

Name of the Faculty: Smt Lata Yadav

Discipline: Electrical engg.

Semester: 6th

Subject: ENTREPRENEURSHIP DEVELOPMENT AND MANAGEMENT

Lesson Plan Duration: 15 weeks

**Work Load (Lecture/Practical)per week(in hours): Lectures-03

Week	Theory	
	Lecture day	Topic(including assignment/test)
1 st	1 st	• Will Discuss Learning outcomes of Entrepreneurship Development & Management subject
		• Introduction to syllabus of Entrepreneurship Development & Management subject
	2 nd	SECTION – A ENTREPRENEURSHIP
		Unit-1 Entrepreneurship
	3 rd	• Concept /Meaning and its need,
		• Qualities of Entrepreneurship
2 nd	1 st	• Functions of entrepreneur and
		• Barriers in entrepreneurship
	2 nd	• Sole proprietorship and partnership forms of business organizations
		• Schemes of assistance by entrepreneurial support agencies at National, State,
	3 rd	• District level: National Small Industries corporation(NSIC),
		• NRDC ,
3 rd	1 st	• DC:MSME,
		• Small Industries Service Institute (SIDBI),
	2 nd	• Nationals Bank for Agriculture and Rural Development(NABARD)
		• Commercial Banks
	3 rd	• State Financial Corporation's (SFC's),
		• Technical Consultancy Organizations (TCO)
4 th	1 st	• Khadi and village Industries Board (KVIB),
		• District Industry centers (DIC)
	2 nd	• Technology Business Incubator (TBI) and
		• Science and Technology Entrepreneur Parks (STEP).
	3 rd	Unit-2 Market Survey and Opportunity Identification:-
		• Scanning of business environment
5 th	1 st	• Salient features of National and State industrial policies and resultant business opportunities
		• Types and conduct of market survey.
	2 nd	• Assessment of demand and supply in potential areas of growth
		• Identifying business opportunity.
	3 rd	• Considerations in product selection
		• Revision/queries of unit1,2.
6 th	1 st	• First assignment will be given
		• Assignment –I check
	2 nd	• Tentative 1 st sessional test
		• Evaluation of sessional marks etc.
	3 rd	• Assignment –I check

		<ul style="list-style-type: none"> Tentative 1st sessional test Evaluation of sessional marks etc.
	3 rd	<ul style="list-style-type: none"> Display and analysis of sessional marks. Seminal/group discussion as per evaluation scheme
7 th	1 st	Unit-3 Project report Preparation:- <ul style="list-style-type: none"> Preliminary project report. Detailed project report including technical
	2 nd	<ul style="list-style-type: none"> Economic and market feasibility. Common errors in project report preparations,
	3 rd	<ul style="list-style-type: none"> Exercises on preparation of project report
8 th	1 st	SECTION –B MANAGEMENT Unit-4:- Introduction to Management: <ul style="list-style-type: none"> Definitions and importance of management, Functions of management
	2 nd	<ul style="list-style-type: none"> Importance and Process of planning, organising, Staffing, directing and controlling ,
	3 rd	<ul style="list-style-type: none"> Principles of management (Henri Fayol, F.W. Taylor) Concept and structure of an organisation
9 th	1 st	<ul style="list-style-type: none"> Types of industrial organisations a) Line organization b) Line and staff organization c) Functional Organisation
	2 nd	Unit-5 :-Leadership and Motivation: 5(a) Leadership- <ul style="list-style-type: none"> Definition and Need ,Qualities Functions of a leader
	3 rd	<ul style="list-style-type: none"> Manager Vs leader , Types of leadership
10 th	1 st	5(b) Motivation- <ul style="list-style-type: none"> Definitions and characteristics Factors affecting motivation ,
	2 nd	<ul style="list-style-type: none"> Theories of motivation (Maslow, Herzberg, McGregor)
	3 rd	<ul style="list-style-type: none"> Revision/queries of unit 3,4,5. Second assignment will be given
11 th	1 st	<ul style="list-style-type: none"> Assignment –II check Tentative 2nd sessional test Evaluation of sessional marks etc.
	2 nd	<ul style="list-style-type: none"> Assignment –II check Tentative 2nd sessional test Evaluation of sessional marks etc
	3 rd	<ul style="list-style-type: none"> Display and analysis of sessional marks. Seminal/group discussion as per evaluation scheme
12 th	1 st	Unit-6 :-Management Scope in Different Areas: 6(a) Human Resource Management: <ul style="list-style-type: none"> Introduction and objective, Introduction to Man power planning and Selection, Introduction to performance appraisal methods
	2 nd	6(b) Material and Store Management: <ul style="list-style-type: none"> Introduction functions, and objectives, ABC Analysis , EOQ analysis ,
	3 rd	6(c) Marketing and sales:

		<ul style="list-style-type: none"> • Introduction, importance, and its functions, • Physical distribution, • Introduction to promotion mix, • Sales promotion ,
13 th	1 st	6(d) Financial Management: <ul style="list-style-type: none"> • Introductions, importance and its functions • Elementary knowledge of income tax sales tax, excise duty, custom duty and VAT
	2 nd	Unit-7:-Miscellaneous Topics 7(a) Customer Relation Management (CRM): <ul style="list-style-type: none"> • Definition and need, • Types of CRM
	3 rd	7(b)Total Quality Management (TQM): <ul style="list-style-type: none"> • Statistical process control, • Total employees Involvement, • Just in time (JIT)
14 th	1 st	7(c)Intellectual Property Right (IPR): <ul style="list-style-type: none"> • Introductions, definition and its importance, • Infringement related to patents, • copy right, trade mark
	2 nd	<ul style="list-style-type: none"> • 3rd assignment will be given • Revision/ queries of unit-6,7
	3 rd	<ul style="list-style-type: none"> • Assignment –III check • Tentative 3rd sessional test • Evaluation of sessional marks etc.
15 th	1 st	<ul style="list-style-type: none"> • Assignment –III check • Tentative 3rd sessional test • Evaluation of sessional marks etc
	2 nd	<ul style="list-style-type: none"> • Display/analysis of 3rd sessional test. • Seminal/group discussion as per evaluation scheme
	3 rd	<ul style="list-style-type: none"> • Remedial will be taken if any shortcomings found • Previous state boards question will be carried out, any other left out topic

Name of faculty : C P Arora

Disciplin Electrical Engineering

Semeste 6th

Subject: Power II

Lesson Plan Duration: 15 weeks

Work Load (Lecture/Practical)per week(in hours): Lectures-04,Practicals-

Week	Lecture Day	Theory	Practical	Topic
1st	1	Unit 1st	1	testing of the dielectric strength of transformer oil and air.
	2	Introduction to fault,common types of Fault		
	3	Over head and under ground system and fault		
	4	Symetrical and unsymetrical fault		
2nd	5	Double line to ground faults		
	6	3 phase to ground faults		
	7	Simple problems relating to fault finding		
3rd	8	Unit 2nd	2	Study of different types of circuit breakers and isolators.
	9	Purpose of protective gear		
	10	Difference between switch,isolator and C.B		
	11	Function of isolator and Circuit breaker		
	12	making and breaking of circuit breaker		
	13	Types of circuit breaker		
4th	14	Bulk CB construction working Principle	3	Plot the time current characteristics of over current relay.
	15	Minimum CB construction working		
	16	SF6 CB construction working		
5th	17	Arc extintion, Principle of arc extinction	4	Power measurement by using CTs and PTs.
	18	Blast CB in Cbin OCB		
	19	Constructional features of OCB		
	20	ACB construction working		
6th	21	minature CB construction,working	5	Earthing of different equipment.
	22	MCCB and ELCB		
	23	Unit 3rd		
7th	24	Function of fuse,HV and LV fuse	6	Perform the overload and short circuit test of MCB.
	25	Rewireable,cartridge fuse construction		
	26	HRC fuse construction		
	27	Purpose of earthing,defination of earthing		
	28	Earthing equipment used in earthing		
8th	29	Substation earthing systems	7	Plot the time current characteristics of Kit-Kat
	30	Methods of reducing earthing resistance		
	31	Introduction to relay ,types of earthing		
	32	Electromagnetic relay construction,working		
9th	33	Thermal relay,construction,working	7	Plot the time current characteristics of Kit-Kat
	34	Induction type Over current relay		
	35	Earth fault relay construction working		
	36	Instaneous Over current relay		
10th	37	Direct over current differential relay	7	Plot the time current characteristics of Kit-Kat
	38	Functions of Differential over current relay		
	39	Unit 4th		
	40	Relays for generator proction		
11th	41	Relay for transformer protection bucloz relay	7	Plot the time current characteristics of Kit-Kat
	42	bucloz relay construction ,working		
	43	Protection for feeder and bus bar		
	44	Over current and earth protection		
12th	45	Distance protection for transmission system	7	Plot the time current characteristics of Kit-Kat
	46	Relay for motor protection		
	47	Protection of system against over voltage		
	48	Causes of over voltage and protection		
	49	Utility of ground wire	7	Plot the time current characteristics of Kit-Kat
	50	Introduction to Lightning arrestor,types		

13th	49	Rod gap arrestor construction ,working		Fuse wire.
	50	Horn gap arrestor		
	51	Metal oxide arrestor		
	52	Metal oxide arrestor		
14th	53	Transmission line protection	8	Taking reading of current on any LT line with ohm meter.
	54	Substation protection		
	55			
	Unit 6th	Concept of tarrif and use		
	56	Types of tarrifs		
15th	57	Block rate tarrif		
	58	Flate rate tarrif		
	59	Maximum demand and two part tarrif		
	60	Simple problems		

Lesson plan	
Name of Faculty	Sh. Kulwant Kharb
Discipline	Electrical Engineering
Semester	6 th
Subject	Electrical Energy Conservation and Management
Lesson Plan Duration	15 week
Week	Theory

	Lecture Day	Topic (Including Assignment/ Test)
1 st	Day1	1 Lighting System
	Day2	1.1. Basic definitions- Lux, lumen and illumination space to height ratio
	Day3	1.2Types of different lamps and their features
	Day4	1.3 Energy efficient practices in lighting
	Day5	1.4.Tips for energy saving in building - New Building, Existing Building
2 nd	Day1	1.5Laws of Illumination
	Day2	1.6 Calculation of illumination at different points, Main requirements for proper lighting
	Day3	1.7Macro level approach at design stage
	Day4	Revision/ Assignment
	Day5	2 Energy Conservation and EC Act 2001
3 rd	Day1	Introduction to energy management, energy conservation, energy efficiency and its need
	Day2	Salient features of Energy Conservation Act 2001 &
	Day3	The Energy Conservation (Amendment) Act, 2010 and its importance
	Day4	Standards and Labeling - Concept of star rating and its importance, Types of product available for star rating
	Day5	Revision/ Assignment
4 th	Day1	Class Test
	Day2	3 Energy Audit
	Day3	Types and methodology
	Day4	Energy auditing reporting format

	Day5	Energy audit instruments
5 th	Day1	Revision/ Assignment
	Day2	4 Electrical Supply System and Motors
	Day3	Types of electrical supply system
	Day4	Single line diagram
	Day5	Transformer loading
6 th	Day1	Tips for energy savings in transformers
	Day2	Motor Loading
	Day3	Variation in efficiency and power factor with loading
	Day4	Tips for energy savings in motors
	Day5	Need for energy efficient motors
7 th	Day1	Initial cost versus like cycle cost
	Day2	Cost analysis on life cycle basis
	Day3	Various constructional features of EEMs
	Day4	EEM as compared to standard motors
	Day5	Revision/ Assignment
8 th	Day1	5 Energy Efficiency in Electrical Utilities
	Day2	Understanding Electricity Bill , Tariff structure
	Day3	Components of power (kW, kVA and kVAR) and power factor
	Day4	Concept of sanctioned load, maximum demand, contract demand and monthly minimum charges (MMC)
	Day5	5.2 Pumps; Introduction to pump and its application, Efficient pumping system operation,
9 th	Day1	Energy efficiency in agriculture pumps, Tips for energy saving in pumps,
	Day2	5.3 Compressed Air System Types of air compressor and its applications,
	Day3	Leakage test, Energy saving opportunities in compressors
	Day4	5.4 Energy Conservation in HVAC and Refrigeration System; Introduction

	Day5	Concept of Energy Efficiency Ratio (EER)
10 th	Day1	Energy saving opportunities in Heating, Ventilation and
	Day2	Air-conditioning (HVAC) and Refrigeration Systems
	Day3	5.5 Thermal Basics: Types of fuels, Thermal energy
	Day4	Energy contents in fuel, Energy Units and
	Day5	its conversion in terms of metric ton of oil equivalent (MTOE)
11 th	Day1	Revision/ Assignment
	Day2	Class Test
	Day3	6 General Energy Saving Tips; Lighting System, Room Air Conditioners
	Day4	Refrigerators, Water Heater, Computers,
	Day5	Fans, Heaters
12 th	Day1	Blowers and Washing Machines
	Day2	Water Pumps
	Day3	Kitchens, Transport
	Day4	Revision/ Assignment
	Day5	Class Test
13 th	Day1	7 Energy Conservation Building Code
	Day2	Haryana ECBC and its salient features including thermal behavior of buildings
	Day3	ECBC Guidelines on Building Envelope
	Day4	ECBC Prescriptive Requirements for Building Envelope
	Day5	ECBC Guidelines on Heating, Ventilation and Air Conditioning
14 th	Day1	ECBC Guidelines on Service Hot Water and Pumping
	Day2	ECBC Guidelines on Lighting
	Day3	ECBC Guidelines on Electrical Power
	Day4	ECBC Guidelines on Star Labelling and Minimum Star rating

	Day5	Revision/ Assignment
15 th	Day1	Class Test
	Day2	Revision/Review/Test of old HSBTE Papers
	Day3	Revision/Review/Test of old HSBTE Papers
	Day4	Revision/Review/Test of old HSBTE Papers
	Day5	Revision/Review/Test of old HSBTE Papers

Name of faculty : Sh. Ravinder Kumar

Discipline : Electrical Engineering
6th

Semester:
IECD

Subject:

Lesson Plan Duration: 15 weeks

**Work Load (Lecture/Practical)per week(in hours): Lectures-04,Practicals-03

Week	Day	Theory Topic/ Assignment/ Test	No.	Practical
1 st	1	Unit-I Introduction to SCR	1	To draw V-I characteristics of an SCR
	2	Construction and working principles of an SCR		
	3	Characteristics of SCR		
	4	Two transistor analogy		
2 nd	1	SCR specifications and rating	2	To draw V-I characteristics of a TRIAC
	2	Construction, working principles and V-I characteristics of DIAC,		
	3	and TRIAC and Quadriac		
	4	Basic idea about the selection of heat sinks for SCR and TRIACS		
3 rd	1	Methods of triggering a Thyristor.	3	To draw V-I characteristics of a DIAC
	2	Study of triggering circuits		
	3	UJT, its Construction, working principles and V-I characteristics		
	4	UJTas relaxation oscillator		
4 th	1	Commutation of Thyristors	4	Revision/File checking
	2	Series and parallel operation of Thyristors		
	3	Applications of SCR, TRIACS and Quadriac		
	4	dv/dt and di/dt protection of SCR		
5 th	1	Assignment/Class test of 1 st unit	5	To draw uni-junction transistor characteristics
	2	Revision/checking/Problems solutions		
	3	Unit2: Introduction to Controlled Rectifiers		

	4	Single phase half wave controlled rectifier with resistive load		
6 th	1	With Inductive load and freewheeling diode	6	Observe the output wave of an UJT relaxation oscillator
	2	Single phase half controlled full wave rectifier		
	3	Single phase fully controlled full wave rectifier bridge		
	4	Single phase full wave Centre tapped rectifier		
7 th	1	Three phase full wave half controlled bridge rectifier	7	Mid- term viva-voice/file checking
	2	Three phase full wave fully controlled bridge rectifier		
	3	Assignment/Class test of 1 st unit		
	4	Revision/checking/Problems solutions		
8 th	1	Unit3: Introduction to Inverters, Choppers, Dual Converters and Cyclo Converters	8	Observe the wave shape across SCR and load of an illumination control circuit
	2	Working principles and application of VSI		
	3	Working principles and application of CSI		
	4	Choppers-introduction, types of choppers and their working principles and applications		
9 th	1	Class A,B and C	9	Fan speed regulator using TRIAC Quadriac (fabrication of this
	2	Class D and E		
	3	Dual converters-introduction, working principles and applications		
	4	Cyclo-converters- introduction		
10 th	1	types, working principles and applications	10	Speed-control of a DC shunt motor or universal motor
	2	Assignment/Class test of 1 st unit		
	3	Revision/checking/Problems solutions		
	4	Unit4:Thyristor Control of Electric Drives		
11 th	1	DC drives control	11	Revision/File checking
	2	Half wave drives		
	3	Full wave drives		
	4	Chopper drives		
	1	AC drives control		

12 th	2	Phase control	12	Revision/File checking
	3	Variable frequency a.c. drives		
	4	Constant V/F application		
13 th	1	Voltage controlled inverter drives	13	Single phase controlled rectifier
	2	Constant current inverter drives		
	3	Cyclo convertors controlled AC drives		
	4	Slip control AC drives		
14 th	1	Assignment / Class test	14	Use of Variable Frequency Drive for running a 3 phase Induction motor
	2	Problem solution/ test check		
	3	Unit5: Uninterrupted Power Supplies		
	4	UPS, UPS online, off line		
15 th	1	Stabilizers, SMPS	15	Revision/File checking
	2	Storage devices (batteries) and their maintenance		
	3	Revision of important topics		
	4	Revision of important topics		
16 th	1	Assignment / Class test	16	Internal Practical
	2	Problem solution/ test check		
	3	Revision/Review/Test of old HSBTE Papers		
	4	Revision/Review/Test of old HSBTE Papers		