SUDDHANANDA ENGINEERING & RESEARCH CENTER LESSON PLAN

Discipline:ELECTRICAL ENGG.	Semester:5thSem	Name of the Teaching Faculty: Sagarika Mohanty
Subject: DEC&MP	No.of Days/ perweekclass	

Unit/Module	Topics	No. of period required
Unit 1	1. **BASICS OF DIGITALELECTRONICS** Binary,Octal,Hexadecimal numbersystems andcompare withDecimal system.	1
	1.2Binaryaddition,subtraction,Multiplicationand Division.	1
	1.4Subtraction ofbinarynumbers in 2's complement method.	1
	1.5Useofweighted andUn-weighted codes&writeBinaryequivalentnumber	1
	1.7Logic Gates:AND, OR,NOT,NAND, NORand EX-ORgates withtruthtable.	1
	1.8 RealizeAND,OR, NOT operationsusing NANDgates	1
	1.8 RealizeAND,OR, NOToperations usingNORgates	1
	1.9 Different postulatesand De-Morgan'stheoremsin Booleanalgebra.	1
	1.10UseOf BooleanAlgebraFor Simplification OfLogicExpression	1
	1.10UseOf BooleanAlgebraFor Simplification OfLogicExpression	1
	1.11Karnaugh Map For 2,3,4 Variable, SimplificationOf SOP And POS LogicExpression UsingK-Map.	1
	1.11Karnaugh Map For 2,3,4 Variable, SimplificationOf SOP And POS LogicExpression UsingK-Map.	1
	Revision	1
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Unit 2	**2.COMBINATIONALLOGICCIRCUITS**	
	2.2Half adder circuit and verifyitsfunctionalityusingtruth table	1
	CLASSTEST-1	1
	2.3RealizeaHalf-adderusingNANDgatesonly and NORgates only.	1
	2.4Fulladder circuit and explainitsoperationwith truth table.	1
	2.5 Realize full-adder using two Half-addersandan OR– gateand write truthtable	1
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	2.7 Operationof4 X1Multiplexersand 1 X4demultiplexer	1
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	2.8WorkingofBinary-Decimal Encoder &3 X8 Decoder.	1
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	2.9Workingof Twobit magnitude comparator.	1
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	REVISION	1
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Unit 3	**3.SEQUENTIALLOGICCIRCUITS**	1
	3.1 Give theidea ofSequentiallogic circuits	1
	3.2Statethe necessity of clockand givethe conceptoflevelclockingandedgetriggering	1
	3.3ClockedSRflip flopwith preset and clear inputs.	1
	3.5Constructlevel clocked JKflip flop usingS-Rflip-flop andexplain withtruth table	1
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	3.6 Concept ofracearound conditionandstudyof masterslaveJK flipflop	1
	3.5Constructlevel clocked JKflip flop usingS-Rflip-flop andexplain withtruth table	1

	3.7 Give the truthtables ofedgetriggeredD andT flipflops and draw theirsymbols.	1
	3.8 Applicationsofflip flops	1
	3.104-bit asynchronouscounterand itstimingdiagram	1
	3.11Asynchronousdecadecounter.	1
	3.124-bitsynchronous counter.	1
	3.13Distinguishbetweensynchronousandasynchronous counters	1
	3.14Statetheneedfora Registerandlistthefourtypes ofregisters.	1
	3.15 WorkingofSISO,SIPO, PISO,PIPORegister withtruth table usingflipflop	1
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	REVISION	1
Unit 4	**4.8085MICROPROCESSOR**	
	4.1IntroductiontoMicroprocessors, Microcomputers	1
	4.2Architectureof Intel8085AMicroprocessoranddescription of each block.	1
	4.3 Pindiagram anddescription.	1
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	INTERNALTEST	**1**
	4.4Stack, Stackpointer&stacktop	1
	4.5Interrupts	1
	4.8 Instructionset of8085example	1
	4.8 Instructionset of8085example	1
	4.9Addressingmode	1
	4.10 FetchCycle,MachineCycle,Instruction Cycle,T-State	1
	4.11Timing Diagram formemoryread, memorywrite,I/Oread, I/O write	1
	4.11Timing Diagram formemoryread, memorywrite,I/Oread, I/O write	1
	4.12Timing Diagramfor8085instruction	1

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	4.13 Counterandtimedelay.	1
	4.14Simpleassemblylanguageprogrammingof 8085.	1
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	REVISION	1
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Unit 5	**5.INTERFACINGANDSUPPORTCHIPS**	
	5.1BasicInterfacingConcepts,Memorymapping&I/O mapping	1
	interfaceIntel 8255	1
	5.3 Applicationusing8255: Seven segment LEDdisplay,Square wave generator, Traffic light Controlle	1
	5.3 Applicationusing8255: Seven segment LEDdisplay,Square wave generator, Traffic light Controlle	1
	5.3Application using8255:SevensegmentLED display,Squarewavegenerator,Traffic light Controlle	1
	REVISION	1
	CLASSTEST-2	**1**
	REVISION	1