

**DEPARTMENT OF INFORMATION TECHNOLOGY**

Course Code / Name : U15EC305 / DIGITAL LOGIC DESIGN

Class (Year / Programme / Department / Section): II / B.TECH / IT

LESSON PLAN

UNIT 1 (DIGITAL SYSTEMS AND BINARY NUMBERS)				
Session No	Topics to be covered	Duration in minutes	Teaching Aid	Book Referred
1	Introduction of Digital Systems	45	BB	A
2	Number Systems	45	BB	A
3	Number System base conversion	45	BB	A
4	Binary to Decimal conversion	45	BB	A
5	Decimal to octal & Hexadecimal conversion	45	BB	A
6	Problems workout	45	BB	A
7	Signed Binary Numbers	45	BB	A
8	Binary Codes	45	BB	A,B
9	Logic Gates	45	BB	A
10	Problems Workout	45	BB	A,B
UNIT 2 (BOOLEAN ALGEBRA)				
1	Introduction of Boolean Algebra	45	BB	A
2	Axioms and Laws of Boolean Algebra	45	BB	A
3	Boolean function <ul style="list-style-type: none">• Canonical Forms• Standard Forms	45	BB	A
4	Introduction of K-Map	45	BB	A
5	Types of K – Map <ul style="list-style-type: none">• One variable K – map• Two variable K - map	45	BB	A

6	Problems workout	45	BB	A,B
7	<ul style="list-style-type: none"> • Three variable K – map • Four Variable K - map 	45	BB	A
8	Problems Workout	45	BB	A,B
9	Don't care Condition	45	BB	A
10	NAND and NOR Implementation	45	BB	A
11	Revision	45	BB	-

UNIT 3 (COMBINATIONAL LOGIC)

1	Introduction of Combinational Logic	45	BB	A
2	Logic Circuits	45	BB	A
3	Binary Adder and Subtractor	45	BB	A
4	Problems Workout	45	BB	A,B
5	Look Ahead Carry Adder	45	BB	A
6	Problems Workout	45	BB	A,B
7	Comparators	45	BB	A
8	Decoders	45	BB	A
9	Encoders	45	BB	A,B
10	Multiplexers	45	BB	A,B
11	Demultiplexers	45	BB	A
12	Revision	45	BB	-

UNIT 4 (MEMORY AND PROGRAMMABLE LOGIC)

1	Introduction of Memory and Programmable Logic Device	45	BB	A
2	Programmable Logic Device <ul style="list-style-type: none"> • ROM • PROM 	45	BB	A
3	Continuity of Programmable Logic Device <ul style="list-style-type: none"> • EPROM • EEPROM 	45	BB	A,B
4	Programmable Logic Array (PLA)	45	BB	A,B

5	Problems Workout	45	BB	A,B
6	Programmable Array Logic (PAL)	45	BB	A
7	Problems Workout	45	BB	A,B
8	Problems Workout	45	BB	A,B
9	Revision	45	BB	A
UNIT 5 (SYNCHRONOUS SEQUENTIAL LOGIC)				
1	Introduction of Synchronous Logic	45	BB	A
2	Over view of Sequential circuits	45	BB	A
3	Latch	45	BB	A
4	Flip Flop <ul style="list-style-type: none"> • SR Flip Flop • Jk Flip Flop 	45	BB	A,B
5	<ul style="list-style-type: none"> • T Flip Flop • D Flip Flop 	45	BB	A,B
6	Execution tables of Flip Flop	45	BB	A
7	Problems Workout	45	BB	A
8	Register and Counters	45	BB	A
9	Shift registers	45	BB	A,B
10	Problems workout	45	BB	A
11	Counters and Ripple Counters	45	BB	A
12	Other Counters	45	BB	A
13	Problems workout	45	BB	A
14	Revision	45	BB	-