

## HASMUKH GOSWAMI COLLEGE OF ENGINEERING, VAHELAL

### SYLLABUS FOR MID SEM EXAM-MARCH-2018

#### EE

Semester	Sub Code	Subject	Unit No(GTU Syllabus)	Unit Name(GTU Syllabus)
8th	2180901	TESTING AND COMMISSIONING OF ELECTRICAL EQUIPMENTS		
	2180909	POWER SYSTEM PLANNING AND DESIGN	1,2,3	Transmission lines design,Design of distribution systems,Design of power system
	2180903	POWER SYSTEM OPERATION AND CONTROL	1,2,5,6	AUTOMATIC GENERATION AND VOLTAGE CONTROL, POWER SYSTEM SECURITY,LOAD FORECASTING,INTRODUCTION TO POWER SYSTEM DEREGULATION AND RESTRUCTURING
	2180910	ENERGY CONSERVATION, AND AUDIT	1,2,3	ENERGY AUDIT METHODOLOGY AND RESEARCH TRENDS, ELECTRICAL DISTRIBUTION AND UTILIZATION, THERMAL SYSTEMS
Semester	Sub Code	Subject	Unit No(GTU Syllabus)	Unit Name(GTU Syllabus)
6th	2160902	POWER ELECTRONICS – II	1,2,3	DC TO AC CONVERTERS: INVERTERS, AC VOLTAGE CONTROLLERS, CYCLOCONVERTERS
	2160912	DESIGN OF DC MACHINES AND TRANSFORMER	1,3,2	GENERAL DESIGN ASPECTS,DESIGN OF DC MACHINES,DESIGN OF THREE PHASE TRANSFORMER(UP TO STACKING FACTOR)
	2160904	HIGH VOLTAGE ENGINEERING(HVE)(2160904)	1,2,3,8	Electrostatic fields and field stress control, Electrical breakdown in gases, Breakdown in liquid and solid dielectric,High voltage testing
	2160907	UTILIZATION OF ELECTRICAL ENERGY AND TRACTION	2,3,4,6,7	Illumination, electric heating, electric welding, electrical circuit used in refrigeration air conditioning and water coolers, electric traction(only two topics)
	2160908	ELECTRICAL POWER SYSTEM – II	1,2,3,4	
	2160913	CONTRIL OF ELECTRICAL DRIVES	1,2,3	Introduction, Dynamics of electric drives, DC Drives.
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4th	2140910	DIGITAL ELECTRONICS	1,2,3,4	NUMBER SYSTEM, LOGIC FAMILIES,BOOLEAN ALGEBRA, COMBINATIONAL LOGIC CIRCUIT
	2140906	AC MACHINES	1,2,3,6	POLY PHASE INDUCTION MOTOR,INDUCTION GENERATOR,SINGLE PHASE INDUCTION MOTOR,COMMUTATOR MOTOR
	2140907	APPLIED THERMAL AND HYDRAULIC ENGINEERING		
	2140908	ELECTRICAL POWER GENERATION	1,2,3,4,7,11	INTRODUCTION, STEAM POWER STATION, HYDRO POWER STATION, NUCLEAR POWER STATION,TARIFF AND ECONOMICS ASPECTS IN POWER GENERATION, SUBSTATION
	2140909	FIELD THEORY	1,2,3,4,11,12	VECTOR ANALYSIS, COULOMB'S LAW AND ELECTRIC FIELD INTENSITY, ELECTRIC FLUX DENSITY, GAUSS'S LAW AND DIVERGENCE, ENERGY AND POTENTIAL, TRANSMISSION LINES, EFFECTS OF ELECTROMAGNETIC FIELDS
	2141005	SIGNALS AND SYSTEMS	1,2,3	Signal, system, convolution(CT), laplace transform, convolution(DT)
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2ND PG	2720714	MODERN CONTROL SYSTEMS	1,2,4	State Variable Analysis,State Variable Design,Lyapunov's Stability Analysis
	2720715	ELECTRICAL MACHINE MODELING AND ANALYSIS	1,2,3	Basic principle for Electrical Machine Analysis,Reference frame theory,Symmetrical Induction machines
	2720716	FACTS	1,2,3,4	Introduction,Reactive Power Control in Electrical Power Transmission Systems,Principles of Conventional Reactive Power Compensators,SVC Control Components and Models
	2720720	POWER SYSTEM TRANSIENTS	2,5	TRAVELLING WAVES ON TRANSMISSION LINE,PROTECTION OF SYSTEMS AND EQUIPMENTS AGAINST TRANSIENT OVERVOLTAGES
	2721316	BASICS OF TRANSPORTATION ENGINEERING	1,2,3,4	INTRODUCTION, URBAN TRANSPORTATION, TRAVEL DEMAND MODELLING, TRAFFIC ENGINEERING