

LESSON PLAN	
JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty: JYOTI NAIK	Academic Year: 2019-20
Course No.: ETT-502	Course Name: COMMUNICATION ENGG-II
Programme: Diploma	Branch: Electronics & Telecommunication Engg.
Year/Sem: III / V	Section: NA

Sl. No.	Period	Time (min)	Unit	Topic to be Covered	Teaching Method
1.	1.	55	1	Introduction to Communication Engineering	Chalk & Board
2.	2.	55	1	Concept of EM waves and effects of environment on its propagation.	Chalk & Board
3.	3.	55	1	Concept of Reflection, Refraction, Interference, diffraction, absorption and attenuation of EM Waves	Chalk & Board
4.	4.	55	1	Types of wave depending on propagation – TE & TM and polarization in EM waves	Chalk & Board
5.	5.	55	1	Types of wave Propagation and Ground Wave Propagation	Chalk & Board
6.	6.	55	1	Sky wave Propagation and Space wave Propagation	Audio –Visual using Smart Class
7.	7.	55	1	Concept of actual height and virtual height, critical frequency, max usable frequency	Chalk & Board
8.	8.	55	1	Concept of skip distance, fading , duct propagation and troposphere scatter propagation	Chalk & Board
9.	9.	55	1	Revision of Unit -1	Chalk & Board
10	10.	55	2	Concept of Wave propagation and wave radiation in space	Chalk & Board
11	11.	55	2	Types of wave propagation	Chalk & Board
12	12.	55	2	Transmission and Radiation mechanism of an antenna	Audio –Visual using Smart Class
13	13.	55	2	Explanation of different terms related to antennas	Chalk & Board
14	14.	55	2	Explanation of different terms related to antennas	Chalk & Board
15	15.	55	2	Transmission equation , radiation integrals and auxiliary potential functions	Chalk & Board
16	16.	55	2	Operation of Directional HF antennas, there advantages and applications	Chalk & Board
17	17.	55	2	Operation of UHF & Microwave antennas, there advantages and applications	Chalk & Board
18	18.	55	2	Concept of Smart Antennas and their advantages	Chalk & Board
19	19.	55	2	Revision of Unit - 2	Chalk & Board
20	20.	55	3	Fundamentals of Transmission line	Chalk & Board
21	21.	55	3	Equivalent , General and RF Circuit of Transmission line	Chalk & Board
22	22.	55	3	Characteristics Impedance, Methods of calculation of Characteristics Impedance and Simple numerical	Chalk & Board
23	23.	55	3	Concept of losses in Transmission Line	Chalk & Board
24	24.	55	3	Concept of Standing wave, SWR, VSWR, Reflection coefficient and simple numerical based on them	Chalk & Board
25	25.	55	3	Quarter wavelength and half wavelength line	Chalk & Board

26	26.	55	3	Impedance matching and concept of Stubs	Chalk & Board
27	27.	55	3	Types of Stub - Single and Double	Chalk & Board
28	28.	55	3	Derivation of equation for primary and secondary constant of Transmission line	Chalk & Board
29	29.	55	3	Revision of Unit - 3	Chalk & Board
30	30.	55	4	Idea of the Television system	Chalk & Board
31	31.	55	4	Statement and Explanation of various terms related to TV like Aspect Ratio, Rectangular Switching, Flicker, Resolution	Chalk & Board
32	32.	55	4	Contd.- Video Bandwidth, Interlaced Scanning, Composite video Signal, synchronization pulses	Chalk & Board
33	33.	55	4	Explanation of the block diagram of TV Transmitter	Chalk & Board
34	34.	55	4	Explanation of the block diagram of Monochrome TV Receiver	Chalk & Board
35	35.	55	4	Explanation of SMPS of TV	Chalk & Board
36	36.	55	4	Working principle of SMPS of TV	Chalk & Board
37	37.	55	4	Discussing the concept of Colour TV signals	Chalk & Board
38	38.	55	4	Principle of operation of LCD display	Audio –Visual using Smart Class
39	39.	55	4	Principle of operation of Large Screen display	Audio –Visual using Smart Class
40	40.	55	4	Digital TV signals and its Transmission	Chalk & Board
41	41.	55	4	Explanation of Digital TV receivers and video programme processor unit	Chalk & Board
42	42.	55	4	Revision of Unit - 4	Chalk & Board
43	43.	55	5	Concept of Microwaves & its advantages and applications	Chalk & Board
44	44.	55	5	Wave guides and types of waveguides	Chalk & Board
45	45.	55	5	Operation of Rectangular waveguide and its advantages	Chalk & Board
46	46.	55	5	Propagation of EM Wave through waveguide with TE & TM Mode	Chalk & Board
47	47.	55	5	Operation of Circular waveguide	Chalk & Board
48	48.	55	5	Concept of Cavity Resonator and its working	Chalk & Board
49	49.	55	5	Explaining operation of Directional Couplers, Isolators & Circulators	Chalk & Board
50	50.	55	5	Operation of two cavity Klystron , Magnetron and Travelling Wave Tube(TWT)	Audio –Visual using Smart Class
51	51.	55	5	Differentiation among klystron, magnetron and TWT	Chalk & Board
52	52.	55	5	Revision of Unit - 5	Chalk & Board
53	53.	55	6	Fundamental concepts and network architecture of Broadband Communication System	Chalk & Board
54	54.	55	6	Cable broadband data network architecture	Chalk & Board
55	55.	55	6	Importance & future of Broadband Telecommunication Internet based network	Chalk & Board
56	56.	55	6	Benefits and applications of Broadband network and concept of Synchronous Optical Network(SONET)	Chalk & Board

57	57.	55	6	ISDN Device interfaces, services & Architecture and applications	Chalk & Board
58	58.	55	6	BISDN Device interfaces, services & Architecture and applications	Chalk & Board
59	59.	55	6	Protocol architecture applications of BISON	Chalk & Board
60	60.	55	6	Revision of Unit – 6	Chalk & Board



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ACADEMIC LESSON PLAN FOR WINTER SEMESTER JULY - 2019	
JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty: RAJENDRA DORA	Academic Year: 2019-20
Course No.: BST-501	Course Name: ENVIRONMENTAL STUDIES
Program: Diploma	Branch: ELECTRONICS & TELECOMMUNICATION
Year/Sem: 3rd / 5th	Section:
Examination : 3 Hours	End Semester Exam : 70marks
Internal Assessment : 30 Marks	TOTAL MARKS : 100 Marks

Sl. No.	Period	Time (min)	Unit/ Chapter	Topic to be covered	Teaching method
1.	1.	55	1	Objective of nature of environmental studies, concept	Black board
2.	2.	55	1	The Multidisciplinary nature of environmental studies	Black board
3.	3.	55	1	Definition, scope and importance, Need for public awareness	Black board
4.	4.	55	1	Revision of unit/chapter-1	Black board
5.	5.	55	2	Natural Resources Renewable and non renewable resources: Natural resources and associated	Black board
6.	6.	55	2	Problems Forest resources: Use and over-exploitation, deforestation, case studies	Black board
7.	7.	55	2	Timber extraction mining, dams and their effects on forests and tribal people.	Black board
8.	8.	55	2	Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam's benefits and problems	Black board
9.	9.	55	2	Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources.	Black board
10	10.	55	2	Food Resources: World food problems ,changes caused by agriculture	Black board
11	11.	55	2	Overgrazing, effects of modern agriculture, fertilizers-pesticides problems, water logging, salinity	Black board
12	12.	55	2	Energy Resources: Growing energy need, renewable and non-renewable energy sources, use of alternate energy sources	Audio visual smart class



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13	13.	55	2	case studies	Black board
14	14.	55	2	Land Resources: Land as a resource ,land degradation ,man induces landslides, soil erosion, and desertification.	Black board
15	15.	55	2	Role of individual in conservation of natural resources, Equitable use of resources for sustainable lifestyles.	Black board
16	16.	55	2	Revision of unit/chapter-2	Black board
17	17.	55	3	Concept of an eco system ,Structure and function of an ecosystem	Audio visual smart class
18	18.	55	3	Producers, consumers, decomposers, Energy flow in the ecosystems, Ecological succession	Black board
19	19.	55	3	Food chains, food web sand	Black board
20	20.	55	3	ecological pyramids, Introduction, types, characteristic features	Black board
21	21.	55	3	structure and function of the following ecosystem	Black board
22	22.	55	3	Forest ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries).	Black board
23	23.	55	3	Revision of unit/chapter-3	Black board
24	24.	55	4	Biodiversity and it's Conservation ,Introduction- Definition: genetics, species and ecosystem diversity.	Black board
25	25.	55	4	Biogeographically classification of India	Black board
26	26.	55	4	Value of biodiversity: consumptive use, productive use	Black board
27	27.	55	4	Social ethical, aesthetic and opt in values	Black board
28	28.	55	4	Biodiversity at global, national and local level	Black board
29	29.	55	4	Threats to biodiversity: Habitats loss, poaching of wild life, man wildlife conflicts	Black board
30	30.	55	4	Revision of unit/chapter-4	Black board
31	31.	55	5	Environmental Pollution :Definition Causes, effects and control measures of: a) Air pollution.	Audio visual smart class
32	32.	55	5	b) Water pollution. c) Soil pollution d) Marine pollution	Audio visual smart class
33	33.	55	5	e) Noise pollution. f) Thermal pollution g) Nuclear hazards.	Audio visual smart class



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34	34.	55	5	Solid waste Management: Causes, effects and control measures of urban and industrial wastes.	Black board
35	35.	55	5	Role of an individual in prevention of pollution.	Black board
36	36.	55	5	Disaster management: Floods, earth quake, cyclone and landslides	Black board
37	37.	55	5	Revision of unit/chapter-5	Black board
38	38.	55	6	Social issues and the Environment :From unsustainable to sustainable development, Urban problems related to energy	Black board
39	39.	55	6	Water conservation, rain water harvesting, water shed management.	Black board
40	40.	55	6	Resettlement and rehabilitation of people; its problems and concern	Black board
41	41.	55	6	Environmental ethics: issue and possible solutions	Black board
42	42.	55	6	Climate change, global warming, acid rain, ozone layer depletion	Audio visual smart class
43	43.	55	6	nuclear accidents and holocaust, case studies, Air (prevention and control of pollution) Act	Black board
44	44.	55	6	Water (prevention and control of pollution) Act, Public awareness	Black board
45	45.	55	6	Revision of unit/chapter-6	Black board
46	46.	55	7	Human population and the environment.	Black board
47	47.	55	7	Population growth and variation among nations	Black board
48	48.	55	7	Population explosion-family welfare program, Environment and human health	Black board
49	49.	55	7	Human rights, Value education	Black board
50	50.	55	7	Role of information technology in environment and human health.	Black board
51	51.	55	7	Revision of unit/chapter-7	Black board
52	52.	55		Revision of unit/chapter -6	Black board
53	53.	55		Revision of unit/chapter -5	Black board
54	54.	55		Revision of unit/chapter -4	Black board
55	55.	55		Revision of unit/chapter -3	Black board
56	56.	55		Revision of unit/chapter-4	Black board
57	57.	55		Revision of unit/chapter-4	Black board
58	58.	55		Revision of unit/chapter-3	Black board
59	59.	55		Revision of unit/chapter-2	Black board
60	60.	55		Revision of unit/chapter-1	Black board



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ACADEMIC LESSON PLAN FOR WINTER SEMESTER JULY - 2019	
JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty: RAJENDRA DORA	Academic Year: 2019-20
Course No.: BST-501	Course Name: Advanced Microprocessor & VLSI
Program: Diploma	Branch: ELECTRONICS & TELECOMMUNICATION
Year/Sem: 3rd / 5th	Section: A
Total Periods : 60 P/ Sem	End Semester Exam : 80marks
Examination : 3 Hours	Internal Assessment : 30 Marks
TOTAL MARKS : 100 Marks	Start of Class : 16 th JULY 2019

Sl. No.	Period	Time (min)	Unit/Chapter	Topic to be covered	Teaching method
1.	1.	55	1	Introduction of Microprocessor	Black board
2.	2.	55	1	Explain the block diagram of advanced microprocessor	Black board
3.	3.	55	1	Bus interface unit- Microprocessor cache super scalar issue of instructions,	Black board
4.	4.	55	1	Integer unit-floating point unit-MMU	Black board
5.	5.	55	2	Explain Memory Hierarchy – Register file – cache-address mapping	Black board
6.	6.	55	2	Virtual memory and paging segmentation	Black board
7.	7.	55	2	Discuss Pipe lining – pipe line hazards Instruction level parallelism, RISC versus CISC.	Black board
8.	8.	55	2	Bus Standards: Explain Parallel Communication– Serial Communication-RS 232	Black board
9.	9.	55	2	I ² C – CAN-USB – Fire Wireless Communication-IrDA	Black board
10.	10.	55	2	Basic features and compare between 80486 & Pentium IV processor	Black board
11.	11.	55	2	Define Historical perspective.	Black board
12.	12.	55	2	Introduction to MOS Transistor	Audio visual smart class



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13.	13.	55	2	Basic operation of MOS	Black board
14.	14.	55	2	Explain structure and operation of MOSFET (n-MOS enhancement type)& COMS	Black board
15.	15.	55	2	Explain MOSFET V-I characteristics	Black board
16.	16.	55	2	Explain MOSFET scaling and small geometry effects.	Black board
17.	17.	55	3	Explain MOSFET capacitances.	Audio visual smart class
18.	18.	55	3	Explain Modelling of MOS Transistors including Basic concept the SPICE level-1 models,	Black board
19.	19.	55	3	The SPICE level-2	Black board
20.	20.	55	3	The SPICE level-3	Black board
21.	21.	55	3	Explain Basic steps in MOS Fabrication processes	Black board
22.	22.	55	3	NMOS Fabrication process	Black board
23.	23.	55	3	CMOS Fabrication Process Flow	Black board
24.	24.	55	4	MOS Fabrication process by n-well on p-substrate	Black board
25.	25.	55	4	CMOS Fabrication process by P-well on n-substrate	Black board
26.	26.	55	4	Explain Layout Design rules	Black board
27.	27.	55	4	Explain Stick Diagrams	Black board
28.	28.	55	4	Stick Diagram of CMOS inverter	Black board
29.	29.	55	4	Explain VLSI Design methodologies	Black board
30.	30.	55	4	VLSI Design Flow & Y chart	Black board
31.	31.	55	5	Explain Basic n MOS inverters, characteristics,	Audio visual smart class
32.	32.	55	5	Describe inverters with resistive load, active Enhancement Load, Active Depletion n-MOS inverter	Audio visual smart class
33.	33.	55	5	Explain CMOS inverter and characteristics	Audio visual smart class
34.	34.	55	5	Interconnect effects: Delay time definitions	Black board
35.	35.	55	5	Explain inverter design with delay constraints.	Black board
36.	36.	55	5	Define Static logic	Black board



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37.	37.	55	5	Explain Static CMOS logic circuits (AOI, NAND ,NOR)	Black board
38.	38.	55	6	Explain XOR & XNOR CMOS logic circuits	Black board
39.	39.	55	6	Explain Complementary Pass Transistor (CPL) Logic	Black board
40.	40.	55	6	Define Dynamic logic and difference with static logic	Black board
41.	41.	55	6	Define high performance dynamics CMOS circuits.	Black board
42.	42.	55	6	Define high performance dynamics CMOS circuits.	Audio visual smart class
43.	43.	55	6	Explain Dynamic Ram,	Black board
44.	44.	55	6	SRAM, flash memory	Black board
45.	45.	55	6	Explain SR Flip Flop/latch,	Black board
46.	46.	55	6	Explain clocked SR latch flip-flop circuits.	Black board
47.	47.	55	6	Explain D latch	Black board
48.	48.	55	7	Design Language (SPL & HDL)	Black board
49.	49.	55	7	Explain HDL & EDA tools	Black board
50.	50.	55	7	Design strategies & concept of FPGA	Black board
51.	51.	55		Design strategies & concept of FPGA	Black board
52.	52.	55		standard cell based design	Black board
53.	53.	55		Explain design flow using VHDL and packages	Black board
54.	54.	55		standard cell based design	Black board
55.	55.	55		Explain design flow using VHDL and packages	Black board
56.	56.	55		Numerical problems solving	Black board
57.	57.	55		Numerical problems solving	Black board
58.	58.	55		Revision of all topics	Black board
59.	59.	55		Revision of all topics	Black board
60.	60.	55		Numerical problems solving	Black board