R.G.Government Polytechnic Banikhet,Distt. Chamba H.P-176303

Department of Electrical Engineering

Lesson Plan

Name of Faculty	Er. Jyoti verma
Discipline	Electrical Engineering
Semester	6th
Subject	IC (L-2 Hrs./Week)
Lesson Plan Duration	Jan-May 2026

Week	Topic	Theory
1st (27 Jan. – 02 Feb.)	Unit 1 Introduction to Constitution:	History of making of the Indian Constitution. Meaning and importance of the Constitution. Salient features and Preamble of Indian Constitution.
2nd (03 Feb. – 09 Feb.)	Unit 1 Introduction to Constitution	Fundamental rights- meaning and limitations.
3rd (10 Feb-17 Feb.)	Unit 1 Introduction to Constitution	Directive principles of state policy and Fundamental duties -their enforcement and their relevance.
4th (18 Feb . –24 Feb.)	Unit 2 Union Government:	Structure of Union Government. Union Executive- President, Vice-president, Prime Minister, Council of Ministers.
5th (25 Feb - 03 Mar.)	Unit 2 Union Government:	Union Legislature- Parliament and Parliamentary proceedings.
6th (05 Mar. – 11 Mar.)	Unit 2 Union Government:	Union Judiciary-Supreme Court of India – composition and powers and function.
CLASS TEST -1		2nd week of March 2026
7th (12 Mar. –19 Mar.)	Unit 3 State and Local Governments	Structure of State Government.
8th (20 Mar . –28 Mar.)	Unit 3 State and Local Governments	State Executive- Governor, Chief Minister, Council of Ministers.
9th (30 Mar. –.06 April)	Unit 3 State and Local Governments	State Legislature-State Legislative Assembly and State Legislative Council. State Judiciary-High court.
10th (07 April. – 16 April.)	Unit 3 State and Local Governments	Local Government-Panchayat raj system with special reference to 73rd and Urban Local Self Govt. with special reference to74th Amendment.

CLASS TEST -2		**2nd week of April 2026**
11th (17 April. – 23 April.)	**Unit 4 Election provisions, Emergency provisions, Amendment of the constitution**	Election Commission of India-composition
12th (24 April -30 April)	**Unit 4 Election provisions, Emergency provisions, Amendment of the constitution**	powers and functions and electoral process.
13th (02 May-08 May.)	**Revision & Doubt Clearance**	Revision & Doubt Clearance
House Test		**2ND week of May 2026**
14th (11 May-16 May.)	**Unit 4 Election provisions, Emergency provisions, Amendment of the constitution**	Amendment of the constitution- meaning, procedure and limitations.
15th (18 May-23 May)	**Revision & Doubt Clearance**	Revision & Doubt Clearance
16th (25 May-26 May)	**Revision & Doubt Clearance**	Revision & Doubt Clearance

NOTE: Lesson Plan is Tentative, subject to availability of Time, Students & Faculty.

Signature of Teacher
(Er.Jyoti verma)

Signature of HOD
(Er. Amit Attri)

LESSON PLAN

Name of Faculty	Mrs. Ankaj Thakur
Department	Applied Science & Humanities
Semester	6th
Subject	Composites Science &Technology
Lesson Plan for the Duration	January-May 2026

Week		Theory
1st (27 Jan. – 02 Feb..)	UNIT-I	Definition – Classification and characteristics of Composite materials. terminology used in fiber science, Advantages and application of composites
2nd (03Feb. – 09 Feb.)		Introduction to composite materials:General characteristics of reinforcement- classification.
3rd (10 Feb-17 Feb.)	UNIT-II	Thermoplastic and thermosetting resins; Commonly used matrix reinforcement system Fibre, Flake and particulate reinforced composites
4th (18 Feb . –24Feb.)		Reinforcements used in PMC'sglass,carbon, aramids, boron, Roving's, yarns, fabrics, etc.
5th (25 Feb - 03 Mar.)		Thermoset matrices for aerospace components- polyesters, epoxies, phenolics, vinyl esters, cyanate esters, etc.
6th (05 Mar. – 11 Mar.)	UNIT-III	Composites for satellites and advanced launch vehicles,
Class Test I 2nd week of March 2026		
7th (12 Mar. –19 March)	UNIT-III	Design considerations PMC for structural composites, Silicon carbide composites, design, processing and properties
(20 March . –28 March.)		Carbon-Carbon composites: Matrix precursors, Manufacturing considerations
9th (30 March –06 April)		Nanocomposites: Nano particle dispersion in polymer matrix
10th (07 April. – 16 April.)		Polymer- nanoclay composites and polymer-carbon nanotubes composites.
Class Test II-2nd week of April 2026		
11th (17 April. – 23 April.)	UNIT-IV	Hand lay-up, Filament winding, Pultrusion, Resin transfer molding,
12th (24 April -30 April)		Processing science of reactive polymer composites. Process steps for production
13th (02 May-08 May.)		Selection of processing conditions toolings, Equipments, Carbon-carbon composites,
House Test-2nd week of May 2026		
14th (11 May-16 May.)	UNIT-V	Processing, Thermal and mechanical properties, Quality control
15th (18 May-23 May)		Raw material testing, Property evaluation at laminate level, NDT techniques.
16th (25 May-26 May)	Revision	Revision & Doubt Clearance

Ankaj Thakur
Lecturer Chemistry

Signature of HOD/OIC

LESSON PLAN

Name of Faculty	Mrs. Deepa Kapoor
Department	Electrical
Semester	6TH
Subject	Entrepreneurship & Start- Ups
Lesson Plan for the Duration	January-May 2026

Week	Theory	
1st (27 Jan. – 02 Feb..)	UNIT-I	Definitions, Traits of an entrepreneur, Intrapreneurship, Motivation.
2nd (03Feb. – 09 Feb.)		Types of Business Structures, Similarities/differences between entrepreneurs and managers
3rd (10 Feb-17 Feb.)	UNIT-II	Discovering ideas and visualizing the business
4th (18 Feb . –24Feb.)		Activity map Business Plan
5th (25 Feb - 03 Mar.)	UNIT-III	Market Analysis–Identifying the target market,
6th (05 Mar. – 11 Mar.)		Competition evaluation and Strategy Development
CLASS TEST -1 2nd week of March 2026		
7th (12 Mar. –19 March)	UNIT-III	Marketing and accounting
8th (20 March . –28 March.)		Risk analysis
9th (30 March –.06 April)	UNIT-IV	Company's Organization Structure
10th (07 April. – 16 April.)		Recruitment and management of talent
CLASS TEST 2 2nd WEEK OF APRIL 2026		
11th (17 April. – 23 April.)	UNIT-IV	Financial organization and management
12th (24 April -30 April)	UNIT-V	Financing methods available for start-ups in India
13th (02 May-08 May.)		Communication of ideas to potential investors–Investor Pitch
HOUSE TEST 2nd WEEK OF MAY 2026		
14th (11May-16 May.)	UNIT-VI	Exit strategies for entrepreneurs, bankruptcy
15th (18May-23 May)		succession and harvesting
16th(25 May- 26 May)	Revision	Revision

Deepa Kapoor
Lecturer English

Signature of HOD/OIC

LESSON PLAN

ne of Faculty	Mrs. Deepa Kapoor
Department	Electrical
Semester	6TH
Subject	Technical Communication
Lesson Plan for the Duration	January-May 2026

Week	Theory	
1st (27 Jan. – 02 Feb..)	UNIT-I	Language as a tool of Communication 2. Features of Technical Communication
2nd (03Feb. – 09 Feb.)		Distinction between General and Technical Communication 4. Channels of Communication at workplace: Downward, Upward, Lateral or Horizontal, Diagonal, Grapevine, Consensus
3rd (10 Feb-17 Feb.)		Barriers to Communication and overcoming barriers
4th (18 Feb . –24Feb.)	UNIT-II	1. Types of Technical writing 2. Drafting skills: Agenda and Minutes of Meetings, Official and Business Correspondence
5th (25 Feb - 03 Mar.)		Basics of Grammar: Spotting errors in sentences (Noun, Pronoun, Verb, Adverb, Adjective, Preposition, Conjunction, Article, Modals, Tenses, Punctuation) 5. Resume Writing and Covering letter
6th (05 Mar. – 11 Mar.)	UNIT-III	Concept and Significance of Presentation skills,Steps of a Effective Presentation,Elements of Effective Presentation skills, including public speaking Clarity of
CLASS TEST -1 2nd week of March 2026		
7th (12 Mar. –19 March)	UNIT-III	Audience Analysis and Retention of audience interest,How to improve Presentation Skills
8th (20 March . –28 March.)	UNIT-IV	What are Speaking Skills and Characteristics of a Good Speech,What is Panel Discussion and its procedure
9th (30 March –.06 April)		Job Interview Skills: What to do Before, After and During Interview,Body Language Examples and their Meanings-Positive and Negative. Body language for interviews
10th (07 April. – 16 April.)		Difference between Etiquettes and Manners ,Table Etiquettes
CLASS TEST 2 2nd WEEK OF APRIL 2026		
11th (17 April. – 23 April.)	UNIT-IV	Telephone Etiquettes, Dressing Etiquettes and Workplace Etiquettes,
12th (24 April -30 April)	UNIT-IV	How to get along with opposite Gender
13th (02 May-08 May.)		What are the elements of Voice Modulation (Quality, Pitch, Rhythm, Volume
HOUSE TEST 2nd WEEK OF MAY 2026		
14th (11May-16 May.)	UNIT-IV	Intonation; Pronunciation; Articulation
15th (18May-23 May)		(stress & accent);Tips for better Voice modulation
16th(25 May- 26 May)	Revision	Revision

Deepa Kapoor
Lecturer English

Signature of HOD/OIC

R.G.Government Polytechnic Banikhet,Distt. Chamba H.P-176303
Department of Electrical Engineering
Lesson Plan

Name of Faculty	Er. Amit Attri
Discipline	Electrical Engineering
Semester	6th
Subject	B.E (L-6 Hrs./Week)
Lesson Plan Duration	Jan-May 2026

Week	Topic	Theory
1st (27 Jan. – 02 Feb.)	**Unit – I Wiring Accessories**	**Switch** – Their types according to construction such as surface switch, flush switch, and pull switch, rotary switch, knife switch, pendent switch, Main-switch (ICDP, ICTP).
2nd (03 Feb. – 09 Feb.)	**Unit – I Wiring Accessories**	**Holders-** Their types such as bayonet cap lamp holder, pendent holder, batten lamp holder, angle holder, bracket holder, tube light holder, screw type Edison and goliath Edison lamp holder, swivel lamp holder.
3rd (10 Feb-17 Feb.)	**Unit – I Wiring Accessories Unit – II Electrical Wires and Underground Cables**	**Socket outlets and plugs-** two pin, three-pin, multi pin sockets, two-pin and three-pin plug. Conductors: - (Definitions only) wire, cable, bus bar, stranded conductor, cable, armoured cable, flexible cable, solid conductor, PVC wires,
4th (18 Feb . –24 Feb.)	**Unit – II Electrical Wires and Underground Cables**	CTS wire, LC wire, FR (Fire retardant) wire, Size of wire according to BIS. Tools used for measurement of wire size Classification of cables (brief introduction) - low tension, high tension, and extra high-tension cables, solid, oil filled and gas filled type.
5th (25 Feb - 03 Mar.)	**Unit – II Electrical Wires and Underground Cables**	Cable insulation materials (brief introduction) - vulcanized rubber (VIR),polyvinyl chloride (PVC), cross linked polythene (XLPE), impregnated paper.
6th (05 Mar. – 11 Mar.)	**Unit– III Wiring Methods and wiring layout**	Factors determining the selection of wiring methods. Conduit wiring- Types of conduit, comparison between Metal and PVC conduit, types of conduit wiring (Surface/Concealed).
CLASS TEST -1		**2rd week of March 2026**
7th (12 Mar. –19 Mar.)	**Unit– III Wiring Methods and wiring layout**	Comparison of various wiring system. Design, working and drawing of following electrical circuit
8th (20 Mar . –28 Mar.)	**Unit– III Wiring Methods and wiring layout**	Simple light and fan circuits, Stair case wiring, Bedroom lighting circuit, Corridor lighting circuit.
9th (30 Mar. –.06 April)	**Unit– IV Residential Building Electrification**	Difference between residential and industrial load. Lighting and power circuits: Light and fan circuit, Power circuit
10th (07 April. – 16 April.)	**Unit– IV Residential Building**	Wiring and circuit Schematic diagrams: multiline and single line representation Load assessment: Selection of size of conductor, Selection of

	Electrification	rating of main switch and protective switch gear
CLASS TEST -2		**3rd week of April 2026**
11th (17 April. – 23 April.)	**Unit– IV Residential Building Electrification**	Design and drawing, estimation and costing of a residential installation having maximum 5 KW load; Sequence to be followed for preparing estimate. Calculation of length of wire and other materials, labour cost. Calculation of Material required for service connection
12th (24 April -30 April)	**Unit– V Illumination in Residential Installation**	Definition: Luminous flux, Luminous intensity, Lumen, Illumination or illuminance, Lux, Space-height ratio, utilization factor
13th (02 May-08 May.)	**Unit– V Illumination in Residential Installation**	depreciation factor, luminous efficiency Laws of Illumination- Inverse Square Law, Cosine Law.
House Test		**2ND week of May 2026**
14th (11 May-16 May.)	**Unit– V Illumination in Residential Installation**	Factors affecting the illumination, Luminous flux of different types of light sources, Lux level required for different places
15th (18 May-23 May)	**Revision & Doubt Clearance**	Revision & Doubt Clearance
16th (25 May-26 May)	**Revision & Doubt Clearance**	Revision & Doubt Clearance

NOTE: Lesson Plan is Tentative, subject to availability of Time, Students & Faculty.

Signature of HOD cum Subject Teacher
(Er. Amit Attri)

R.G.Government Polytechnic Banikhet,Distt. Chamba H.P-176303
Department of Electrical Engineering
Lesson Plan

Name of Faculty	Er Amit Attri
Discipline	Electrical Engineering
Semester	4th
Subject	Induction, Synchronous & Electric Machines (L-4 Hrs./Week)
Lesson Plan Duration	Jan-May 2026

Week	Topic	Theory
1st (27 Jan. – 02 Feb.)	**Unit – I Three Phase Induction Motor**	Working principle: production of rotating magnetic field, Synchronous speed, rotor speed and slip. Constructional details of 3 phase induction motors: Squirrel cage induction motor and Slip ring induction motor.
2nd (03 Feb. – 09 Feb.)	**Unit – I Three Phase Induction Motor**	Rotor quantities: frequency, induced emf, power factor at starting and running condition. Characteristics of torque versus slip (speed), Torques: starting, full load and maximum with relations among them. Induction motor as a generalized transformer with phasor diagram. Four quadrant operation, Power flow diagram.
3rd (10 Feb-17 Feb.)	**Unit – I Three Phase Induction Motor**	Starters: need and types; stator resistance, auto transformer, star delta, rotor resistance and soft starters. Speed control methods: stator voltage, pole changing, rotor resistance and VVVF. Motor selection for different applications as per the load torque-speed requirements. Maintenance of three phase induction motors.
4th (18 Feb . –24 Feb.)	**Unit – II Single phase induction motors**	Double field revolving theory, principle of making these motors self-start. Construction and working: Resistance start induction run, capacitor start induction run, capacitor start capacitor run, shaded pole, repulsion type, series motor, universal motor, hysteresis motor.
5th (25 Feb - 03 Mar.)	**Unit – II Single phase induction motors**	Torque-speed characteristics for all of the above motors. Motor selection for different applications as per the load torque-speed requirements. Maintenance of single phase induction motors
6th (05 Mar. – 11 Mar.)	**Unit– III Three phase Alternators**	Principle of working, moving and stationary armatures. Constructional details: parts and their functions, rotor constructions
CLASS TEST -1		**2nd week of March 2026**
7th (12 Mar. –19 Mar.)	**Unit– III Three phase Alternators**	Windings: Single and Double layer. E.M.F. equation of an Alternator with numerical by considering short pitch factor and distribution factor. Alternator loading: Factors affecting the terminal voltage of alternator;
8th (19 Mar . –28 Mar.)	**Unit– III Three phase Alternators**	Armature resistance and leakage reactance drops. Armature reaction at various power factors and synchronous impedance.

9th (30 Mar. –.06 April)	**Unit– III Three phase Alternators**	Voltage regulation: direct loading and synchronous impedance methods. Maintenance of alternators
10th (07 April. – 16 April.)	**Unit– IV Synchronous motors**	Principle of working /operation, significance of load angle. Torques: starting torque
CLASS TEST -2		**2nd week of April 2026**
11th (17 April. – 23 April.)	**Unit– IV Synchronous motors**	running torque, pull in torque, pull out torque. Synchronous motor on load with constant excitation (numerical), effect of excitation at constant load (numerical).
12th (24 April -30 April)	**Unit– IV Synchronous motors**	V- Curves and Inverted V-Curves. Hunting and Phase swinging. Methods of Starting of Synchronous Motor. Losses in synchronous motors and efficiency (no numerical). Applications areas
13th (02 May-08 May.)	**Unit– V Fractional horse power (FHP) Motors**	Construction and working: Synchronous Reluctance Motor, Switched Reluctance Motor, BLDC, Permanent Magnet Synchronous Motors,
House Test		**2nd week of May 2026**
14th (11 May-16 May.)	**Unit– V Fractional horse power (FHP) Motors**	stepper motors, AC and DC servomotors. Torque speed characteristics of above motors. Applications of above motors.
15th (18 May-23 May)	**Revision & Doubt Clearance**	Revision & Doubt Clearance
16th (25 May-26 May)	**Revision & Doubt Clearance**	Revision & Doubt Clearance

NOTE: Lesson Plan is Tentative, subject to availability of Time, Students & Faculty.

Signature of Teacher
(Er.Amit Attri)

Signature of HOD
(Er. Amit Attri)

R.G.Government Polytechnic Banikhet,Distt. Chamba H.P-176303

Department of Electrical Engineering

Lesson Plan

Name of Faculty	Er. Jyoti verma
Discipline	Electrical Engineering
Semester	4th
Subject	**B&MHPP**(L-4 Hrs./Week)
Lesson Plan Duration	Jan-May 2026

Week	Topic	Theory
1st (27 Jan. – 02 Feb.)	Unit – I Basics of Biomass-based Power Plants	Properties ofsolid fuel for biomass power plants: bagasse, wood chips, rice husk, municipal waste. Properties of liquid and gaseous fuel for biomass power plants: Jatropha, bio-diesel gobar gas
2nd (03 Feb. – 09 Feb.)	Unit – I Basics of Biomass-based Power Plants	Layout of a Bio-chemical based (e.g. biogas) power plant. Layout of a Thermo-chemical based (e.g. Municipal waste) power plant
3rd (10 Feb-17 Feb.)	Unit – I Basics of Biomass-based Power Plants Unit– II Biomass Gasification Power Plants	Layout of a Agro-chemical based (e.g. bio-diesel) power plant Selection of biomass power plants. The basic principle to convert Agriculture and forestry products and wood processing remains (includingrick husks, wood powder, branches, offcuts, corn straws, rice straws, wheat straws, cotton straws, fruit shells, coconut shells, palm shells, bagasse, corncobs) into combustible gas
4th (18 Feb . –24 Feb.)	Unit– II Biomass Gasification Power Plants	General Construction and working of a typical gasifier Power generating in gas engine: Strengths and limitations of Agriculture and forestry products gasifier
5th (25 Feb - 03 Mar.)	Unit– II Biomass Gasification Power Plants	Preventive maintenance steps different types of biomass gasifiers Revision & Doubt Clearance
6th (05 Mar. – 11 Mar.)	Unit– III Different Types of Gasifiers	Construction and working of the following types of gasifiers: Rice Husk Gasification Power Plant and their specifications Straw Gasification Power Plant and their specifications
CLASS TEST -1		2nd week of March 2026
7th (12 Mar. –19 Mar.)	Unit– III Different Types of Gasifiers	Bamboo Waste, Bamboo Chips Gasification Power Plant and their specifications Coconut shell, coconut peat, coconut husk, Gasification Power Plant and their specifications

8th (20 Mar . –28 Mar.)	**Unit– III Different Types of Gasifiers**	Bagasse/Sugar Cane Trash Gasification Power Plant and their specifications Gobar gas plant and its specifications
9th (30 Mar. –.06 April)	**Unit– III Different Types of Gasifiers System**	Breakdown maintenance of biomass power plant at the module level. Revision & Doubt Clearance
10th (07 April. – 16 April.)	**Unit– IV Micro-hydro Power Plants**	Locations of micro-hydro power plant Energy conversion process of hydro power plant.
CLASS TEST -2		**2nd week of April 2026**
11th (17 April. – 23 April.)	**Unit– IV Micro-hydro Power Plants**	Classification of hydro power plant: High, medium and low head. General Layouts of typical micro-hydro power plant.
12th (24 April -30 April)	**Unit– IV Micro-hydro Power Plants** **Unit– V Different types of Micro-hydro power plants**	Strengths and limitations of micro-hydro power plants Construction and working of High head – Pelton turbine and their specifications
13th (02 May-08 May.)	**Unit– V Different types of Micro-hydro power plants**	Construction and working of Medium head – Francis turbine and their specifications Construction and working of Low head – Kaplan turbine and their specifications
House Test		**2ND week of May 2026**
14th (11 May-16 May.)	**Unit– V Different types of Micro-hydro power plants** **Revision & Doubt Clearance**	Preventive and breakdown maintenance of micro-hydro power plants Safe Practices for micro-hydro power plants. Revision & Doubt Clearance
15th (18 May-23 May)	**Revision & Doubt Clearance**	Revision & Doubt Clearance
16th (25 May-26 May)	**Revision & Doubt Clearance**	Revision & Doubt Clearance

NOTE: Lesson Plan is Tentative, subject to availability of Time, Students & Faculty.

Signature of Teacher
(Er.Jyoti verma)

Signature of HOD
(Er. Amit Attri)

R.G.Government Polytechnic Banikhet,Distt. Chamba H.P-176303
Department of Electrical Engineering
Lesson Plan

Name of Faculty	Er. Jyoti verma
Discipline	Electrical Engineering
Semester	4th
Subject	**EPTD** (L-4 Hrs./Week)
Lesson Plan Duration	Jan-May 2026

Week	Topic	Theory
1st (27 Jan. – 02 Feb.)	**Unit – I Basics of Transmission and Distribution**	Single line diagrams with components of the electric supply transmission and distribution systems. Classification of transmission lines: Primary and secondary transmission; standard voltage level used in India. Classification of transmission lines: based on type of voltage, voltage level, length and others
2nd (03 Feb. – 09 Feb.)	**Unit – I Basics of Transmission and Distribution**	Characteristics of high voltage for power transmission. Method of construction of electric supply transmission system – 110 kV, 220 kV, 400 kV. Method of construction of electric supply distribution systems – 220 V, 400V, 11 kV, 33 kV
3rd (10 Feb-17 Feb.)	**Unit – I Basics of Transmission and Distribution** **Unit – II Transmission Line Parameters and Performance**	Method of construction of electric supply distribution systems – 220 V, 400V, 11 kV, 33 kV Line Parameters: Concepts of R, L and C of line parameters
4th (18 Feb . –24 Feb.)	**Unit – II Transmission Line Parameters and Performance**	types of lines. Performance of short line: Efficiency, regulation and its derivation, effect of power factor, vector diagram for different power factor.
5th (25 Feb - 03 Mar.)	**Unit – II Transmission Line Parameters and Performance**	Performance of medium line representation, nominal 'T', nominal 'π' and end condenser methods. Transposition of conductors and its necessity. Skin effect and proximity effect
6th (05 Mar. – 11 Mar.)	**Unit– III Extra High Voltage Transmission**	Extra High Voltage AC (EHVAC) transmission line: Necessity, high voltage substation components such as transformers and other switchgears, advantages, limitations and applications and lines in India. Ferranti and Corona effect.
CLASS TEST -1		**2nd week of March 2026**
7th (12 Mar. –19 Mar.)	**Unit– III Extra High Voltage Transmission**	High Voltage DC (HVDC) Transmission Line: Necessity, components, advantages, Limitations and applications. Layout of mono-polar, bi-Polar and homo-polar transmission lines; Lines in India.
8th (20 Mar . –28 Mar.)	**Unit– III Extra High Voltage Transmission**	Features of EHVAC and HVDC transmission line. Flexible AC Transmission line: Features, d types of FACTS controller. New trends in wireless transmission of electrical power.

9th (30 Mar. –.06 April)	**Unit-- IV A.C Distribution System**	AC distribution Components classification, requirements of an ideal distribution system, primary and secondary distribution system. Feeder and distributor, factors to be considered in design of feeder and distributor
10th (07 April. – 16 April.)	**Unit– IV A.C Distribution System**	Types of different distribution schemes: radial, ring, and grid, layout, advantages, disadvantages and applications. Voltage drop, sending end and receiving end voltage
CLASS TEST -2		**2nd week of April 2026**
11th (17 April. – 23 April.)	**Unit– IV A.C Distribution System**	Distribution Sub-Station: Classification, site selection, advantages, disadvantages and applications. Single Line diagram (layout) of 33/11KV Sub-Station, 11KV/400V sub-station, Symbols and functions of their components.
12th (24 April -30 April)	**Unit– V Components of Transmission and Distribution Line**	Overhead Conductors: Properties of material, types of conductor with trade names, significance of sag. Line supports: Requirements, types of line structures and their specifications, methods of erection. Line Insulators
13th (02 May-08 May.)	**Unit– V Components of Transmission and Distribution Line**	Properties of insulating material, selection of material, types of insulators and their applications, 26 causes of insulator failure, derivation of equation of string efficiency for string of three suspension insulator, methods of improving string efficiency.
House Test		**2ND week of May 2026**
14th (11 May-16 May.)	**Unit– V Components of Transmission and Distribution Line** **Revision & Doubt Clearance**	Underground Cables: Requirements, classification, construction, comparison with overhead lines, cable laying and cable jointing. Revision & Doubt Clearance
15th (18 May-23 May)	**Revision & Doubt Clearance**	Revision & Doubt Clearance
16th (25 May-26 May)	**Revision & Doubt Clearance**	Revision & Doubt Clearance

NOTE: Lesson Plan is Tentative, subject to availability of Time, Students & Faculty.

Signature of Teacher
(Er.Jyoti verma)

Signature of HOD
(Er. Amit Attri)

R.G.Government Polytechnic Banikhet,Distt. Chamba H.P-176303

Department of Electrical Engineering

Lesson Plan

Name of Faculty	Er. BS Thakur
Discipline	Electrical Engineering
Semester	4th
Subject	FPE (L-4 Hrs./Week)
Lesson Plan Duration	Jan-May 2026

Week	Topic	Theory
1st (27 Jan. –02 Feb.)	Unit – I Power Electronic Devices	Power electronic devices Power transistor: construction, working principle, V-I characteristics and uses
2nd (03Feb. – 10 Feb.)	Unit – I Power Electronic Devices	IGBT: Construction, working principle, V-I characteristics and uses. Concept of single electron transistor (SET) - aspects of Nano-technology.
3rd (11 Feb-18 Feb.)	Unit – II Thyristor Family Devices	SCR: construction, two transistor analogy, types, working and characteristics. SCR mounting and cooling. Types of Thyristors:
4th (19 Feb . –25 Feb.)	Unit – II Thyristor Family Devices	SCR, LASCR, SCS, GTO, UJT, PUT, DIAC and TRIAC
5th (26 Feb - 05 Mar.)	Unit – II Thyristor Family Devices	Thyristor family devices: symbol, construction, operating principle and V-I characteristics. Protection circuits: over-voltage, over-current, Snubber, Crowbar.
6th (06 Mar. – 13 Mar.)	Unit– III Turn-on and Turn-off Methods of Thyristors	SCR Turn-On methods: High Voltage thermal triggering, Illumination triggering, dv/dt triggering, Gate triggering. Gate trigger circuits – Resistance and Resistance-Capacitance circuits. SCR triggering using UJT, PUT: Relaxation Oscillator and Synchronized UJT circuit.
CLASS TEST -1		3rd week of March 2026
7th (14 Mar. –21 Mar.)	Unit– III Turn-on and Turn-off Methods of Thyristors	Pulse transformer and opto-coupler based triggering. SCR Turn-Off methods: Class A- Series resonant commutation circuit, Class B-Shunt Resonant commutation circuit, Class C-Complimentary Symmetry commutation circuit
8th (22 Mar –28 Mar.)	Unit– III Turn-on and Turn-off Methods of Thyristors	Class D –Auxiliary commutation, Class E- External pulse commutation, Class F- Line or natural commutation.
9th (29 Mar. –.05 April)	Unit– IV Phase Controlled Rectifiers	Phase control: firing angle, conduction angle. Single phase half controlled, full controlled and midpoint controlled rectifier with R, RL load:
10th (06 April. – 16 April.)	Unit– IV Phase Controlled Rectifiers	Circuit diagram, working, input- output waveforms, equations for DC output and effect of freewheeling diode.
CLASS TEST -2		3RD week of April 2026
11th (17 April. – 24 April.)	Unit– IV Phase Controlled Rectifiers	Different configurations of bridge controlled rectifiers: Full bridge, half bridge with common anode, common cathode, SCRs in one arm and diodes in another arm.

12th (25 April -02 May)	**Unit– V Industrial Control Circuits**	Applications: Burglar's alarm system, Battery charger using SCR, Emergency light system, Temperature controller using SCR
13th (03 May-09 May.)	**Unit– V Industrial Control Circuits**	Illumination control / fan speed control TRIAC, SMPS. UPS: Offline and Online
House Test		**2ND week of May 2026**
14th (10 May-19 May.)	**Unit– V Industrial Control Circuits** **Revision & Doubt Clearance**	SCR based AC and DC circuit breakers. Revision & Doubt Clearance
15th (20 May-26 May)	**Revision & Doubt Clearance**	Revision & Doubt Clearance
16th (27 May-29 May)	**Revision & Doubt Clearance**	Revision & Doubt Clearance

NOTE: Lesson Plan is Tentative, subject to availability of Time, Students & Faculty.

Signature of Teacher
(Er.BS Thakur)

Signature of HOD
(Er. Amit Attri)