https://www.youtube.com/watch?v=FJzXhv9fihg
				Construction, operation of moving coil instruments	https://www.youtube.com/watch?v=64dLk7dW-lo
				Construction, operation of electrodynamometer instruments	https://www.youtube.com/watch?v=zVQezjfdRUs
				moving iron and induction type instruments	https://www.youtube.com/watch?v=nuqzLK6oIsk
				Hot wire type instrument	https://www.youtube.com/watch?v=ispZ0eV1f-U
				shunt and multipliers, CT and PT.	https://www.youtube.com/watch?v=4qPM7lM1xbw
PEE-2303		PEE-2303	Wattmeter and energy meter	Dynamometer and induction type wattmeter	https://www.youtube.com/watch?v=Zfgs33Adsa8
				Induction type energy meter	https://www.youtube.com/watch?v=BRJ9azr61OA
				Measurement of 1-phase and 3-phase power in balanced and unbalanced load condition	https://www.youtube.com/watch?v=QVYTB5lALFw
				3 phase wattmeter	https://www.youtube.com/watch?v=PLfiPC_Fn5A

PEE-2303		PEE-2303	Measurement of Electrical Paramerters	Classification of resistance	https://www.youtube.com/watch?v=-3v1SLvxu8Q
				Measurement of low, Medium, and high resistance	https://www.youtube.com/watch?v=Ik_OOBX--FM
				Kelvin's double bridge, Wheat-Stone Bridge	https://www.youtube.com/watch?v=jyRT2dJAuAg
				Ammeter, Voltmeter method	https://www.youtube.com/watch?v=foAGarUTsP4
				ohm-Meter, Multi meter, Megger	https://www.youtube.com/watch?v=W1T3hME0eDM
				Importance of Earth Resistance, Earth Tester	https://www.youtube.com/watch?v=7SyVyzCK4D0
				Measurement of inductanceby A.C bridges, Maxwell, Anderson, Hay's bridge	https://www.youtube.com/watch?v=v0TTXgTpBPE
				Measurement of capacitance by Desauty and Wien's bridge, Schering bridge	https://www.youtube.com/watch?v=0MQ8cue7x8U
			Dielectric Measurement	Dielectric loss and its importance	https://www.youtube.com/watch?v=R5ecGEVXtUQ
				Methods of measurement of dielectric loss by wattmeter	https://www.youtube.com/watch?v=pgIMvEMNnXw
				CRO -CRT, Electrostatic and magnetic deflection	https://www.youtube.com/watch?v=3c8laYIrmZU
				Time base X and Y Amplifiers	https://www.youtube.com/watch?v=jJv4_tcMJqg
				Controls on the CRO	https://www.youtube.com/watch?v=X2lqQzi4b9w
				Dual beam oscilloscope	https://www.youtube.com/watch?v=cIxICyBV2Ic
				Digital storage and Multi-channel CRO	https://www.youtube.com/watch?v=RumzvW_u5zs
			Electronic Instruments	Transistor	https://www.youtube.com/watch?v=SpiA5t0k5Rg
				voltmeter, FETVM, balanced bridge	https://www.youtube.com/watch?v=SpiA5t0k5Rg
				Specification of electronic voltmeter Single and three phase electronic energymeters MilliVoltmeter, and Micro-voltmeters LVDT strain gauge transducers Digital voltmeter Digital Multi meters	https://www.youtube.com/results?search_query=lvdt https://www.youtube.com/watch?v=o0LLV5GP6Ow https://www.youtube.com/watch?v=ybdPoIoI84g

Subject Name-ELECTRICAL ENGINEERING DRAWING					
Code	Course Title	**Paper Code**	**Topics**		**Links**
PEE-2304	**ELECTRICAL ENGINEERING DRAWING**	PEE-2304	Symbols and Notation		https://www.youtube.com/watch?v=URZNOi17kjY
					https://www.youtube.com/watch?v=Kzm1XNl7okc
					https://www.youtube.com/watch?v=9pqRQKHXnbY
					https://www.youtube.com/watch?v=eD1YQ1esXBk
PEE-2304		PEE-2304	Domestic Wiring	Types of wiring	https://www.youtube.com/watch?v=6l_fMT3R5Bg
				Rules of Wiring	https://www.youtube.com/watch?v=r0wrOSO605k
					https://www.youtube.com/watch?v=W5nrUGOBRVs
PEE-2304		PEE-2304	Instrument Circuits		https://www.youtube.com/watch?v=9nTjCEpPZyo
PEE-2304		PEE-2304	Motor Winding Diagrams		https://www.youtube.com/watch?v=4kVpzODja1w
PEE-2304		PEE-2304	Electrical Machine Drawing		https://www.youtube.com/watch?v=2zpkI0Uzab4
PEE-2304		PEE-2304	Power Wiring	Three point shunt motor starter	https://www.youtube.com/watch?v=QY2t2GHEz6s
				Four point shunt motor starter	https://www.youtube.com/watch?v=TP82k_43vBM
				Plate earthing	https://www.youtube.com/watch?v=W_evliwLgeU
				Pipe earthing	https://www.youtube.com/watch?v=NtJ1JNyJvfE
PEE-2304		PEE-2304	Simple Electronic Circuits		https://www.youtube.com/watch?v=nsf2n1c05Ws
PEE-2304		PEE-2304	Panel wiring diagram of an alternator		https://www.youtube.com/watch?v=HSgXfzrT9Wg
PEE-2304		PEE-2304	Autocad Electrical		https://www.youtube.com/watch?v=6VXybp4g4vU

Subject Name- ELECTRICAL ENGG MATERIALS & COMPONENTS					
Code	**Course Tittle**	**Paper Code**	**Topics**		**Links**
2305	ELECTRICAL ENGG MATERIALS & COMPONENTS	PEE-2305	INTRODUCTION	Classes of engineering materials, Metal and alloys, Ceramics, Organic, Polymers and Composite material,	https://www.youtube.com/watch?v=c1ZbiBIY6Sc
				Classification of solids from Electrical Engineering respect.	https://www.youtube.com/watch?v=C0ZKDSa9uJQ
			CONDUCTING MATERIAL	Properties of conductors	https://www.youtube.com/watch?v=2AAIQIcaNhM
				Characteristics of good conductor material,	https://www.youtube.com/watch?v=XaId7WR0mGo
				Conductor material for overhead lines,	https://www.youtube.com/watch?v=LaSAUG_rTzA https://www.youtube.com/watch?v=EZszSVZ9G6s
				Conductors for underground cables,	https://www.youtube.com/watch?v=u0jAVR-j60o

				Conductor material used for electric machines Winding,	https://www.youtube.com/watch?v=u0jAVR-j60o
				Superconductivity,	https://www.youtube.com/watch?v=D-9M3GWoBrw
				Materials for bus bar	https://www.youtube.com/watch?v=H_DTE3EtyHI
				Thermoelectric generator	https://www.youtube.com/watch?v=G9NgoxHMPwk
			SEMICONDUCTOR MATERIAL	Types of semi-conductors,	https://www.youtube.com/watch?v=3WW60S48f-s
				working and applications of semi-conductors,	https://www.youtube.com/watch?v=h0Y9jDKqScQ&list=PLgMDNELGJ1CaNcuuQv9xN07ZWkXE-wCGP
				Temperature sensitive elements,	https://www.youtube.com/watch?v=TXjHWGngsME
				Photoconductive cells,	https://www.youtube.com/watch?v=8jEg-iRCoNE
				Photovoltaic cells	https://www.youtube.com/watch?v=mCgXsEyQZSI
			INSULATING MATERIAL	Introduction, properties (Thermal, Chemical, Mechanical, and Electrical) insulating Materials	https://www.youtube.com/watch?v=C0ZKDSa9uJQ

				class of insulation	https://www.youtube.com/watch?v=C0ZKDSa9uJQ
				Transformer oils, their testing	https://www.youtube.com/watch?v=C0ZKDSa9uJQ
				Piezoelectricity & Ferro electricity	https://www.youtube.com/watch?v=C0ZKDSa9uJQ
			DIELECTRIC MATERIALS	Dielectric strength, Factors affecting dielectric strength,	https://www.youtube.com/watch?v=vzxDTMShbPc
				Dielectric loss,	https://www.youtube.com/watch?v=vzxDTMShbPc
				Permittivity and polarization,	https://www.youtube.com/watch?v=etjZmdmrjSU
				Different types of Capacitors	https://www.youtube.com/watch?v=cHbcdk-C4Zo
			MAGNETIC MATERIALS	Classification of magnetic material	https://www.youtube.com/watch?v=yWa_2P6CDpw
				Magnetization curve,	https://www.youtube.com/watch?v=whAztOMIwLU
				Hysteresis loop	https://www.youtube.com/watch?v=d8q6DzQ7CpU
				Antiferromagnetism, Ferromagnetism	https://www.youtube.com/watch?v=FwtmQ_nk-es
				Soft and hard magnetic material	https://www.youtube.com/watch?v=I_Og5qlqv-Y

				Ferrites.	https://www.youtube.com/watch?v=l_Og5qlqv-Y
			IC FABRICATION	Planar process,	https://www.youtube.com/watch?v=Iv4Cj2A3ldw
				Fabrication of monolithic IC's, Fabrication of – bipolar Transistor	https://www.youtube.com/watch?v=lpXNCwsnxjM&list=PLuv3GM6-gsE3npYPJJDnEF3pdiHZT6Kj3
				characteristics of IC components.	https://www.youtube.com/watch?v=K4OVNU1pgpM&list=PL6rRP-nRlNS2gG0Y0aNEuoSZlvwCHjBA0
				IC packaging	https://www.youtube.com/watch?v=lpXNCwsnxjM&list=PLuv3GM6-gsE3npYPJJDnEF3pdiHZT6Kj3

Subject - Electrical Estimating and Costing

s. no	sem	Subject	Subject code	Unit	Topic	Available URL
2	IV	Electrical Estimating and Costing	PEE-2351	I	Estimation & Costing	https://www.youtube.com/watch?v=sdMaJX5xFZI
					indian electricity rules 1956	https://www.youtube.com/watch?v=UzG1TGwWVwY
				II	electrical wiring system	https://www.youtube.com/watch?v=p7hh1woRJDg
					Types of Wiring Systems and Methods of Electrical Wiring	https://www.youtube.com/watch?v=Sc9Nf0Cl1l4
					Internal Wiring	https://www.youtube.com/watch?v=4rhv3YoSsrk
				III	Power wiring	https://www.youtube.com/watch?v=nzm59HL8wsk
						https://www.youtube.com/watch?v=GSVT7jgO-M8
						https://www.youtube.com/watch?v=bW1A4FCMTyY
					electrical installation in residential building	https://www.youtube.com/watch?v=oeWj_yhIuPo
				IV	electrical installation in commercial building	https://www.youtube.com/watch?v=A9tPpm7AbKg
				V	Service connections	https://www.youtube.com/watch?v=WRm_aZeRnTk
				VI	Estimation of Substation	https://www.youtube.com/watch?v=-GPz_2ywdD8
						https://www.youtube.com/watch?v=-GPz_2ywdD8
					Indoor Substation	https://www.youtube.com/watch?v=VVNpdvgUAXY
				VII	Estimation for Overhead Line	https://www.youtube.com/watch?v=BGbcisreER0
					comparison of three phase transformer	https://www.youtube.com/watch?v=w9kSZqJ0NPg
					Parallel Operation	https://www.youtube.com/watch?v=kUBPjfHjB60

Subject Name- ELECTRICAL MACHINE-II					
Code	Course Title	**Paper Code**	**Topics**		**Links**
PEE-2352	ELECTRICAL MACHINE-II	PEE-2352	Three Phase Induction Motor-I	Introduction and principal of I.M	https://www.youtube.com/watch?v=2C1dqjLna7M
				Type of Induction Motor and Equivalent Circuit	https://www.youtube.com/watch?v=sZGt3jPX_Fo
				Test of I.M and efficiency and Losses of I.M	https://www.youtube.com/watch?v=_qirZaJKenQ
PEE-2352		PEE-2352	Three Phase Induction Motor-II	Type of Starter of I.M	https://www.youtube.com/watch?v=mdT0xjdjero
				Cogging & Crawling	https://www.youtube.com/watch?v=chplWBAyMS0
				Speed Control of I.M	https://www.youtube.com/watch?v=mdxFbklpl_c
				Braking of I.M	https://www.youtube.com/watch?v=sO6Heoyq6_g
PEE-2352		PEE-2352	Alternator (Synchronous Generator)	Principal and Construction of Alternator	https://www.youtube.com/watch?v=24X4znh4nl0
				TYPE OF Alternator	https://www.youtube.com/watch?v=24m4xnIFj4E
				Equivalent Circuit of Alternator	https://www.youtube.com/watch?v=24X4znh4nl0
				Regulation Method of Alternator	https://www.youtube.com/watch?v=NHxGvHHZTQQ
				Parallel Operation and synchronization method of Alternator	https://www.youtube.com/watch?v=aZR7JsH9QnM
				Power angle Characteristics of Alternator	https://www.youtube.com/watch?v=VmHReZEMJBg
PEE-2352		PEE-2352	Synchronous Motor	Principal and Construction of S.M	https://www.youtube.com/watch?v=gSsblyU07Zg
				Phasor Diagram of S.M	https://www.youtube.com/watch?v=HCEbnAC98sQ
				V-curve and Inverted V-Curves of S.M	https://www.youtube.com/watch?v=SHk49rSvVp8
				Starting Method of S.M	https://www.youtube.com/watch?v=hHhZVvYMppo

				Hunting Of S.M	https://www.youtube.com/watch?v=SHk49rSvVp8
PEE-2352		PEE-2352	A.C Commutator Motors	A.C Series Motor	https://www.youtube.com/watch?v=zy9DThc5ICc
				Compensated Series Motor	https://www.youtube.com/watch?v=tFf6M2h1GGU
				Commutating poles	https://www.youtube.com/watch?v=ulgBACZ4dk0
				Universal Motor	https://www.youtube.com/watch?v=wv_HR8KX8Go
				Repulsion motor	https://www.youtube.com/watch?v=cmE8HAplMdI
PEE-2352		PEE-2352	Special Purpose Machines	Linear Induction Motor	https://www.youtube.com/watch?v=Mm3CbQFW02A
				Induction generator	https://www.youtube.com/watch?v=TZEPIcARMfw
				Stepper motor	https://www.youtube.com/watch?v=u37oKmMSERA
				Permanent Magnet motor	https://www.youtube.com/watch?v=W-pIINzaqbU
				Brushless DC Motor	https://www.youtube.com/watch?v=mr90BZEtE7w
				A.C Series Motor	https://www.youtube.com/watch?v=zy9DThc5ICc

Subject Name- GENERATION TRANSMISSION AND DISTRIBUTION					
Code	Course Title	**Paper Code**	**Topics**		**Links**
PEE-2353	**GENERATION TRANSMISSION AND DISTRIBUTION**	PEE-2353	**Basics of Power Generation**	Introduction and overview of methods of Electrical Power Generation	https://www.youtube.com/watch?v=1GQ8eyGAdQM https://www.youtube.com/watch?v=Z1X9M8x6sLo https://www.youtube.com/watch?v=EiGbrNYg38U https://www.youtube.com/watch?v=HITFE-ju8Vc
PEE-2353		PEE-2353	**Conventional Sources of Energy**	Thermal, Hydel, nuclear, Diesel, Gas -Turbine Power Generation And construction site selection and Advantages and Disadvantages	https://www.youtube.com/watch?v=zGvHs86URGM https://www.youtube.com/watch?v=cuPGyBZcr00 https://www.youtube.com/watch?v=0E7gfBgKUDU https://www.youtube.com/watch?v=2FKYSwEghq4 https://www.youtube.com/watch?v=4ZsZauy_huY
PEE-2353		PEE-2353	**Non-Conventional Sources of Energy**	Need of primary and Secondary energy sources	https://www.youtube.com/watch?v=3gCPskcGAcc https://www.youtube.com/watch?v=irfigdqRfGc
				Difference between Conventional and non- conventional sources of energy	https://www.youtube.com/watch?v=EMTKZWqZcxo https://www.youtube.com/watch?v=FkqMspkGmTw
				Solar, Wind Bio-Gas and Tidal, Power Generation.	https://www.youtube.com/watch?v=8El-xOA9Jgw https://www.youtube.com/watch?v=APmujoNwkVc

					https://www.youtube.com/watch?v=ghc5LjbUGEs https://www.youtube.com/watch?v=68re4vwKy8g
				Geo- Thermal and MHD Power Generation.	https://www.youtube.com/watch?v=JJoMobProrY https://www.youtube.com/watch?v=IrU6FH2_Gx8
PEE-2353		PEE-2353	Concept Of Transmission Lines	Single line diagram of complete power systems	https://www.youtube.com/watch?v=OKkOif2JYRE https://www.youtube.com/watch?v=nqKpyip_23Y
				Parameters of transmission line	https://www.youtube.com/watch?v=moU031Kpug0
				Skin Effect and proximity effect	https://www.youtube.com/watch?v=DWGIQ4lI00g https://www.youtube.com/watch?v=FzPQG5zhLNc https://www.youtube.com/watch?v=1cePZC4DpoE
				Concept of sag and tension	https://www.youtube.com/watch?v=DemFuurxc2E
				Corona formation advantages and disadvantages of corona	https://www.youtube.com/watch?v=AW9AxY7lCSI https://www.youtube.com/watch?v=ruYjfm2V5xU
PEE-2353		PEE-2353	Parameters of Transmission line	Representation of transmission line	https://www.youtube.com/watch?v=gtLOOjMj27A https://www.youtube.com/watch?v=79KQb3wGwDg
				Ferranti effect	https://www.youtube.com/watch?v=xxlz6yIMYyU
				Difference between overhead line and underground cables	https://www.youtube.com/watch?v=To305fqeOlE https://www.youtube.com/watch

					?v=RsfvZ_UxVdY
				Classification of and construction of LT and HT cables	https://www.youtube.com/watch?v=g3qW112dfKw https://www.youtube.com/watch?v=k9ZNxqEq4WE
PEE-2353		PEE-2353	HVDC Transmission EHVAC Transmission	https://www.youtube.com/watch?v=-XXc7xkWrdM https://www.youtube.com/watch?v=qbi0rufpCdI https://www.youtube.com/watch?v=uXdbxNC9u7I https://www.youtube.com/watch?v=1M8DRbsZ6Kg	
PEE-2353		PEE-2353	Distribution systems	https://www.youtube.com/watch?v=hAuSbJPSxus https://www.youtube.com/watch?v=fx6T4NOQ0U0 https://www.youtube.com/watch?v=Y7_zKCnGgsI	
PEE-2353		PEE-2353	Substation	https://www.youtube.com/watch?v=InCzfKQiOho https://www.youtube.com/watch?v=7Q-aVBv7PWM https://www.youtube.com/watch?v=Q5lE9jxRRuM https://www.youtube.com/watch?v=B9Dr82pm5-E https://www.youtube.com/watch?v=nyxkRogrcYY	

Subject Name-MICROPROCESSOR AND MICROCONTROLLER					
Code	**Course Title**	**Paper Code**	**Topics**		**Links**
PEE-2354	**MICRO PROCESSOR AND MICRO CONTROLLER**	PEE-2354	BOOLEAN ALGEBRA	Binary logic functions	https://www.youtube.com/watch?v=V2UMDeAaZmU
				Boolean laws	https://www.youtube.com/watch?v=K73N9ES_8nI
				De-Morgan's theorems	https://www.youtube.com/watch?v=km66mgxTk78
				Karnaugh Maps	https://www.youtube.com/watch?v=EznCqZ1eh5Q
PEE-2354		PEE-2354	SEQUENTIAL LOGIC AND SHIFT REGISTERS	Sequential circuits	https://www.youtube.com/watch?v=ibQBb5yEDlQ
				flip-flops	https://www.youtube.com/watch?v=jm0PGDSSBkI
				Counters	https://www.youtube.com/watch?v=Gc3DL-tmr-g
PEE-2354		PEE-2354	MICRO PROCESSORS	Introduction to microprocessors	https://www.youtube.com/watch?v=UcFgRzCtVSk&list=PLfzBO7vcQZ1KO4mGVA3M8n1x2QDN0lkz1
				Architecture 8086	https://www.youtube.com/watch?v=DmwOSdwzZ3E
				Pin Configuration 8086	https://www.youtube.com/watch?v=GapjjO_8Kuk
PEE-2354		PEE-2354	MICRO CONTROLLERS	Comparison between microcontrollers and microprocessors	https://www.youtube.com/watch?v=o6W0opScrKY&list=PLuv3GM6-gsE01L9yDO0e5UhQapkCPGnY3
				Evolution of microcontrollers, Applications	https://www.youtube.com/watch?v=oQpYfYzPq5s
PEE-2354		PEE-2354	THE 8051 ARCHITECTURE	Block Diagram	https://www.youtube.com/watch?v=r_UxJDteKIM&list=PLSWRPBzGkib_0RhTeoFvNM4WsjtcAZqvI
				PIN Diagram and 8051 architecture	https://www.youtube.com/watch?v=OaaP5WIG7ro
PEE-2354		PEE-2354	8051 ADDRESSING MODES AND INSTRUCTIONS	8051 ADDRESSING	https://www.youtube.com/watch?v=p9wxyIx-j-c
PEE-2354		PEE-2354	8051 INTERRUPTS, TIMER / COUNTERS and SERIAL COMMUNICATION	INTERRUPTS	https://www.youtube.com/watch?v=YBl9gljYAaQ
				TIMER / COUNTERS	https://www.youtube.com/watch?v=0SZPr4iGACg
				SERIAL COMMUNICATION	https://www.youtube.com/watch?v=ODKOfLL7sB4

Subject Name- Power Electronics					
Code	**Course Title**	**Paper Code**	**Topics**		**Links**
2355	Power Electronics	PEE-2355	POWER SEMICONDUCTOR DEVICES	SCR	https://www.youtube.com/watch?v=4JsR4xflPa4
				Triggering	https://www.youtube.com/watch?v=4JsR4xflPa4
				Commutation	https://www.youtube.com/watch?v=GmSPm5oi_nI&list=PLSWRPBzGkib-Ti9XX3G_phPN57cTPm1Bd
				Ratings	https://www.youtube.com/watch?v=xzz8-d0fTYQ
				Mountings	https://www.youtube.com/watch?v=SgQcWJPW1mE
				Other devices	https://www.youtube.com/watch?v=1Auay7ja2oY&list=PLA07ACBDE053A8229
			RECTIFICATION	Introduction	https://www.youtube.com/watch?v=Dfdzz64gux8
				Fully controlled half wave rectifier	https://www.youtube.com/watch?v=fOZ8bUrFJGk
				Fully controlled full wave rectifier	https://www.youtube.com/watch?v=fOZ8bUrFJGk
				3-phase full controlled converter	https://www.youtube.com/watch?v=HnEM8OISWNY
			INVERTERS	1-phase bridge inverter	https://www.youtube.com/watch?v=-WU3BxOxvII
				VSI	https://www.youtube.com/watch?v=GSpH3s6K0Ic
				CSI	https://www.youtube.com/watch?v=GSpH3s6K0Ic

				PWM technique	https://www.youtube.com/watch?v=_gJPYgQQ01c&list=PLbMVogVj5nJQoZqyLxx-cg_dYE-Dt2UMH
				Applications	https://www.youtube.com/watch?v=Dg5AIy0bY1A
			CHOPPERS	Chopper principle	https://www.youtube.com/watch?v=-RD53zPzII4
				Step up and step down chopper	https://www.youtube.com/watch?v=8UbLt2U1Ydw
				CLASS-A	https://www.youtube.com/watch?v=8UbLt2U1Ydw
				CLASS-B	https://www.youtube.com/watch?v=8UbLt2U1Ydw
				CLASS-C	https://www.youtube.com/watch?v=9R5XDJ09boQ
				CLASS-D	https://www.youtube.com/watch?v=5Dkzgf0-HJI
				CLASS-E	https://www.youtube.com/watch?v=5Dkzgf0-HJI
			CONVERTERS and AC VOLTAGE CONTROLLERS	single phase dual converter	https://www.youtube.com/watch?v=JYj2zL8oiRI
				Three phase dual converter	https://www.youtube.com/watch?v=JYj2zL8oiRI
				principle of phase control	https://www.youtube.com/watch?v=6HO4LvpC2Zo
				single phase ac voltage controller with R-	https://www.youtube.com/watch?v=NJWU33cqx1g

				load,	
				single phase ac voltage controller with R-L load,	https://www.youtube.com/watch?v=xA84vQdKZZ4
			Cycloconverter	1 phase to 1 phase circuit	https://www.youtube.com/watch?v=l4CfEB61fMc
				Step-up cycloconverter	https://www.youtube.com/watch?v=d65OinQbRVg
				mid-point cycloconverter	https://www.youtube.com/watch?v=pOhLDO7sMeU
				step down cycloconverter,	https://www.youtube.com/watch?v=l4CfEB61fMc
				3 phase half wave cycloconverter,	https://www.youtube.com/watch?v=6LCOV76dLRk
				3 phase to 1 phase cycloconverter	https://www.youtube.com/watch?v=6LCOV76dLRk
			SPEED CONTROL OF MOTORS	4-Quadrant Operation of DC Motors	https://www.youtube.com/watch?v=WMi-ZN3qtSs
				Constant Torque and Constant Horse power Operation	https://www.youtube.com/watch?v=f-Or7W6b5R4
				Speed Control of Separatel	https://www.youtube.com/watch?v=1AT1yuQ9awM&list=PLFW6lRTa1g83slfVY1p1xGqPGYUmXyahx

				y excited DC Motors	
				Speed control Using Chopper	https://www.youtube.com/watch?v=PEe_PisRvAk
				Speed control by Dual converter	https://www.youtube.com/watch?v=JYj2zL8oiRI&t=1s
			Applications	High frequency heating- i	https://www.youtube.com/watch?v=9fpPDUceO40
				introduction to dielectric,	https://www.youtube.com/watch?v=bgATL1278Lo
				resistance welding	https://www.youtube.com/watch?v=9fpPDUceO40

Subject Name- ELECTRIC TRACTION					
Code	**Course Title**	**Paper Code**	**Topics**	**CONTENTS**	**Links**
PEE-3301	ELECTRIC TRACTION	PEE-3301	ELECTRIC LOCOMOTIVES	Nomenclature used for Electric Locomotives	https://www.youtube.com/watch?v=uf1828zKHQ4 https://www.youtube.com/watch?v=BDMFsYnTdVI
				Types of Electric Locomotives by Nomenclature	https://www.youtube.com/watch?v=Sh1wkBB3BYQ
				Electric Traction, Types of Electric Traction, Ideal traction system, Various systems of traction their advantages and disadvantages	https://www.youtube.com/watch?v=iiGuCCDnKhY https://www.youtube.com/watch?v=aY9uX468bdY https://www.youtube.com/watch?v=f8Z0D2rzhUo https://www.youtube.com/watch?v=f8Z0D2rzhUo&t=23s
				AC Locomotive: Equipment's of AC Electric Locomotive	https://www.youtube.com/watch?v=wycpoNX4fqA
				Power Circuit Equipment's and Auxiliary Circuit Equipment's	https://www.youtube.com/watch?v=1xQQuOlY_7Y https://www.youtube.com/watch?v=qKCG8XMLVlc
				Equipment's in Power Circuit and their Functions: Power circuit diagram of AC locomotives, pantograph, circuit breaker, tap changer traction transformer, rectifier, smoothing choke traction motor.	https://www.youtube.com/watch?v=A7zx0HMsENs https://www.youtube.com/watch?v=MOaLFrw9y9w https://www.youtube.com/watch?v=aOJuf12P4KI https://www.youtube.com/watch?v=Qhflf8irD8M
PEE-3301		PEE-3301	TRACTION MOTORS	Introduction of Traction motors,	https://www.youtube.com/watch?v=v6A3RGbwlOc

				Characteristics of traction motors,	https://www.youtube.com/watch?v=iiGuCCDnKhY&t=6s https://www.youtube.com/watch?v=71ggB_V_sro https://www.youtube.com/watch?v=Fbw1Rcm3E68
				Torque-Armature current characteristics of D. C. Motors	https://www.youtube.com/watch?v=Ai9CPqmHTh8 https://www.youtube.com/watch?v=jzfkPzIMPyc
				Speed-Torque Characteristics of D. C. motors	https://www.youtube.com/watch?v=8ZSEdQTIwEc
				Speed Armature current characteristics of D. C. Motors	https://www.youtube.com/watch?v=-L-weKRfDao
				A. C. Series motors, Comparison between series and shunt motors with regard to other suitability for traction	https://www.youtube.com/channel/UC9UvUCxhf8v0TO5yd9tqqFA
				Torque-slip characteristics of three phase induction motor	https://www.youtube.com/watch?v=zBzVMuV6Lyg
				Single Phase series motors (only advantages and disadvantages regarding electric traction linear induction (LIM) based traction system	https://www.youtube.com/watch?v=iiGuCCDnKhY&t=11s https://www.youtube.com/watch?v=Be8hL6KsFhw
PEE-3301		PEE-3301	POWER SUPPLY ARRANGEMENTS	High voltage supply	https://www.youtube.com/watch?v=k5uNa13Li1I
				Constituents of supply system: Substations, Feeding posts, Feeding and Sectioning	https://www.youtube.com/watch?v=k8rGvDfEg3s

				arrangements, sectioning and paralleling post, Sub sectioning post, Elementary section, Switching stations. Major equipment's at substation: Transformer, Circuit breaker, interrupter, Location and spacing of substation.	https://www.youtube.com/watch?v=A7zx0HMsENs https://www.youtube.com/watch?v=MOaLFrw9y9w https://www.youtube.com/watch?v=aOJuf12P4KI https://www.youtube.com/watch?v=Qhflf8irD8M
				Different types of Electrification systems, Methods of supplying power to railway trains, Applications of systems for Railway Electrification.	https://www.youtube.com/watch?v=d8CkZDVp1cs https://www.youtube.com/watch?v=T6wBmURPqJk https://www.youtube.com/watch?v=tZ8Wu1ri9bI
PEE-3301		PEE-3301	CURRENT COLLECTING EQUIPMENTS	Systems of supplying power in electric traction: third rail or conductor rail system overhead system.	https://www.youtube.com/watch?v=O5Wq1ECAoik
				Current collectors for overhead system: trolley collector or pole collector, Bow collector, Pantograph collector.	https://www.youtube.com/watch?v=i8R6Ud__Vcs https://www.youtube.com/watch?v=Akj5FD-_Yfc
				Types of pantographs: diamond pantograph and faiveley type, methods of raising and lowering of pantograph, maintenance of pantograph.	https://www.youtube.com/watch?v=nJb4PtG5auk https://www.youtube.com/watch?v=a2fORxqz8C0
PEE-3301		PEE-3301	SIGNALLING AND SUPERVISORY CONTROL	Systems of supplying power in electric traction: third rail or conductor rail system, overhead system	https://www.youtube.com/watch?v=O5Wq1ECAoik&t=21s

				Current collectors for overhead system: trolley collector or pole collector, bow collector, pantograph collector. Types of pantographs: diamond pantograph and faiveley type, methods of raising and lowering of pantograph, maintenance of pantograph.	https://www.youtube.com/watch?v=MxU7OtHPKTU https://www.youtube.com/watch?v=f4ZlMCATzKw
PEE-3301		PEE-3301	SIGNALLING AND SUPERVISORY CONTROL	Requirements of signaling system, types of signals, color light signals, three and four aspects of color light signals	https://www.youtube.com/watch?v=lPlvKRabfUA https://www.youtube.com/watch?v=dK1_35OGQh4
				Track circuits, DC track circuits, AC track circuits and supervisory control: advantages of remote control, remote control switching Equipment's.	https://www.youtube.com/watch?v=GBIcHRTX9DA https://www.youtube.com/watch?v=ifT_EBRe4WI https://www.youtube.com/watch?v=ewSZ6vCb8Wk
PEE-3301		PEE-3301	TRACTION MECHANISM	Introduction of Braking, Advantages and disadvantages of electric braking, types of Electric braking	https://www.youtube.com/watch?v=Yr9e_gHDC8c
				Definition of plugging, Application of plugging on D. C. shunt motor, D. C. series motor. Definition of Rheostatic braking,	https://www.youtube.com/watch?v=lJx9v9Oq1ww
				Application of Rheostat braking on D. C. shunt motor, D. C. series motor,	https://www.youtube.com/watch?v=LzuWiG0cA4E

				Definition of Regenerative braking, Application of Regenerative braking on D. C. shunt motor, D. C. series motor	https://www.youtube.com/watch?v=ylVuGwoIYv0 https://www.youtube.com/watch?v=3hpB3ZrwLDc
				Crest speed, Average speed, Schedule speed, Factors affecting schedule speed of a Train, Tractive effort, and Mechanics of Train movement.	https://www.youtube.com/watch?v=r9CKYi7kIbs https://www.youtube.com/watch?v=1oFVpif6-wM https://www.youtube.com/watch?v=k7YYHSN0u2k

Subject Name- Energy Utilisation and its Audit					
Code	**Course Tittle**	**Paper Code**	**Topics**		**Links**
PEE 3302	**Energy Efficiency in Electrical Utilities**	PEE 3302	illumination		https://www.youtu.be/gyY7-2BcNp4
			Luminous flux		https://www.youtu.be/9ZZJqr48cxc
			inverse Square law		https://www.youtu.be/LNgPiQfi3z8
			solid angle		https://www.youtu.be/UqLX4BdNk4Q
			light		https://www.youtu.be/R2osszFu5BQ
			candle power		https://www.youtu.be/zHkQq8zeVJw
			M.H.C.P,M.S.C.P,Reduction factor,lamp efficiency		https://www.youtu.be/JaOv2tm4M9o
			utilization factor,		https://www.youtu.be/zdziNLkTmE
			laws of illumination		https://www.youtu.be/qIWFLG_wDj4
			sources of light		https://www.youtu.be/WjQKoOUDOwU
			incandescent lamp		https://www.youtu.be/anAOnSdo56M
			low pressure mercury vapour lamp		https://www.youtu.be/t8XSp7X3Mrs
			High pressure mercury vapour lamp		https://www.youtu.be/2KwsQDpRDQ8

			sodium vapour lamp		https://www.youtube.com/watch?v=o6KD5BxrgE8
			Types of Energy Audit		https://www.youtube.com/watch?v=7hDyLuFJ0c8

Subject Name- INDUSTRIAL AUTOMATION					
Code	**Course Title**	**Paper Code**	**Topics**	CONTENTS	**Links**
PEE-3303	ELECTRICAL MEASUREMENTS	PEE-3303	AUTOMATION	Need of automation	https://www.youtube.com/watch?v=O63O70w24aU
				advantages of automation	https://www.youtube.com/watch?v=DnqAD5c6iKw
				requirement of automation	https://www.youtube.com/watch?v=eybFxDge8aA
PEE-3303		PEE-3303	CONTROL SYSTEM	Concept of control system	https://www.youtube.com/watch?v=XMfH2P2Fc6Q
				basic block diagram of control system	https://www.youtube.com/watch?v=6YRjc8LgXmc
				transfer function	https://www.youtube.com/watch?v=WrVk_lT60dk
				different terms in control system, types of control system	https://www.youtube.com/watch?v=o_Bp7j77Uqc
				application of control system	https://www.youtube.com/watch?v=iZz3FHUJiSM
				development of block diagram for simple application like level, temperature, flow control	https://www.youtube.com/watch?v=oa-fMvQYAKU
PEE-3303		PEE-3303	ELECTRICAL ACTUATORS	Potentiometers-working and use as error detector	https://www.youtube.com/watch?v=X-A5oL76ys8
				servomotors-ac and dc-working principle	https://www.youtube.com/watch?v=PSi-B_PlHpA
				synchro transmitter	https://www.youtube.com/watch?v=kBPHwaU81fk
				control transformer, use of as error detector	https://www.youtube.com/watch?v=lGPov68rpnA
				stepper motor-PM and variable reluctance-working principle	https://www.youtube.com/watch?v=MSHVl1YXqjo
				tacho-generator	https://www.youtube.com/watch?v=vqQkjPYAwzA
				application of above components as AC/DC control system.	https://www.youtube.com/watch?v=shfwgqIN9M0
PEE-3303		PEE-3303	CONTROLLERS	Hydraulic-advantages and disadvantages	https://www.youtube.com/watch?v=MgdrvUv1MA4
				hydraulic servomotor	https://www.youtube.com/watch?v=E4GhSM4WaSM

					https://www.youtube.com/watch?v=7O3e_If5fLc
				types of pump used, control valves, components like accumulator, filter, seals, pneumatic resistance and capacitance of pressure system, pneumatic flapper-nozzle system, pneumatic relays, actuating valves	https://www.youtube.com/watch?v=ONxEiCppesE
				comparison between pneumatic and hydraulic systems	https://www.youtube.com/watch?v=p7kaKmwc09g https://www.youtube.com/watch?v=mTOIG1s2sW0
				electrical and electronic controller- brief overview of op-amp	https://www.youtube.com/watch?v=TcnYbrXXDp8 https://www.youtube.com/watch?v=pglcFjiWBZw
				inverting, non-inverting, lead-lag networks.	https://www.youtube.com/watch?v=iB4325n8afg https://www.youtube.com/watch?v=090Djhigirg
PEE-3303		PEE-3303	CONTROL ACTONS	On-off, P, I, PI, PD, PID, actions	https://www.youtube.com/watch?v=2UgiIA63ydo
				PID actions using hydraulic, pneumatic electronic controller	https://www.youtube.com/watch?v=OYPXiC7QjUM
				tuning of PID controller	https://www.youtube.com/watch?v=hOJFKXPyZVU
PEE-3303		PEE-3303	PROGRAMMABLE LOGIC CONTROLLER	Introduction, advantages and disadvantages, of PLC	https://www.youtube.com/watch?v=yYoAh3kErZw
				PLC VS PC,	https://www.youtube.com/watch?v=zd8LKysZ-0c
				block diagram of PLC, basic blocks like CPU, I/O modules	https://www.youtube.com/watch?v=TjOEqC3E5ZA
				bus system, power supply and remote I/OS, different PLC available in market.	https://www.youtube.com/watch?v=urcx_wQ6g8U

Subject Name- INSTALLATION MAINTENANCE AND TESTING					
Code	**Course Tittle**	**Paper Code**	**Topics**		**Links**
3304	INSTALLATION MAINTENANCE AND TESTING	PEE-3304	INTRODUCTION	I.S.S. concept of tolerance	https://www.youtube.com/watch?v=vC-ZB4UVZow
				Method of testing	https://www.youtube.com/watch?v=g_x8r2wkraI
				Concept of routine, preventive and breakdown maintenance	https://www.youtube.com/watch?v=f58SW0Hwcf0
				advantages of preventive and breakdown maintenance,	https://www.youtube.com/watch?v=KdLZ5u-sKZs
				factors affecting preventive maintenance schedule	https://www.youtube.com/watch?v=oRwD7I49PgI
				introduction to total productive maintenance	https://www.youtube.com/watch?v=oRwD7I49PgI
			SAFETY AND PREVENTION	Definition of terminology used in	https://www.youtube.com/watch?v=g_x8r2wkraI&t=1s

			OF ACCIDENTS	safety	
				safety hazard, accident, major accident hazard,	https://www.youtube.com/watch?v=91YpCY-1Fy0
				responsibility, authority, accountability, monitoring,	https://www.youtube.com/watch?v=yhywrCChJBQ&list=PLLy_2iUCG87D5n9zraFS2QYajk0OAOlVK
				I.E. act and statutory regulations for safety of persons	https://www.youtube.com/watch?v=3VReVbsmjKI
				causes of electrical accidents factors	https://www.youtube.com/watch?v=vhtQGQbuq6w https://www.youtube.com/watch?v=7T3fHr8p_hc
				methods of providing artificial respiration	https://www.youtube.com/watch?v=0sUFSJwF7OA
				operation of fire extinguishers	https://www.youtube.com/watch?v=m2DKIw5zDBA
			INSTALLATION	Factors involved in designing the machine foundation,	https://www.youtube.com/watch?v=54-J8VcMzCU
				requirement of different	https://www.youtube.com/watch?v=-HNJ441vdlY

				dimension of foundation for static and rotating machines	
				procedure for leveling and alignment	https://www.youtube.com/watch?v=MXAsKFnCqUE
				effects of misalignment.	https://www.youtube.com/watch?v=U4qUNJ0_PZY
				Installation of rotating machines	https://www.youtube.com/watch?v=NsT_8bJU9WM
				Use of various devices and tools in loading and unloading	https://www.youtube.com/watch?v=WXmIdbVDJqE
			TESTING AND MAINTENANCE OF ROTATING MACHINES	Type tests, routine tests and special tests of 1 ϕ and 3 ϕ induction motors.	https://www.youtube.com/watch?v=lqZ55_sJmHg
				Routine, preventive and breakdown maintenance of 1ϕ and 3 ϕ Induction Motors.	https://www.youtube.com/watch?v=sZoZdpvJn6o&t=167s
				Parallel operation	https://www.youtube.com/watch?v=HSTVsg5wx_4

				of alternators,	
				maintenance schedule of alternators and synchronous machines,	https://www.youtube.com/watch?v=NsT_8bJU9WM
				break test on DC series motor	https://www.youtube.com/watch?v=EA6xXvIKXDE
				trouble shooting charts.	https://www.youtube.com/watch?v=EA6xXvIKXDE
			TESTING AND MAINTENANCE OF TRANSFORMERS	Listing type test, routine test and special test	https://www.youtube.com/watch?v=Jfx0ITTPwfw
				procedure for conducting tests	https://www.youtube.com/watch?v=Jfx0ITTPwfw
				insulation resistance	https://www.youtube.com/watch?v=DL6VuBcQfH8
				Different methods of determining temperature rise back to back test,	https://www.youtube.com/watch?v=f58SW0Hwcf0
				short circuit test,	https://www.youtube.com/watch?v=6ISEsxlFAAc
				open-delta (delta-	https://www.youtube.com/watch?v=Lrmtdrv4Lb8

				delta) test	
			TESTING AND MAINTENANCE OF INSULATION	Instruments used for measuring insulation resistance	https://www.youtube.com/watch?v=vxwDIR35VBs
				drying of insulation	https://www.youtube.com/watch?v=ZXGXfOGRhmc
				Classification of insulating materials,	https://www.youtube.com/watch?v=C0ZKDSa9uJQ
				Tests on oil: acidity test, sludge test, crackle test, flash point test	https://www.youtube.com/watch?v=AFfnq-Qf7rw
				Filtration of insulating oil	https://www.youtube.com/watch?v=uYAbs8vcBIY
			TESTING AND MAINTENANCE OF RELAYS AND CIRCUIT BREAKER	Testing of Relays	https://www.youtube.com/watch?v=-M0rewsgNko
				Testing of circuit breakers,	https://www.youtube.com/watch?v=NsT_8bJU9WM
				preventive maintenance of circuit breaker.	https://www.youtube.com/watch?v=OmgdSbHB5fc
			HOT LINE MAINTENANCE	Meaning and advantages	https://www.youtube.com/watch?v=NsT_8bJU9WM

				special types of non-conducting materials used for tools for hot line maintenance.	https://www.youtube.com/watch?v=NsT_8bJU9WM
			EARTHING	Reasons of earthing	https://www.youtube.com/watch?v=aITb42_NeFA
				earthing system	https://www.youtube.com/watch?v=gSaxl_17SWI
				earth lead and its size	https://www.youtube.com/watch?v=x0Y-RxGNZPg
				improvement of earth resistance	https://www.youtube.com/watch?v=066YQOBO7_Y
				double earthing	https://www.youtube.com/watch?v=Dvx-xMLlX9M
				rules for earthing	https://www.youtube.com/watch?v=066YQOBO7_Y

Subject Name- POWER SYSTEM OPERATION AND PROTECTION Semester 5					
Code	Course Title	**Paper Code**	**Topics**		**Links**
PEE-3305	POWER SYSTEM OPERATION AND PROTECTION	PEE-3305	POWER SYSTEM STABILITY	Introduction	https://www.youtube.com/watch?v=70gLa0-1Rho
				classification of stability	https://www.youtube.com/watch?v=70gLa01Rho&list=PLC3FFC85203B1EC18
				power angle diagram	https://www.youtube.com/watch?v=ZBAKu8hg2lU
				equal area criterion	https://www.youtube.com/watch?v=KJcxz3kl_Ik
PEE-3305		PEE-3305	CONTROL OF REACTIVE POWER	voltage and load frequency	https://www.youtube.com/watch?v=gqhGZirLiS8
				voltage regulation	https://www.youtube.com/watch?v=XjvefqfhT78
				methods of voltage control	https://www.youtube.com/watch?v=opocYkK_oSA
				Relations between voltage and reactive power	https://www.youtube.com/watch?v=IZnw2nzmt0U
PEE-3305		PEE-3305	SYMMETRICAL COMPONENTS AND FAULT CALCULATIONS	SYMMETRICAL COMPONENTS	https://www.youtube.com/watch?v=24X4znh4nl0
				unsymmetrical fault	https://www.youtube.com/watch?v=24m4xnIFj4E
				symmetrical components	https://www.youtube.com/watch?v=24X4znh4nl0
				sequence networks	https://www.youtube.com/watch?v=NHxGvHHZTQQ
PEE-3305		PEE-3305	SWITCHGEAR	Introduction of switchgear	https://www.youtube.com/watch?v=1Bg2VmsoBLg
				Fuses	https://www.youtube.com/watch?v=jYRoWloQ52k
PEE-3305		PEE-3305	PROTECTIVE RELAYS	Classification of Relays	https://www.youtube.com/watch?v=hv3MukV9HkA
				Electromagnetic relay	https://www.youtube.com/watch?v=cunddFiQzrk
				Thermal relays lecture	https://www.youtube.com/watch?v=qipzfQYz9p4
				Directional Over Current Relay	https://www.youtube.com/watch?v=1j3t6pNQ4ik

				Distance relays	https://www.youtube.com/watch?v=CKp09vPdGYM https://www.youtube.com/watch?v=fl5SSiMntMA
				Differential relays	https://www.youtube.com/watch?v=TsDHce-k8d4
PEE-3305		PEE-3305	CIRCUIT BREAKERS	Introduction of circuit breakers	
				classification of circuit breakers	https://www.youtube.com/watch?v=8hJ3NFBKLTg
				Oil circuit breakers	https://www.youtube.com/watch?v=W8KO04U1xvM
				SF6 circuit breakers	https://www.youtube.com/watch?v=hjrw98GoHJk
				Vacuum circuit breakers	https://www.youtube.com/watch?v=2xLAbj9Tv6A
				Air blast circuit breakers	https://www.youtube.com/watch?v=tDpE5YDNrio
PEE-3305		PEE-3305	PROTECTION AGAINST OVER VOLTAGES	Causes and effects of over voltage	https://www.youtube.com/watch?v=CDmNR-FUAhE
				Travelling wave	https://www.youtube.com/watch?v=7zHOQqQQWkQ
				Lighting Arresters	https://www.youtube.com/watch?v=8mMGvU10vTA
PEE-3305		PEE-3305	PROTECTIVE SCHEMES	Protection of alternator	https://www.youtube.com/watch?v=_NK3WHECBpo
				Merz price differential protection	https://www.youtube.com/watch?v=qMh9CM_PBAo
				Buchholz relay	https://www.youtube.com/watch?v=PUKGoU7q_Qk
				Differential protection	https://www.youtube.com/watch?v=Hc_h0MDqQIk
				Protection of induction motors	https://www.youtube.com/watch?v=jdrkH02OJ0k
				Under voltage protection	https://www.youtube.com/watch?v=-nA2wCCKRBY

Subject - Control System						
s. no	**sem**	**Subject**	**Subject code**	**Unit**	**Topic**	**Available URL**
1	VI	Control System	PEE-3351	I	Basics of Control System	https://www.youtube.com/watch?v=UrBfEUVZMEY
					Open Loop Control system	https://www.youtube.com/watch?v=ADZbw1zNEiQ
					Closed Loop Control system	https://www.youtube.com/watch?v=JhPBiLaD4vo
					Basics of Laplace Transformation	https://www.youtube.com/watch?v=AKHmAOgMsQQ
					Transfer Function	https://www.youtube.com/watch?v=e2p3VTfeAe8
					Block Diagram Reduction Rules	https://www.youtube.com/watch?v=1EMJGs-GRBo
					Manson's Gain formula	https://www.youtube.com/watch?v=DqeCAkqJfjs
					Signal Flow Graph	https://www.youtube.com/watch?v=SGu7QqwoEpE
					Mathematical Modeling of Control System	https://www.youtube.com/watch?v=Wv2MqI2sFkM
					Transfer Function & Block Diagram of Armature Controlled D.C motor	https://www.youtube.com/watch?v=3qmtb7t_AUk
					Modeling of Potentiometers	https://www.youtube.com/watch?v=UTUf9mT2dI0
				II	Test Signals	https://www.youtube.com/watch?v=aB-fcQnYmlI
					Time Responce of First Order Control System	https://www.youtube.com/watch?v=T8ATyg_Fo6Y
					Second Order System	https://www.youtube.com/watch?v=dAwCtTPX2XM
					Time Domain Specifications	https://www.youtube.com/watch?v=MzrgBc4s-jk
					Static Error Constants	https://www.youtube.com/watch?v=_p6w7oztrwQ
				III	Introduction to Frequency Response	https://www.youtube.com/watch?v=psx3gsKbY2U

					Frequency Domain Specifications	https://www.youtube.com/watch?v=yN17yBbm830
					Correlation between Time and Frequency Response	https://www.youtube.com/watch?v=nsMGJYz-HyQ
				IV	Introduction to Stability	https://www.youtube.com/watch?v=t1BrHAYhvog
					Routh Stability Criterion	https://www.youtube.com/watch?v=MRyICw3eOJs
					Special Case of Routh Array	https://www.youtube.com/watch?v=G5uRpuIa3Ls
					Root Locus Technique Construction Rules	https://www.youtube.com/watch?v=o3bRqh4IlCA
					Procedure to Draw Bode Plot	https://www.youtube.com/watch?v=CYaRer4vsdo
					Compensators in Control System	https://www.youtube.com/watch?v=9YRhTY-W1TY
				V	Introduction to State Space Analysis	https://www.youtube.com/watch?v=BgaTRpitlGY
					State Model	https://www.youtube.com/watch?v=DSvBXXnZv34
					State Transition Matrix	https://www.youtube.com/watch?v=vr2kQpRb-QI
					Derivation of Transfer Function from State Model	https://www.youtube.com/watch?v=vY2Byo2SJ48
					Transfer Function from State Model	https://www.youtube.com/watch?v=Y9vVuPD2cGM
					Controllability and Observability	https://www.youtube.com/watch?v=S4_rIjCC70w

Subject Name- High Voltage Engineering

Semester 6

Code	Course Title	Paper Code	Topics		Links
PEE-3352	High Voltage Engineering	PEE-3352	BREAKDOWN MECHANISM IN GASES, LIQUIDS AND SOLIDS	Introduction to mechanism of breakdown in Gases,	https://www.youtube.com/watch?v=6mR_GSybllg
				Townsend's First Ionization Coefficient	https://www.youtube.com/watch?v=KofDOGgmKqA
				Townsend's Second Ionization Coefficient	https://www.youtube.com/watch?v=MBdWnd1DBo4
				Corona Discharge	https://www.youtube.com/watch?v=4wYky9YUwWg&t=258s
				Treeing and tracking of Solid Dielectrics	https://www.youtube.com/watch?v=2PvPxASUn1Q
				Electrical Insulating material classification and properties	https://www.youtube.com/watch?v=bbQxqdfYaUs
				Streamer or Kanal Mechanism of Spark	https://www.youtube.com/watch?v=NgTUq5w2mtA
				Bubbles theory of Liquid Dielectric Breakdown	https://www.youtube.com/watch?v=6nGkdHFC2yE
			Generation of high voltage and current	Generation of High DC Voltage	https://www.youtube.com/watch?v=AWAOpK0SArg
				Over Voltages Due to Switching	https://www.youtube.com/watch?v=3fsQrWmnXMA
				Vande Graff Generator	https://www.youtube.com/watch?v=Xqt2gAalV4Y
				Generation of impulse current.	https://www.youtube.com/watch?v=fvpRBxWEZ2Q
			Measurement of high voltage and current	High Voltage Measurement , Devices & Techniques	https://www.youtube.com/watch?v=D-OZJkk51Jw
				Generating Voltmeter	https://www.youtube.com/watch?v=IG7DtyqDkC4
				Sphere Gap	https://www.youtube.com/watch?v=dOxgaH_YDL0
				Measurement of high frequency	https://www.youtube.com/watch?v=ISuCjaDZ9jU

				and impulse current.	
			HIGH VOLTAGE TESTING OF ELECTICAL EQUIPMENTS	Testing of Overhead Line Insulator,	https://www.youtube.com/watch?v=tOIS_iXZuTA
				Testing of Cables Testing of Bushings	https://www.youtube.com/watch?v=7ktgE2CcoFw
				Capacitor bank testing procedure	https://www.youtube.com/watch?v=tvy6d-RzOeI
				Power Transformer Testing	https://www.youtube.com/watch?v=7uSzfQOSrX8
				Testing of Circuit Breaker	https://www.youtube.com/watch?v=8irZxxG9Np8
			NON-DESTRUCTIVE INSULATION TEST	Dielectric Constant and loss factor	https://www.youtube.com/watch?v=yUQyCd4eF_I
				Schering Bridge	https://www.youtube.com/watch?v=VBMevfWSLbo
				Partial Discharges:	https://www.youtube.com/watch?v=9wZZmte6VgA

Subject Name- ENERGY EFFICIENCY IN ELECTRICAL UTILITIES
Semester 6

Code	Course Title	Paper Code	Topics		Links
PEE-3362	ENERGY EFFICIENCY IN ELECTRICAL UTILITIES	PEE-3362	ENERGY CONSERVATION IN BUILDING AND ECBC		https://www.youtube.com/watch?v=xUjlDpwbfZA
					https://www.youtube.com/watch?v=DMc_T9JKFMo
					https://www.youtube.com/watch?v=aIvKUXnDMc8
					https://www.youtube.com/watch?v=hsw76cDueoc
			CAPTIVE POWER GENERATION		https://www.youtube.com/watch?v=FyVnjS_L9s
					https://www.youtube.com/watch?v=43g_flnz2Tc
			ELECTRIC MOTORS	Types of Electric Motors	https://www.youtube.com/watch?v=A6CmMxxVJRE
				Soft Starters	https://www.youtube.com/watch?v=VbiM3G8WJCo
				Energy efficient motors	https://www.youtube.com/watch?v=nL0K1bP0I5M
			ENERGY CONSERVATION ACT-2001 AND RELATED POLICIES	Energy Conservation Act-2001	https://www.youtube.com/watch?v=WqipKm1gaUQ https://www.youtube.com/watch?v=W93OR48WeOk
				Demand side Management	https://www.youtube.com/watch?v=7MMzJxFzkaQ https://www.youtube.com/watch?v=RgGAMLRUH0E
				Electricity Act 2003	https://www.youtube.com/watch?v=QX9s-FaIFbE
				National Action Plan on Climate Change	https://www.youtube.com/watch?v=HVKoyigifbc
				Bureau of Energy Efficiency (BEE)	https://www.youtube.com/watch?v=meBbbKL3otA
			ELECTRICAL SYSTEM	Electricity-billing	https://www.youtube.com/watch?v=Z4M9sbGcPPo
				Power factor improvement	https://www.youtube.com/watch?v=tON5-bICZog
				Performance assessment of PF capacitors	https://www.youtube.com/watch?v=NvuPlntsTpE
			ENERGY SCENARIO	Commercial and non-commercial energy sources	https://www.youtube.com/watch?v=IjDu6TIoGUI
				Renewable energy and Non renewable energy	https://www.youtube.com/watch?v=kL9Cw9RYxTo
				Primary & Secondary Energy sources	https://www.youtube.com/watch?v=irfigdqRfGc
				Energy security	https://www.youtube.com/watch?v=gr1SkdpNZyI
				Energy conservation and its Importance	https://www.youtube.com/watch?v=-oxr8jfk5kc https://www.youtube.com/watch?v=YmMOFNzccFk