

Name of Faculty	Er. Sandeep Bhardwaj
Discipline	Electrical Engineering
Semester	4th
Subject	EPTD(L-4 Hrs./Week)
Lesson Plan Duration	Jan-May 2025


Week	Topic	Theory
1 st (27 Jan. - 03 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
2 nd (04 Feb. - 10 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
3 rd (11 Feb - 18 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
4 th (19 Feb. - 28 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.
5 th (01 Mar - 07 Mar.)	Unit - II Transmission Line Parameters and Performance	Performance of medium line representation, nominal π , nominal T and end condenser methods. Transposition of conductors and its necessity. Skin effect and proximity effect
6 th (08 Mar. - 15 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		
7 th (16 Mar. - 24 Mar.)	Unit- III Extra High Voltage Transmission	3 rd week of March 2025 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.
8 th (25 Mar. - 31 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.

9 th (1 April – 11 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 Types of different distribution schemes: radial, ring, and grid, layout, advantages, disadvantages and applications. Voltage drop, sending end and receiving end voltage
10 th (12 April. – 18 April.)	Unit– IV A.C Distribution System	
CLASS TEST -2		
11 th (19 April. – 26 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.
12 th (27 April - 05 May)	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
13 th (06 May - 11 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		
14 th (12 May - 18 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
15 th (19 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. Sandeep Bhardwaj




Signature of HOD
Er. Aman Anand

Name of Faculty	Er. Devender Kumar
Discipline	Electrical Engineering
Semester	4th
Subject	ELECTRICAL POWER TRANSMISSION AND DISTRIBUTION (P-2)
Lesson Plan Duration	Hrs./Week Jan. – May 2025

Week	Practical No.	Practical Name
1 st	Practical-I	Prepare a report based on transmission line network in Himachal
2 nd	Practical-II	Collect the information on components of transmission line
3 rd	Practical-III	Evaluate transmission line performance parameters of a given line.
4 th	Practical-IV	Library/ Internet survey of electrical high voltage line and HVDC lines
5 th	Practical-V	Visit to 33/11 KV and 11KV/400V Distribution Substation and write a report
6 th	Activity 1	Prepare a model showing
7 th	Activity 2	Collect different samples of Overhead Conductors, Underground Cables, Line supports and Line Insulators.
8 th	Activity 3	Prepare a power point presentation
9 th	Activity 4	Collect information on: i. A.C Distribution System adjacent to your institute. ii. Draw a layout diagram of 11KV/400 V substation in your campus/ adjacent substation.
10 th	Activity 5	Submission of Model
11 th	Activity 6	Submission of samples of overhead conductors etc
12 th	Activity 7	Submission of collected information
13 th		Revision and evaluation
14 th		Revision and evaluation

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

Prepared by

(Er. Devender Kumar)


Signature of HOD
(Er. Aman Anand)

Government Polytechnic Kullu, Distt. Kullu H.P.
Department of Electrical Engineering


Lesson Plan

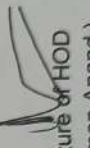
Name of Faculty	Er Naval Kishor
Discipline	Electrical Engineering
Semester	4 th
Subject	Induction, Synchronous & Electric Machines Lab (P-2 Hrs./Week)
Lesson Plan Duration	Jan-May 2024

Week	Practical NO.	Practical Name
1 st (27 Jan. -02 Feb.)	1	Identify the different parts (along with function and materials) for the given single phase and three phase induction motor.
2 nd (03Feb. - 10 Feb.)	2	Connect and run the three phase squirrel cage induction motors (in both directions) using the DOL, star-delta, auto-transformer starters (any two)
3 rd (11 Feb-18 Feb.)	3	Conduct the No-load and Blocked-rotor tests on given 3-f squirrel cage induction motor and determine the equivalent circuit parameters
4 th (19 Feb. -25 Feb.)	4	Measure the open circuit voltage ratio of the three phase slip ring induction motor.
5 th (26 Feb - 05 Mar.)	5	Perform the direct loading test on the given three phase alternator and determine the regulation and efficiency.
6 th (06 Mar. - 13 Mar.)	6	Determine the regulation and efficiency of the given three phase alternator from OC and SC tests (Synchronous impedance method)
CLASS TEST -1		
7 th (14 Mar. -21 Mar.)	7	3RD week of March 2025 Conduct the test on load or no load to plot the 'V' curves and inverted 'V' curves (at no-load) of 3-f synchronous motor.
8 th (22 Mar -28 Mar.)	8	Dismantling and reassembling of single phase motors used for ceiling fans, universal motor for mixer.
9 th	9	

(29 Mar. - 05 April)			Control the speed and reverse the direction of stepper motor
10 th (06 April. - 16 April.)	10		Control the speed and reverse the direction of the AC servo motor
CLASS TEST -2			
11 th (17 April. - 24 April.)	11		Control the speed and reverse the direction of the DC servo motor
12 th (25 April -02 May)	12		Conduct the No-load and Blocked-rotor tests on given 3-f squirrel cage induction motor and plot the Circle diagram
13 th (03 May-09 May.)	13		Perform the direct load test on the three phase squirrel cage induction motor and plot the i) efficiency versus output, ii) power factor versus output, iii) power factor versus motor current and iv) torque-slip/speed characteristics.
House Test			
14 th (10 May-19 May.)	14		Conduct the direct load test to determine the efficiency and speed regulation for different loads on the given single phase induction motor; plot the efficiency and speed regulation curves with respect to the output power
15 th (20 May-26 May)	Revision & Doubt Clearance		Revision & Doubt Clearance
16 th (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. Naval Kishor)


Signature of HOD
(Er. Aman Anand)

Government Polytechnic Kullu, Distt. Kullu H.P.
Department of Electrical Engineering
Lesson Plan

Name of Faculty	Er Naval Kishor
Discipline	Electrical Engineering
Semester	4th
Subject	Induction, Synchronous & Electric Machines(L-4 Hrs./Week)
Lesson Plan Duration	Jan-May 2024

Week	Topic	Theory
1 st (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.
2 nd (03Feb. - 10 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.
3 rd (11 Feb-18 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.
4 th (19 Feb. -25 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.
5 th (26 Feb - 05 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
6 th (06 Mar. - 13 Mar.)	Unit– III Three phase Alternators	Principle of working, moving and stationary armatures. Constructional details: parts and their functions, rotor constructions
CLASS TEST -1		
7 th (14 Mar. -21 Mar.)	Unit– III Three phase Alternators	3RD week of March 2025 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.
8 th (22 Mar -28 Mar.)	Unit– III Three phase Alternators	Armature resistance and leakage reactance drops. Armature reaction at various power factors and synchronous impedance.

9 th (29 Mar. - 05 April)	Unit- III Three phase Alternators	Voltage regulation: direct loading and synchronous impedance methods. Maintenance of alternators Principle of working /operation, significance of load angle. Torques: starting torque
10 th (06 April. - 16 April.)	Unit- IV Synchronous motors	
CLASS TEST -2		
11 th (17 April. - 24 April.)	Unit- IV Synchronous motors	3 RD week of April 2025 running torque, pull in torque, pull out torque. Synchronous motor on load with constant excitation (numerical), effect of excitation at constant load (numerical).
12 th (25 April -02 May)	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
13 th (03 May-09 May.)	Unit- V Fractional horse power (FHP) Motors	Construction and working: Synchronous Reluctance Motor, Switched Reluctance Motor, BLDC, Permanent Magnet Synchronous Motors,
House Test		
14 th (10 May-19 May.)	Unit- V Fractional horse power (FHP) Motors	2 nd week of May 2025 stepper motors, AC and DC servomotors. Torque speed characteristics of above motors. Applications of above motors.
15 th (20 May-26 May)	Revision & Doubt Clearance	Revision & Doubt Clearance
16 th (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. Naval Kishor)

Signature of HOD
(Er. Aman Anand)

Name of Faculty	Er. Shikha
Discipline	Electrical Engineering
Semester	4th
Subject	Fundamentals Of Power Electronics (L-3, Ds-1, Hrs./Week)
Lesson Plan Duration	Jan. – May 2025


Week	Chapter	Topic to be covered
1 st (27Jan. – 01Feb.)	Unit – I Power Electronic Devices	Power electronic devices Power transistor: construction, working principle, V-I characteristics and uses
2 nd (02Feb. – 08Feb.)	Unit – I Power Electronic Devices	IGBT: Construction, working principle, V-I characteristics and uses.
3 rd (09Feb. – 15Feb.)	Unit – I Power Electronic Devices	Concept of single electron transistor (SET) - aspects of Nano-technology.
4 th (16Feb. – 22Feb.)	Unit – II Thyristor Family Devices	SCR: construction, two transistor analogy, types, working and characteristics. SCR mounting and cooling
5 th (23Feb. – 01Mar.)	Unit – II Thyristor Family Devices	Types of Thyristors: SCR, LASCR, SCS, GTO, UJT, PUT, DIAC and TRIAC Thyristor family devices: symbol, construction, operating principle and V-I characteristics
6 th (02 Mar. – 08Mar.)	Unit – II Thyristor Family Devices	Protection circuits: over-voltage, over-current, Snubber, Crowbar.
7 th (09Mar. – 15Mar.)	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
In Third Week of March 2025.		
8 th (23Mar. – 29Mar.)	Unit – III Turn-on and Turn-off Methods of Thyristors	SCR triggering using UJT, PUT; Relaxation Oscillator and Synchronized UJT circuit. Pulse transformer and opto-coupler based triggering.
9 th (01 Apr. – 05 Apr.)	Unit – III Turn-on and Turn-off Methods of Thyristors	SCR Turn-Off methods: Class A- Series resonant commutation circuit, Class B- Shunt Resonant commutation circuit, Class C-Complimentary Symmetry commutation circuit, Class D –Auxiliary commutation, Class E- External pulse commutation, Class F- Line or natural commutation.
10 th (06Apr. – 12Apr.)	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: Circuit diagram, working, input- output waveforms
11 th (03Apr. – 19Apr.)	Unit – IV Phase Controlled Rectifiers	Equations for DC output and effect of freewheeling diode. Different configurations of bridge controlled rectifiers: Full bridge, half bridge with common anode, common cathode,
In Third Week of April 2025.		
Class Test – 2		
12 th (27Apr. – 03May)	Unit – IV Phase Controlled Rectifiers	Equations for DC output and effect of freewheeling diode. Different configurations of bridge controlled rectifiers: Full bridge, half bridge with common anode, common cathode,

Shikha

13 th (29Apr. - 05May.)	Unit- IV Phase Controlled Rectifiers	SCRs in one arm and diodes in another arm.
House Test		
14 th (11May. - 17 May.)	Unit- V Industrial Control Circuits	In Second Week of May 2025. Applications: Burglar's alarm system, Battery charger using SCR, Emergency light system, Temperature controller using SCR and; Illumination control / fan speed control TRIAC, SMPS.
15 th (18May- 29May)	Unit- V Industrial Control Circuits	UPS: Offline and Online . SCR based AC and DC circuit breakers.

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

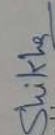
Prepared by
(Er. Shikha)


Signature of HOD
(Er. Aman Anand)

Name of Faculty	Er. Shikha
Discipline	Electrical Engineering
Semester	4 th
Subject	Fundamentals Of Power Electronics Laboratory (P-2 Hrs./Week)
Lesson Plan Duration	Jan. – May 2025

Week	Practical No.	Practical Name
1 st	Practical-I	Test the proper functioning of power transistor.
2 nd	Practical-II	Test the proper functioning of IGBT.
3 rd	Practical-III	Test the proper functioning of DIAC to determine the break over voltage.
4 th	Practical-IV	Determine the latching current and holding current using V-I characteristics of SCR.
5 th	Practical-V	Test the variation of R, C in R and RC triggering circuits on firing angle of SCR
6 th	Practical-VI	Test the effect of variation of R, C in UJT triggering technique.
7 th	Practical-VII	Perform the operation of Class – A, B, C, turn off circuits.
8 th	Practical-VIII	Perform the operation of Class –D, E, F turn off circuits.
9 th	Practical-IX	Use CRO to observe the output waveform of half wave controlled rectifier with resistive load and determine the load voltage.
10 th	Practical-X	Draw the output waveform of Full wave controlled rectifier with R load, RL load, freewheeling diode and determine the load voltage.
11 th	Practical-XI	Determine the firing angle using DIAC and TRIAC phase controlled circuit on output power under different loads such as lamp, motor or heater
12 th	Practical-XII	Test the performance of given SMPS, UPS
13 th		Revision and evaluation
14 th		Revision and evaluation

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

Prepared by

 (Er. Shikha)

Signature of HOD

 (Er. Aman Anand)

Government Polytechnic Kullu, Distt. Kullu H.P

Department of Electrical Engineering

Lesson Plan

Name of Faculty	Er Naval Kishor
Discipline	Electrical Engineering
Semester	4th
Subject	Biomass and micro hydro power Plants (L-4 Hrs./Week)
Lesson Plan Duration	Jan-May 2024

Week	Topic	Theory
1 st (27 Jan. -02 Feb.)	Unit- I Basics of Biomass-based Power Plants	Properties of solid 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 Layout of a Bio-chemical based (e.g. biogas) power plant:
2 nd (03Feb. - 10 Feb.)	Unit- I Basics of Biomass-based Power Plants	Layout of a Thermo-chemical based (e.g. Municipal waste) power plant Layout of an Agro-chemical based (e.g. bio-diesel) power plant Selection of biomass power plants.
3 rd (11 Feb.-18 Feb.)	Unit- II Biomass Gasification Power Plants	The basic principle to convert Agriculture and forestry products and wood processing remains (including rice husks, wood powder, branches, offcuts, corn straws, rice straws, wheat straws, cotton straws, fruit shells, coconut shells, palm shells, bagasse, corncobs) into combustible gas
4 th (19 Feb . -25 Feb.)	Unit- II Biomass Gasification Power Plants	General Construction and working of a typical gasifier Power generating in gas engine
5 th (26 Feb - 05 Mar.)	Unit- II Biomass Gasification Power Plants	Strengths and limitations of Agriculture and forestry products gasifier Preventive maintenance steps different types of biomass gasifiers
6 th (06 Mar. - 13 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 3 RD week of March 2025		
7 th (14 Mar. -21 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 Bagasse/Sugar Cane Trash Gasification Power Plant and their specifications
8 th (22 Mar -28 Mar.)	Unit- III Different Types of Gasifiers	Gobar gas plant and its specifications Breakdown maintenance of biomass power plant at the module level.
9 th (29 Mar. -.05 April)	Unit- IV Micro-hydro Power Plants	Locations of micro-hydro power plant Energy conversion process of hydro power plant.

10 th (06 April. – 16 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.
CLASS TEST -2		
11 th (17 April. – 24 April.)	Unit- IV Micro-hydro Power Plants	3 RD week of April 2025 Strengths and limitations of micro-hydro power plants
12 th (25 April -02 May)	Unit- V Different types of Micro-hydro power plants	Construction and working of High head – Pelton turbine and their specifications
13 th (03 May-09 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		
14 th (10 May-19 May.)	Unit- V Different types of Micro-hydro power plants	2 nd week of May 2025 Preventive and breakdown maintenance of micro-hydro power plants Safe Practices for micro-hydro power plants
15 th (20 May-26 May)	Revision & Doubt Clearance	Revision & Doubt Clearance
16 th (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. Naval Kishor)

Signature of HOD
(Er. Aman Anand)

Government Polytechnic Kullu, Distt. Kullu H.P.

Department of Electrical Engineering

Lesson Plan

Name of Faculty	Er Naval Kishor
Discipline	Electrical Engineering
Semester	4th
Subject	Biomass and micro hydro power Plants (P-2 Hrs./Week)
Lesson Plan Duration	Jan-May 2024

Week	Practical NO.	Practical Name
1 st (27 Jan. -02 Feb.)	1	Identify different components of a typical Biomass power plant.
2 nd (03Feb. - 10 Feb.)	2	Identify different biomass resources and evaluate their energy potential.
3 rd (11 Feb-18 Feb.)	3	Assemble the Biogas power plant
4 th (19 Feb. -25 Feb.)	4	Dismantle the Biogas power plant
5 th (26 Feb - 05 Mar.)	5	Identify the components of the high head micro hydro power plant
6 th (06 Mar. - 13 Mar.)	6	Identify the components of the medium head micro hydro power plant
CLASS TEST -1		3 RD week of March 2025
7 th (14 Mar. -21 Mar.)	7	
8 th (22 Mar -28 Mar.)	8	Identify the components of the low head micro hydro power plant
9 th (29 Mar. -05 April)	9	Assemble a high head micro hydro power plant
10 th (06 April. - 16 April.)	10	Assemble a medium head micro hydro power plant

CLASS TEST - 2		3 RD week of April 2025
11 th (17 April. - 24 April.)	11	Assemble a low head micro hydro power plant
12 th (25 April -02 May)	12	Undertake preventive maintenance of the high head micro hydro power plant
13 th (03 May-09 May.)	13	Undertake preventive maintenance of the medium head micro hydro power plant
House Test		2 nd week of May 2025
14 th (10 May-19 May.)	14	Conduct the direct load test to determine the efficiency and speed regulation for different loads on the given single phase induction motor; plot the efficiency and speed regulation curves with respect to the output power
15 th (20 May-26 May)	Revision & Doubt Clearance	Revision & Doubt Clearance
16 th (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. Naval Kishor)

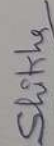


Signature of HOD
(Er. Aman Anand)

Name of Faculty	Er. Shikha
Discipline	Electrical Engineering
Semester	4 th sem
Subject	SCA
Lesson Plan Duration	Jan- May 2025

S.No.	Description of Activity	Week	Topics
1	Group Discussion	2 nd & 3 rd week of February	Technology impacting job opportunities
2	Technical Quiz	4 th week of February & 1 st week of March	EMI, EDC, Electrical Machines
3	Expert lecture	2 nd & 3 rd week of March	Women Empowerment
4	Yoga activity	4 th week of March & 1 st week of April	Yoga activity
5	Campus beautification	2 nd & 3 rd week of April, 1st Week May	Cleanliness Drive for all Electrical Labs
6	Essay Writing	2 nd , 3 rd , 4 th week of May	AI driven decision making – pros & cons

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

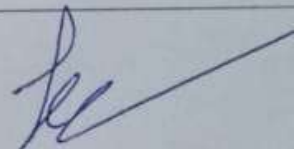

Signature of Teacher
(Er.Shikha)


Signature of HOD
(Er. Aman Anand)

Government Polytechnic Kullu, Distt. Kullu H.P.
Department of Electrical Engineering
Lesson Plan

Name of Faculty	Lekh Raj Sharma
Discipline	Civil, Electrical & Automobile Engg. 4 th Semester
Semester	4 th
Subject	Essence of Indian Knowledge and Tradition
Lesson Plan Duration	Jan. – May 2025

Week	Chapter	Topic to be covered
1 st (27Jan. – 01Feb.)	Unit – I Unit 1: Indian Knowledge System (IKS):	-----25% Marks Introduction and Function of Indian Knowledge System (IKS).• The Basic Structure of Indian Knowledge System (IKS) (only Introduction)• 1. The 4 Vedas, Namely (Rigveda), (Yajurveda), सामवेद (Samaveda), अथर्ववेद (Atharvaveda) . 2. The 4 UpVedas, namely (Ayurveda (healthcare)), (Dhanurveda (archery)), गंधर्ववेद (Gandharva-veda (dance, music etc.)) and स्थापत्यवेद (Sthapatyaveda (architecture)).
2 nd (02Feb. – 08Feb.)	Unit 1: Indian Knowledge System (IKS):	Signals: DC/AC, voltage/current, periodic/non- periodic signals, average, rms, peak values, different types of signal waveforms.
3 rd (09Feb. – 15Feb.)	Unit 1: Indian Knowledge System (IKS):	3. The 6 Vedagangs, namely Shiksha (), Kalpa (), Vykarana (), Chhandas), Nirukta (), and Jyotisha (ज्योतिष).
4 th (16Feb. – 22Feb.)	Unit 1: Indian Knowledge System (IKS):	4. Itihasa (इतिहास) (Ramayana and Mahabharata महाभारि) and Purana (Vishnupurana तवष्णुपुराण, Bhagavata Purana (भागवि) etc.)
5 th (23Feb. – 01Mar.)	Unit 1: Indian Knowledge System (IKS):	5. Dharmashastra धर्मशास्त्र (Manusmriti मनुस्मृति, Yajnavalkya-smriti यज्ञवल्क्यस्मृति etc.). 6. Darshan दशवर्ण (िथा). 7. Nyaya (Logic िर्व शास्त्र) and Epistemology).
6 th (02 Mar. – 08Mar.)	Unit 2: Modern science ----	Modern science: Introduction, Characteristics, importance and Examp•
7 th (09Mar. – 15Mar.)	Unit 2: Modern science ----	Role of IKS in modern science•
Class Test – 1		In Third Week of March 2025.
8 th (23Mar. – 29Mar.)	Unit 3: Traditional Knowledge -	Traditional knowledge: Definition, nature, characteristics, scope and importance Indigenous Knowledge (IK): characteristics•
9 th (01Apr. – 05Apr.)	Unit 3: Traditional Knowledge -	Traditional knowledge vis-a-vis Indigenous knowledge Traditional knowledge Vs western knowledge•
10 th (06Apr. – 12Apr.)	Unit 3: Traditional Knowledge -	The need for protecting traditional knowledge.
11 th (03Apr. – 19Apr.)	Unit 4: Yoga and Holistic Health car	Yoga: Meaning and Importance of Yoga Yoga and physical health, Yoga and psychological health, Yoga and intellectual health, Yoga and• spiritual health, Yoga and social approach.
Class Test – 2		In Third Week of April 2025.



12 th (27Apr. – 03May)	Unit 4: Yoga and Holistic Health car	Introduction to Ashtanga Yoga, Yogic Kriyas (Shat Karma) Pranayama and its types; Active lifestyle and stress management through Yoga• Physical Fitness, Health and wellness: Meaning and Importance of Wellness,• Components of Wellness, Health and physical Fitness•
13 th (29Apr. – 05May.)	Unit 4: Yoga and Holistic Health car	Traditional sports & Regional Games for promoting wellness: Leadership through Physical Activity and Sports; Introduction to First Aid.●
House Test		In Second Week of May 2025.
14 th (11May. – 17 May.)	Unit 5: Himachal Pradesh: A Basic Information	History, Culture, Heritage/ Tradition, Customs & Manners, Regional Knowledge, Geographical Features, Constitutional History●
15 th (18May- 29May)	Unit 5: Himachal Pradesh: A Basic Information	Tourism Place & Scope Festivals and Fair●

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

Prepared by
(Lekh Raj Sharma)

Signature of HOD AS&H
(Mr. LR Sharma)