

Electronics and Communication Engg. Department
Session 2024-25 (2nd Semester)

Subject : Environmental Studies

Load :- L-2

1 week	1st lecture	Unit 1: basics of Ecology
	2nd lecture	ECO -system concept
2 week	1st lecture	Sustainable Development
	2nd lecture	Renewable sources and non -renewable
3 week	1st lecture	Unit 2: Sources of Air Pollution ,Effcet of air-pollution on human health, economy
	2nd lecture	Air pollution control methods
4 week	1st lecture	Unit 3 : Water Pollution ,Impurities in water
	2nd lecture	cause of water pollution,source of water pollution
5 week	1st lecture	Concept of dissolved BOD,Concept of dissolved COD
	2nd lecture	Water treatment processes
6 week	1st lecture	Unit 4 : Soil Pollution
	2nd lecture	sources of soil pollution
7 week	1st lecture	E-waste management
	2nd lecture	sources of soil pollution
8 week	1st lecture	Effetc and control of soil pollution
	2nd lecture	Disposal of Solid waste
9 week	1st lecture	unit 4 : Impact of energy usage on enviroment
	2nd lecture	Global warming ,Green House Effect
10 week	1st lecture	Deleption of Ozone layer
	2nd lecture	Acid rain
11 week	1st lecture	Eco- friendly material
	2nd lecture	Recycling of material
12 week	1st lecture	Concept of Green Building
	2nd lecture	Concept of carbon credit and carbon footprint
13 week	1st lecture	Unit 5 : Disaster Mangemnet
	2nd lecture	A: Different type of disaster
14 week	1st lecture	Natural disaster
	2nd lecture	Man made disaster and examples
15 week	1st lecture	B: Disaster Preparedness
	2nd lecture	disaster preparedness plan
16 week	1st lecture	Pricdiction, early warning and safety measurment
	2nd lecture	Psychological response and Management

Poonam Verma
Lect.

Preeti Bhandari
HOD,ECE

Electronics and Communication Engg. Department
Session 2024-25 (4th Semester)

Subject : POWER ELECTRONICS

Load :-L-3 P -4

1 week	1st lecture	Construction & working of SCR	
	2nd lecture	V-I characteristics of SCR	
	3rd lecture	Two transistor analogy of SCR	
2 week	1st lecture	SCR Specifications & ratings	To plot V-I Characteristics of SCR
	2nd lecture	Triggering methods	
	3rd lecture	Commutation circuits	
3 week	1st lecture	series operation of SCR	To plot V-I Characteristics of DIAC
	2nd lecture	parallel operation of SCR	
	3rd lecture	DIAC -working & characteristics	
4 week	1st lecture	TRIAC -working & characteristics	To plot V-I Characteristics of TRIAC
	2nd lecture	V-I characteristics of UJT	
	3rd lecture	UJT as relaxation oscillator	
5 week	1st lecture	GTO,PUT-characteristics	To plot V-I Characteristics of UJT Relaxation Oscillator
	2nd lecture	MOSFET	
	3rd lecture	Heat sink of thyristors	
6 week	1st lecture	Light Intensity control	
	2nd lecture	speed control of universal motors	
	3rd lecture	Fan regulator & Battery Charger	
7 week	1st lecture	single phase half wave controlled rectifier with R load	Observation of wave shape of voltage of single-phase half controlled rectifier
	2nd lecture	single phase half wave controlled rectifier with R-L load	
	3rd lecture	single phase full wave controlled rectifier with R load	
8 week	1st lecture	single phase full wave controlled rectifier with R-L load	Observation of wave shape of voltage of single-phase full wave controlled rectifier
	2nd lecture	Fully controlled full wave bridge rectifier	
	3rd lecture	Fully controlled full wave bridge rectifier	
9 week	1st lecture	single phase full wave centre tap rectifier	Observation of wave shape of voltage at relevant point in TRIAC based AC phase control circuit for varying lamp intensity
	2nd lecture	Inverter operation ,concept of duty cycle	
	3rd lecture	series inverters	
10 week	1st lecture	parallel inverters	
	2nd lecture	Choppers-operation & working	
	3rd lecture	Type A , B chopper	
11 week	1st lecture	Type C,D chopper	Observation of wave shape of voltage at relevant point in TRIAC based AC phase control circuit for AC fan speed control
	2nd lecture	Dual converter working	
	3rd lecture	Dual converter types & applications	
12 week	1st lecture	cycloconverter -working & its applications	
	2nd lecture	half wave drives,Full wave drives	
	3rd lecture	Chopper drives,inverter drives	
13 week	1st lecture	phase control method & constant v/f operation	
	2nd lecture	cycloconverter drives	
	3rd lecture	UPS: Off line & on-line UPS	
14 week	1st lecture	Smart UPS	Installation of UPS system and routine maintenance of batteries
	2nd lecture	Concept of high voltage DC transmission	
	3rd lecture	Advantages high voltage DC transmission	
15 week	1st lecture	Idea of SMPS	
	2nd lecture	Classification of Batteries	
	3rd lecture	Classification of Batteries	
16 week	1st lecture	Revision	
	2nd lecture	Revision	
	3rd lecture	Revision	

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