Electronics & Communication Engg. Department 6th Semester
Computer Networking and Data Communication Lesson plan for the Session Jan-June 2025

Lecture NO	Topic Name
	Unit-1 (15 hrs) 12 marks
1	Concept of analog and digital signals. Bandwidth
2	Network architecture. Basics of OSI
3	Explanation of OSI reference Model
4	TCP/IP reference models
5	Explanation of each layer
6	Types of Computer Networks – Personal Area Network, Local Area Network
7	Metropolitan Area Network, Wide Area Network, Internetwork
8	Computer Network Topologies – Point to Point, Bus topology
9	Star topology, tree topology
10	mesh topology,
11	ring topology,
12	Daisy Chain, Hybrid Topology
13	Computer Network Model
14	Transmission media,Wired
15	wireless connectivity
	Unit-2 (15 hrs) 12 marks
16	Digital Transmission – Digital to Digital Conversion
17	Line Coding
18	Unipolar Encoding
19	Polar Encoding
20	Bipolar Encoding
21	block Coding
22	Analog Transmission - Analog-to-Digital Conversion
23	Digital to analog Conversion
24	Analog to Analog Conversion
25	Sampling
26	Quantization
27	Types of Quantization
28	Encoding
29	Transmission Modes Wired
30	wireless Modes
	Unit-3 (15 Hrs) 12 Marks
31	Wireless Communication: Radio, Microwave Transmission
32	Infra-red, Light Transmission
33	Wireless Communication Standards
34	Characterization of the Wireless Channel
35	Receiver Techniques for Fading Dispersive Channels
36	Mobility Management in Wireless Networks
37	Mobile IP
38	Mobile Ad hoc Networks
39	Ad hoc Routing Protocols
40	Performance Analysis of DCSR
41	Performance Analysis of CBRP
42	Cluster Techniques
43	Incremental Cluster Maintenance Scheme
44	Space time Coding
45	for Wire- less Communication
	Unit-4 (18 Hrs) 12 Marks
46	Types of Network Routing
47	Network Layer Protocols
48	FDM
49	TDM
50	CDMA

51	Circuit switching
52	Packet switching
53	Frame relay
54	ATM switching
55	ISDN
56	Local area network protocols
57	Fibre optic networks. Satellite networks
58	Data link layer design issues: its functions and protocols
59	Internet protocol
60	Routing algorithms
61	Congestion control algorithms
62	IP addressing schemes
63	Internetworking and sub-netting
64	Error Detection and Correction - Types of Errors, Detection, Correction
65	Switching and Data link layer, data link control and protocols
	Unit-5 (17 Hrs) 12 Marks
66	Transmission Media & Transmission Control protocol
67	Magnetic Media
68	Twisted Pair cable
69	Coaxial Cable, Power Lines
70	Fiber Optics. Protocol– Features
71	Header, Addressing
72	Connection Management
73	Error Control
74	Flow Control
75	Multiplexing
76	Congestion control algorithms
77	Timer Management
78	Crash Recover

Signature of Teacher

HOD/ECE

Electronics & Communication Engg. Department 6th Semester

Entrepreneurship and Start-ups Lesson plan For the session Jan-Jun 2025

Lecture No.	Topic Name
	Unit 1 : Introduction to Entreneurship and start-Ups (12 Hrs.) 09 Marks
1	Definitions
2	Traits of entrepreneur
3	Intrapreneurship
4	Intrapreneurship
5	Motivation
6	Motivation
7	Types of Business structures
8	Types of Business structures
9	Types of Business structures
10	Similarities / differences between entrepreneurs and managers
11	Similarities / differences between entrepreneurs and managers
12	Similarities / differences between entrepreneurs and managers
	Unit 2 : Business (10 Hrs.) 09 Marks
13	Business Idea and their implementation
14	Business Idea and their implementation
15	Discovering ideas and visualizing the business
16	Discovering ideas and visualizing the business
17	Discovering ideas and visualizing the business
18	Activity map
19	Activity map
20	Activity map
21	Business Plan
22	Business Plan
	Unit 3: Idea to Start -up (12 Hrs.) 12 Marks
23	Market Analysis- Identifying the target market
24	Market Analysis- Identifying the target market
25	Market Analysis- Identifying the target market
26	Competition evaluation and Strategy Development
27	Competition evaluation and Strategy Development
28	Competition evaluation and Strategy Development
29	Marketing and accounting
30	Marketing and accounting
31	Marketing and accounting
32	Risk analysis
33	Risk analysis
34	Risk analysis

	Unit 4 : Management (12hrs) 10 Marks
35	Company's Organization Structure
36	Company's Organization Structure
37	Company's Organization Structure
38	Company's Organization Structure
39	Recruitment and management of talent
40	Recruitment and management of talent
41	Recruitment and management of talent
42	Recruitment and management of talent
43	Financial organization and management
44	Financial organization and management
45	Financial organization and management
46	Financial organization and management
	Unit 5 : Financing and Protection of Ideas (10 hrs) 12 Marks
47	Financing methods available for start-ups in India
48	Financing methods available for start-ups in India
49	Financing methods available for start-ups in India
50	Communication of ideas to potential investors-Investor Pitch
51	Communication of ideas to potential investors-Investor Pitch
52	Communication of ideas to potential investors-Investor Pitch
53	Communication of ideas to potential investors-Investor Pitch
54	Patenting and Licenses
55	Patenting and Licenses
56	Patenting and Licenses
	Unit 6: Exit strategies (08 hrs) 08 Marks
57	Exit strategies for entrepreneurs
58	Exit strategies for entrepreneurs
59	Bankruptcy
60	Bankruptcy
61	Bankruptcy
62	Succession and harvesting strategy
63	Succession and harvesting strategy
64	Succession and harvesting strategy

Subject Teacher

HOD/OIC

Electronics & Communication Engg. Department 6th Semester

Multimedia Applications Lesson plan for the Session Jan-June 2025

Topic Name
Unit 1 16 Hrs 15 Marks
Introduction to Multimedia
Multimedia Elements
Multimedia Hardware
GPU
Digital Camera
Scanner
Projector
Printer
MIDI Synthesizer
Light Pen
Touch Screen
Microphone, Speakers
Multimedia Software - Raster Graphics and Vector Graphics Editing Software, Audio and Vid
Multimedia Authoring
Video and Audio Data Compression Techniques
Lossy and Lossless
Unit 2 16 Hrs 15 Marks
Multimedia Applications
Video on Demand
Video Streaming
Multimedia Conferencing
Interactive Television
Educational Applications
Social Media
Healthcare
Augmented Reality
Virtual Reality
Visual Effects (VFX)
Modelling
Simulation
Marketing
Business Presentations
Business Presentations
Unit 3 16Hrs 15 Marks
Computer Graphics, Raster and Vector Graphics
Basic Terminology - Coordinate System
Pixel, Bitmap
Resolution
Dot Pitch
Color Depth

Aspect Ratio
Gamut
Color Models
RGB, CMYK, HSL
Aliasing, 2D
Transformations - Translation, Rotation and Scaling
Vector Graphics Primitives, Shapes, Anchor Points, Bezier Curves, Combining Shapes
Union, Intersection, Exclusion and Minus; Stroke and Fill, Features of Adobe Illustrator
Features of Adobe Photoshop
Features of Adobe Illustrator
Unit 4 16 Hrs 15 Marks
Digital Audio & Video
Characteristics of Audio
Frequency
Amplitude
Envelope

Digitization of Sound

Sampling and Quantization
Synthetic Sound
MIDI, Digital Video
Basic Principles of Animation,
Animation Terminology - Timeline Frames
Keyframes, Layers
Tweening, 2D and 3D Animation
Introduction to different MPEG standards
MPEG-1, MPEG-2
MP3, AAC

Signature of Class Teacher

HOD ECE

Govt. Millennium Polytechnic Chamba

Discipline : ECE
Name of Faculty : Mr. Bhupinder Singh Thakur
Semester : 6th
Subject : Automation Solutions
Duration :16 weeks
Work load per week (in hours): Lectures—03 (Th), Practical—00, DCS -01

Week	Theory	
	Lecture Day	Topics
1st	1	Idea on PID
	2	Same Topic
	3	Same Topic
	4	DCS
2nd	5	Same Topic
	6	Revision
	7	Idea on a close loop system with real example of different instrument needed
	8	DCS
3rd	9	Same Topic
	10	Same Topic
	11	Same Topic
	12	DCS
4th	13	Revision
	14	Introduction to PLCs, Areas of applications
	15	DCS
	16	Architecture of a typical PLC, operation of PLC.
5th	17	Same Topic
	18	Difference between PLC and Hardware system, Relay logic and Ladder Logic
	19	DCS
	20	Programming of PLCs, systematic solution finding.
6th	21	Same Topic
	22	Programming languages, PLC Programmers, PC interface.
	23	DCS
	24	Function block diagram, ladder diagram, instruction list, structured text.
7th	25	Same Topic
	26	Sequential function chart, logic control systems, timers, counters
	27	DCS
	28	Commissioning and operational safety of a PLC, data transmission interface and communication in the field area
8th	29	Same Topic
	30	Guidelines and standards
	31	DCS
	32	Features of DCS
9th	33	Same Topic
	34	PLC and DCS – a comparative study.
	35	DCS
	36	Architecture of a Typical DCS system
10th	37	Same Topic
	38	Same Topic
	39	Advantage & Disadvantage of DCS.
	40	DCS

11th	41	Same Topic
	42	Hardware arrangement of DCS for a complete close loop system for analog as well as digital control
	43	Same Topic
	44	DCS
12th	45	Concept of graphic panel, control panel, tuning panel, alarm panel etc.
	46	Same Topic
	47	Definition of Robot and Robotics, functional components of Robot.
	48	DCS
13th	49	Same Topic
	50	Different types of robot joints, workplace, work volume, work envelop degree of freedom of robot
	51	Same Topic
	52	DCS
14th	53	Common types of configuration used in major linkage or arm. 4.4 Description of Cartesian coordinate robot.
	54	Same Topic
	55	DCS
	56	Robot Sensors: internal (joint position, speed sensor, acceleration, force, torque)
15th	57	Same Topic
	58	Robot Sensors: external tactile
	59	DCS
	60	Robot Sensors: proximity, long range).
16th	61	Same Topic
	62	Robot application- loading unloading, material handling etc.
	63	DCS
	64	Revision

Faculty Signature

HOD
ECE

Deptartment:ECE

Semester: 6th

Subject: Indian Constitution

Lect.No	Topic Number	
	Unit 1 Introduction to Constitution:	**8 Hours**
1	History of making of the Indian Constitution.	
2	Meaning and importance of the Constitution.	
3	Salient features and Preamble of Indian Constitution.	Contd....
4	Salient features and Preamble of Indian Constitution.	
5	Fundamental rights- meaning and limitations.	Contd....
6	Fundamental rights- meaning and limitations.	
7	Directive principles of state policy and Fundamental duties -their enforcement and their relevance.	Contd....
8	Directive principles of state policy and Fundamental duties -their enforcement and their relevance.	
	Unit 2 Union Government:	**8 Hours**
9	Structure of Union Government.	
10	Structure of Union Government.	
11	Union Executive- President, Vice-president, Prime Minister, Council of Ministers.	Contd...
12	Union Executive- President, Vice-president, Prime Minister, Council of Ministers.	
13	Union Legislature- Parliament and Parliamentary proceedings.	Contd...
14	Union Legislature- Parliament and Parliamentary proceedings.	
15	Union Judiciary-Supreme Court of India – composition and powers and function.	Contd...
16	Union Judiciary-Supreme Court of India – composition and powers and function.	
	Unit 3 State and Local Governments:	**10 Hours**
17	Structure of State Government.	
18	Structure of State Government.	Contd.....
19	State Executive- Governor, Chief Minister, Council of Ministers.	
20	State Executive- Governor, Chief Minister, Council of Ministers.	
21	State Legislature-State Legislative Assembly and State Legislative Council.	Contd.....
22	State Legislature-State Legislative Assembly and State Legislative Council.	
23	State Judiciary-High court.	Contd.....
24	State Judiciary-High court.	
25	Local Government-Panchayat raj system with special reference to 73rd and Urban Local Self Govt. with special	
	to74th Amendment.	Contd.....
26	Local Government-Panchayat raj system with special reference to 73rd and Urban Local Self Govt. with special	
	to74th Amendment.	
	Unit 4 Election provisions, Emergency provisions, Amendment of the constitution	**6Hours**
27	Election Commission of India-composition, powers and functions and electoral process.	Contd.....
28	Election Commission of India-composition, powers and functions and electoral process.	
29	Types of emergency-grounds, procedure, duration and effects.	Contd.....
30	Types of emergency-grounds, procedure, duration and effects.	
31	Amendment of the constitution- meaning, procedure and limitations.	Contd.....
32	Amendment of the constitution- meaning, procedure and limitations.	

Signature of Teacher

Signature of HOD/OIC

Mechatronics Engg. Department 4th Semester

HYDRAULICS AND PNEUMATIC SYSTEMS Lesson plan for the Session Jan-June 2025

Lecture No.	Topic Name
	Unit 1 08 Hrs 9 Marks
1	Need scope and importance of hydraulic and pneumatic
2	Hydrostatic and hydrodynamic definitions
3	Properties of fluid
4	Pascal's law
5	Continuity equation
6	Bernoulli's equation
7	Advantages and limitations of hydraulic
8	Advantages and limitations of pneumatic systems
	Unit 2 10 Hrs 12 Marks
9	Hydraulic Pipes-Type
10	Hydraulic Pipes materials
11	Hydraulic Pipes designations
12	pressure ratings
13	Hydraulic Pipes selection criteria
14	Piping Layout
15	Piping Layout Concept
16	rules/norms
17	Hydraulic Pump-Type
18	construction, working applications
19	selection criteria Hydraulic Pump
20	Power pack Control Valves- Type
21	Power pack Control Valves designation
22	Power pack Control Valves symbols
23	Power pack Control Valves working and applications.
24	Hydraulic Actuators-Type
25	Hydraulic Actuators working and applications.
26	Other Element such as filters
27	manifold , receivers
28	coolers and connecters
	Unit 3 06 Hrs 06 Marks
29	Compressible fluid flow
30	mass flow rate
31	compressible fluidType
32	compressible fluid properties
33	compressible fluid applications
	Unit 4 20 Hrs 18 Marks
34	Pneumatic Elements Pipes Type
35	Pneumatic Elements designations
36	Pneumatic Elements applications
37	Pneumatic Elements properties
38	Air Compressor Reciprocating
39	Air Compressor rotary
40	Air Compressor working
41	Air Compressor selection criteria
42	Pneumatic Cylinders Type
43	Pneumatic Cylinders symbol, cushion, assemblies
44	Pneumatic Cylinders mounting and installation
45	Air Motors-Type
46	Air Motors working and applications.
47	Pneumatic Valves-Type
48	Pneumatic Valves-Type, symbols, working,
49	Pneumatic Valves applications

50	Pneumatic Valves selection criteria.
51	Air receivers, filters
52	pressure regulator
53	lubricator
	Unit 5 10 Hrs 09 Marks
54	Hydraulic and Pneumatic Circuits
55	Hydraulic and Pneumatic Circuits Concept
56	Hydraulic and Pneumatic Circuits Meaning
57	Hydraulic and Pneumatic Circuits ISO symbols
58	Basic hydraulic
59	pneumatic circuits-Type
60	circuit diagrams
61	Rules/Norms for designing hydraulic
62	Rules/Norms for designing pneumatic circuits.

Signature Of Teacher

HOD

Mechatronics Engg. Department 4th Semester

MICROPROCESSOR AND MICROCONTROLLER Lesson plan for the Session Jan-June 2025

Lecturer No.	Topic Name
	Unit 1 02 Hrs 2 Marks
1	Typical organization of a microcomputer system and functions of its various blocks Microprocessor
2	Microprocessor, its evolution, function and impact on modern society
	Unit 2 10 Hrs 12 Marks
3	Architecture of a Microprocessor (8085 microprocessor)
4	Explanation of Architecturer
5	Concept of Bus , bus organization of 8085
6	Functional block diagram of 8085
7	function of each block
8	Pin details of 8085
9	Explanation of ecah pin
10	Demultiplexing of address/data bus
11	generation of read/write control signals
12	Steps to execute a stored programme
	Unit 3 10 Hrs 10 Marks
13	Comparison between microprocessor and microcontroller
14	Microcontroller overview
15	Architecture of 8051 microcontroller
16	Explanation of each block of 8051
17	Pin detail of 8051
18	Explanation of each pin of 8051
19	I/O Port structure
20	Memory Organizationb of 8051
21	Special Function Registers of 8051
22	External Memory
	Unit 4 14 Hrs 14 Marks
23	Instruction Format
24	Instruction Types
25	Instruction set of 8051
26	Data transfer instructions
27	Airthmetic instructions
28	Logical instructions
29	Bit manipulation instructions
30	Machine control group of instructions
31	Stack and Memory instructions
32	Addressing Modes of 8051
33	Explanation of addressing modes with example
34	Assembler Directives
35	Assembler Operation
36	Compiler, Debugger and simulator
	Unit 5 12 hrs 8 Marks
37	Timers of 8051
38	Timer 0 operation
39	Timer 1 operation
40	Timer Mode 0 Programming
41	Timer Mode 1 Programming
42	Timer Mode 2 Programming
43	Serial port operation
44	Transmit serial port programming
45	Recieve serial port programming
46	Interrupts of 8051
47	Interrrupt structure
48	Interrupt programming

	Unit 6 12 Hrs 10 marks
49	Key pad Interface with 8051
50	Program of keypad interface
51	7-segment Display interface witrh 8051
52	Program of interface
53	LCD interface with 8051
54	Program of Interface
55	Stepper Motor intertface with 8051
56	A/D interface with 8051
57	D/A interface with 8051
58	RTC interface with 8051
	Unit 7 4 Hrs 4 Marks
59	ARDUINO overview
60	ARDUINO block Diagram
61	ARDUINO Pin Detail
62	ARDUINO Features

Signature Of Teacher

HOD/OIC
E.C.E

Govt. Millennium Polytechnic Chamba

Discipline : Mechatronics Engg
Name of Faculty : Mr. Bhupinder Singh Thakur
Semester : 4th
Subject : Industrial Electronics
Duration :16 weeks

Work load per week (in hours): Lectures—04 (Th), Practical—00, DCS (Pr)-00

Week	Theory	
	Lecture Day	Topics
1st	1	Overview of SCR
	2	Overview of SCR
	3	Overview of DIAC
	4	Overview of DIAC
2nd	5	Revision
	6	Overview of TRIAC
	7	Overview of TRIAC
	8	Different method of SCR triggering
3rd	9	Same Topic
	10	Revision
	11	Different commutation circuits for SCR.
	12	Same Topic
4th	13	Series &parallel operation of SCR
	14	Construction, working principle of UJT
	15	Same Topic
	16	V-I characteristics of UJT
5th	17	UJT as relaxation oscillator
	18	Briefintroduction to Gate Turnoff thyristor (GTO).
	19	Single phase half wave controlled rectifier with R & R-L load.
	20	Same Topic
6th	21	Revision
	22	Single phase fully controlled full wave bridge rectifier R &R-L Load
	23	Same Topic
	24	Revision
7th	25	Single phase fully controlled full wave center tap rectifier R&R-L Load.
	26	Same Topic
	27	Revision
	28	Single phase half controlled full wave rectifier with R & R-L Load
8th	29	Same Topic
	30	Revision
	31	Principle of operation of basic inverter circuits

	32	Same Topic
9th	33	concepts of duty cycle
	34	Same Topic
	35	series &parallel inverters & their applications.
	36	Same Topic
10th	37	Choppers: Introduction
	38	types of choppers (Class A, Class B, ClassC and Class D)
	39	Same Topic
	40	Step up and step down choppers.
11th	41	Same Topic
	42	Same Topic
	43	Dual Converters
	44	Same Topic
12th	45	cyclo-converters:
	46	Same Topic
	47	Introduction, types & basic workingprinciple of dual converters and cyclo converters & their applications.
	48	Same Topic
13th	49	DC drive control mechanism (Basic working principle)
	50	Same Topic
	51	Half wave drives.
	52	Same Topic
14th	53	Full wave drives
	54	Same Topic
	55	Chopper drives (Speed control of DC motor using choppers)
	56	Same Topic
15th	57	UPS system, its block diagram and operation
	58	UPS systems: on-line
	59	UPS systems offline
	60	UPS systems lineinteractive& their applications
16th	61	Light intensity control of lamp using TRIAC
	62	Speed control of universal motors
	63	fan regulator
	64	Automatic battery charger circuit.

Faculty Signature

HOD

Machatronics 4th Semester

Electronic Instruments and Measurement Lesson plan For the Session Jan-Jun 2025

Lecture No.	Topic Name
	Unit 1 : Basic of Measurements (10 Hrs.) 12 Marks
1	Measurement, method of measurement
2	Types of instruments and specifications
3	Accuracy, presion, sensitivity, resolution, range
4	Errors in measurements
5	Sources of errors
6	Limiting Errors
7	Loading Effect
8	Importance and application of standards
9	Importance and application of standards
10	Calibration
	Unit 2: Tranducers (10 hrs) 12 Marks
11	Distinction between active and passive tranducers with examples
12	Basic requirements of Transducers
13	Variable Resistance Type Transducers (Strain gauge, Thermistor, Hygrometer)
14	Variable capacitance type (pressure gauge, dielectric gauge)
15	Variable inductance type (LVDT, Bourdon pressure gauge)
16	Solid state sensor
17	Thermocouple, piezoelectric device,
18	Photoelectric device
19	Photoelectric device
20	Proxmity probe
	Unit 3 : Electrical Measuring Instruments (09 hrs) 12 Marks
21	Megger
22	Megger
23	Earth Tester
24	Power Factor Meter
25	Power Factor Meter
26	Frequency Meter
27	Frequency Meter
28	Frequency Meter
29	Tong Tester

	Unit 4 : Instrument Transformer (09 hrs) 12 Marks
30	Current Transformer And its need in measurement
31	Current Transformer And its need in measurement
32	Current Transformer And its need in measurement
33	Current Transformer And its need in measurement
34	Potential Transformer and its need in measurements
35	Potential Transformer and its need in measurements
36	Potential Transformer and its need in measurements
37	Potential Transformer and its need in measurements
38	Potential Transformer and its need in measurements
	Unit 5: Electronic Instruments (10 hrs) 12 Marks
39	Digital Multimeter
40	Digital Multimeter
41	Digital Multimeter
42	Cathode Ray Oscilloscope (CRO)
43	Cathode Ray Oscilloscope (CRO)
44	Cathode Ray Oscilloscope (CRO)
45	Digital Storage Device (DSO)
46	Digital Storage Device (DSO)
47	Function Generator
48	Function Generator

Subject Teacher

HOD/OIC

Department.: ECE

Subject: Essence of Indian Knowledge & Tradition

Course Learning Objectives	The objective of this course is to expose the students with the concepts of Indian traditional knowledge and to make them appreciate the importance of the roots of indigenous knowledge system.
Course Outcomes	After completing this course the students will be able to: CO-1. Identify the concept of Indian Knowledge System (IKS). CO-2. Understand the need and importance of protecting traditional knowledge. CO-3. Compare the Indian traditional knowledge and modern science. CO-4. Understand the use of Yoga in stress management, mental health, mindfulness, healthy eating, weight loss and quality sleep. CO-5. Aware of the general knowledge of Himachal Pradesh.
Lect.No	Topic Number
	Unit 1 Indian Knowledge System (IKS):----------15 Marks
1	□ Introduction and Function of Indian Knowledge System(IKS).
	□ The Basic Structure of Indian Knowledge System(IKS) (only Introduction
2	1. The 4 Vedas, Namly ऋ्ग्वेद (Rigveda) ,यजुर्वेद (Yajurveda),सामवेद (Samaveda) ,अथर्वाेवेद (Atharvaveda) .
3	2. The 4 UpVedas, Namelyआयुर्वेद (Ayurveda (health-care)), धनुर्वेद (Dhanurveda (archery)), गंधर्वाेवेद (Gandharva-veda (dance, music etc.)) and स्थापत्यवेद (Sthapatyaveda (architecture)).
4	3. The 6 Vedagangs ,namelyShiksha (शिक्षा), Kalpa (कल्प),Vykaraṇa (व्याकरण), Chhandasछंदस्), Nirukta (निरुक्त), and Jyotisha(ज्योतिष).
5	4. Itihasa (इतिहास)(Ramayanaरामायण and Mahabharata महाभारत) and Puranaपुराण (Vishnupuranaविष्णुपुराण, BhagavataPurana (भागवतपुराण) etc.)
6	5. Dharmashatraधर्माेशा. (Manusmritiमनुस्मृति, Yajnavalkya-smritiयाज्ञवल्क्यस्मृति, etc.).
7	6. Darshanदर्शान (आस्तिकतथानास्तिक).
8	7. Nyaya न्याय (Logic तर्काेशा.andEpistemologyज्ञानमीमांसा).
	Unit 2 : Modern Science ----------12 Marks
9	• Modern science: Introduction, Characteristics, importance and Example----------contd.
10	• Modern science: Introduction, Characteristics, importance and Example
11	• Difference between modern Science and Indian knowledge system
12	• Difference between modern Science and Indian knowledge system
13	• Role of IKS in modern science
14	• Role of IKS in modern science
	Unit 3 : Traditional knowledge---------- 9 Marks
15	• Traditional knowledge: Definition, nature, characteristics, scope and importance
16	• Indigenous Knowledge (IK): characteristics
17	• Traditional knowledge vis-a-vis Indigenous knowledge
18	• Traditional knowledge Vs western knowledge
19	• The need for protecting traditional knowledge
	Unit 4 : Yoga and Holistic Health Care----------15Marks
20	• Yoga: Meaning and Importance of Yoga
21	• Yoga and physical health, Yoga and psychological health, Yoga and intellectual health, Yoga and spiritual health, Yoga and social approach
22	• Introduction to Ashtanga Yoga, Yogic Kriyas (Shat Karma)

23	• Pranayama and its types; Active lifestyle and stress management through Yoga
24	• Physical Fitness, Health and wellness: Meaning and Importance of Wellness,
25	• Components of Wellness, Health and physical Fitness;
26	• Traditional sports & Regional Games for promoting wellness:
27	• Leadership through Physical Activity and Sports; Introduction to First Aid.
	Unit 5 : Himachal Pradesh: A Basic Information---------- 9 Marks
28	• History, Culture, Heritage/ Tradition, Customs & Manners
29	• Regional Knowledge, Geographical Features, Constitutional History----------contd.
30	• Regional Knowledge, Geographical Features, Constitutional History
31	• Tourism Place & Scope
32	• Festivals and Fairs

Signature of Teacher

Signature of HOD/Dean