

Electronics and Communication Engg. Department

Session 2024-25 (2nd Semester)

Subject: Electronic Devices and Circuits-I

Load :- L-3 P-4

Week No	Lecture No	THEORY	PRACTICAL
1 week	1st lecture	Introduction about the subject	Introduction about the subject practicals
	2nd lecture	UNIT1: define atom,electron,nucleus,Basic atomic structure,energy levels	
	3rd lecture	insulators,conductor & semiconductor concept	
2 week	1st lecture	Germanium and Silicon structure, covalent bonds	Plotting of V-I characteristics of a PN junction diode
	2nd lecture	Intrinsic and Extrinsic semi conductor, concept of Doping	
	3rd lecture	conductor, insulators,semiconductor - energy level diagram , minority and majority charge carriers	
3 week	1st lecture	P & N type semi conductor, current flow mechanism	Plotting of V-I characteristics of a Zener diode
	2nd lecture	effect of temperature on conductivity of intrinsic semi conductor	
	3rd lecture	UNIT2: PN junction diode, mechanism of current flow , forward and reversed biased, potential barrier	
4 week	1st lecture	Drift and diffusion currents, depletion layer, junction capacitance concept	To observe input and output of series clipping circuits
	2nd lecture	V-I characteristics of PN junction Diode, static and dynamic resistance ,Zener and Avalanche breakdown	
	3rd lecture	application of diode as half wave, full wave and bridge rectifier	
5 week	1st lecture	1st Sessional	To observe input and output of shunt clipping circuits
	2nd lecture	peak inverse voltage, rectification efficiencies and ripple factor calculations	
	3rd lecture	shunt capacitor filter, series inductor filter	
6 week	1st lecture	LC and π filter	To observe input and output of positive clamping circuit
	2nd lecture	Types of diodes and their applications	
	3rd lecture	clipping and clamping circuits	
7 week	1st lecture	UNIT3: Bipolar transistor concept and its structure	To observe input and output of negative clamping circuit
	2nd lecture	PNP transistor- symbol and mechanism of current flow	
	3rd lecture	NPN transistor- symbol and mechanism of current flow	
8 week	1st lecture	Current relations in transistor, leakage current concept,CB,CE & CC configurations of a transistor	fabrication of half wave rectifier circuit on breadboard and observe the output
	2nd lecture	input and output characteristics and dynamic resistance in CB configuration	
	3rd lecture	input and output characteristics and dynamic resistance in CE configuration,Comparison of CB,CE,CC configuration	
9 week	1st lecture	Current amplification factors,Relation between α, β, γ	fabrication of full wave rectifier circuit on breadboard and observe the output
	2nd lecture	Concept of DC load line and calculation of current and voltage gain	
	3rd lecture	2nd Sessional	
10 week	1st lecture	UNIT4: concept of transistor biasing and selection of operating point	plotting of the wave shape of full wave rectifier with Shunt capacitor filter and series inductor filter
	2nd lecture	need for stabilization of operating point	
	3rd lecture	Different types of biasing circuits	
11 week	1st lecture	single stage transistor amplifier circuit	plotting of input and output characteristics and calculation of parameters of transistors in CE configuration
	2nd lecture	concept of DC and AC load line and its use	
	3rd lecture	phase reversal of output voltage with respect to input voltage	
12 week	1st lecture	UNIT5: Operation and characteristics of FET's and their application	plotting of input and output characteristics and calculation of parameters of transistors in CB
	2nd lecture	construction,operation and characteristics of a MOSFET in Depletion and enhancement mode	

	3rd lecture	Applications of MOSFET	configuration
13 week	1st lecture	Comparison of JFET, MOSFET and BJT	Measurements of voltage gain, input and output impedance in a single stage CE amplifier circuit
	2nd lecture	CLASS TEST(UNIT NO 1 & 2)	
	3rd lecture	CLASS TEST(UNIT NO 4 & 5)	
14 week	1st lecture	3rd SESSIONAL	Plotting of V-I characteristics of FET
	2nd lecture	CLASS TEST(UNIT NO 5)	
	3rd lecture	REVISION	
15 week	1st lecture	REVISION	Revision and viva
	2nd lecture	REVISION	
	3rd lecture	DOUBT SESSION	

*Extra classes taken in arrangement periods and practical labs.

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Lect.

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Subject:- EDM

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Week	Theory	
	Lecture Day	Topic(including assignments/tests)
1 st Week	1st	Concept/Meaning and its need of Entrepreneurship
	2nd	Qualities and functions of entrepreneur
	3rd	Barriers in entrepreneurship
Week2	1st	Sole proprietorship and partnership forms of business organisation
	2nd	Schemes of assistance by entrepreneurial support agencies at National, State, KVIB,
	3rd	District level: NSIC
Week3	1st	District level: NRDC & DC: MSME
	2nd	District level: SIDBI & NABARD,
	3rd	District level: Commercial Banks, SFC's TCO, KVIB, & DIC
Week4	1st	Technology Business Incubator (TBI) and Science and Technology Entrepreneur Parks (STEP).
	2nd	Assignment and revision of unit 1
	3rd	Assignment and revision of unit 2
Week5	1st	test of unit 1
	2nd	test of unit 2
	3rd	Sessional test 1
Week6	1st	Definition, The nature of management
	2nd	Management as a process, Management as science and art
	3rd	Management Function, Management in administration
Week7	1st	Levels of managements, Leadership, Management Skills
	2nd	Planning and Forecasting – Meaning and definition, Features
	3rd	Steps in planning process, Approaches, Principles
Week8	1st	Importance, Advantages and disadvantages of planning, types of plan
	2nd	Types of planning, Management by Objective, Decision making meaning, characteristics
	3rd	Revision and test
Week9	1st	Assignment, test and revision of unit 1
	2nd	Assignment, test and revision of unit 2
	3rd	Sessional test 2
Week10	1st	Organize process-meaning and definition, characteristics process, need and importance
	2nd	Principles, span of management, types, content
	3rd	Uses, limitation, Factors affecting Organizational chart
Week11	1st	Meaning, nature, importance
	2nd	Staffing process, manpower planning, recruitment
	3rd	Selection, orientation and placement, training, Remuneration
Week12	1st	Meaning, feature, importance
	2nd	Control, process, characteristics of an effective control system
	3rd	Types of control, co-ordination of characteristics, essentials
Week13	1st	Market survey and opportunity identification, Scanning of business environment
	2nd	Assessment of demand and supply in potential area of growth
	3rd	Project report preparation, detailed project report including technical
Week14	1st	Economic and market feasibility, common errors in project report preparation
	2nd	Exercise on preparation of project report
	3rd	Assignment, test and Revision and test of unit 4,5
	1st	revision

Week15	2nd	Sessional test 3
	3rd	revision of unit 4, 5
Week16	1st	revision
	2nd	revision of unit 1,2,3
	3rd	revision of unit 4, 5

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