NILASAILAINSTITUTEOFSCIENCE&TECHNOLOGY
SERGARH-756060, BALASORE (ODISHA)
(ApprovedbyAICTE&affiliatedtoSCTE&VT, Odisha)

LESSONPLAN

SUBJECT:Th-2(DIGITAL ELECTRONICS & MICROPROCESSOR)

CHAPTERWISEDISTRIBUTIONOFPERIODS

Sl.No.	NameofthechapteraspertheSyllabus	No. of Periodsas perthe Syllabus	No. of periods actually needed
1	BasicsOfDigitalElectronics	15	15
2	CombinationalLogicCircuits	15	15
3	SequentialLogicCircuits	15	8
4	8085Microprocessor	20	20
5	InterfacingAndSupportChips	10	10
	TOTAL	75	75

scipline: EEE	Semester: 5th	NameoftheTeachingFaculty:Er.RANJAN KUMAR PADHI
Week	ClassDay	Theory/PracticalTopics
1st	1st	**1.BASICSOFDIGITALELECTRONICS** 1.1 Binary, Octal,HexadecimalnumbersystemsandcomparewithDecimal system.
	2nd	1.1Binary,Octal,Hexadecimalnumbersystemsandcomparewith Decimal system
	3rd	1.1Binary,Octal,Hexadecimalnumbersystemsandcomparewith Decimal system
	4th	1.2Binaryaddition,subtraction,MultiplicationandDivision.
	5th	1.31'scomplementand2'scomplementnumbersforabinarynumber
2nd	1st	1.4Subtractionofbinarynumbersin2'scomplement method.
	2nd	1.5UseofweightedandUn-weightedcodes&writeBinaryequivalent numberforanumberin8421,Excess-3andGrayCodeandvice-versa.
	3rd	1.6ImportanceofparityBit.
	4th	1.7LogicGates:AND,OR,NOT,NAND,NORandEX-ORgateswith truth table.
	5th	1.7LogicGates:AND,OR,NOT,NAND,NORandEX-ORgateswith truth table.
3rd	1st	1.8RealizeAND,OR,NOToperationsusingNAND,NORgates.
	2nd	1.9DifferentpostulatesandDe-Morgan'stheoremsinBooleanalgebra.
	3rd	1.10UseOfBooleanAlgebraForSimplificationOfLogicExpression
	4th	1.11KarnaughMapFor2,3,4Variable,SimplificationOfSOPAndPOS Logic Expression Using K-Map.
	5th	1.11KarnaughMapFor2,3,4Variable,SimplificationOfSOPAndPOS Logic Expression Using K-Map.

4th	1st	**2. COMBINATIONALLOGICCIRCUITS** Givetheconceptofcombinationallogiccircuits.
	2nd	2.2Halfaddercircuitandverifyitsfunctionalityusingtruthtable.
	3rd	2.2Halfaddercircuitandverifyitsfunctionalityusingtruthtable.
	4th	2.3RealizeaHalf-adderusingNANDgatesonlyandNORgatesonly.
	5th	2.4Fulladdercircuitandexplainitsoperationwithtruthtable.
5th	1st	2.4Fulladdercircuitandexplainitsoperationwithtruthtable.
	2nd	2.5Realizefull-adderusingtwoHalf-addersandanOR–gateandwrite truth table
	3rd	2.6Fullsubtractorcircuitandexplainitsoperationwithtruthtable.
	4th	2.6Fullsubtractorcircuitandexplainitsoperationwithtruthtable.
	5th	**2.7Operationof4X1Multiplexersand1X4demultiplexer**
6th	1st	2.7Operationof4X1Multiplexersand1X4demultiplexer
	2nd	2.8WorkingofBinary-DecimalEncoder&3X8Decoder.
	3rd	2.8WorkingofBinary-DecimalEncoder&3X8Decoder.
	4th	2.9WorkingofTwobitmagnitudecomparator.
	5th	2.9WorkingofTwobitmagnitudecomparator.
7th	1st	3. SEQUENTIALLOGICCIRCUITS GivetheideaofSequentiallogiccircuits.
	2nd	3.2Statethenecessityofclockandgivetheconceptoflevelclocking and edge triggering,
	3rd	3.3ClockedSRflipflopwithpresetandclearinputs.
	4th	3.5ConstructlevelclockedJKflipflopusingS-Rflip-flopandexplain withtruthtable
	5th	3.6ConceptofracearoundconditionandstudyofmasterslaveJKflip flop.
8th	1st	3.7GivethetruthtablesofedgetriggeredDandTflipflopsanddraw their symbols.
	2nd	3.8Applicationsofflipflops. 3.9Definemodulusofacounter
	3rd	3.104-bitasynchronouscounteranditstimingdiagram.
	4th	3.104-bitasynchronouscounteranditstimingdiagram.
	5th	3.11Asynchronousdecadecounter.

9th	1st	3.124-bitsynchronouscounter.
	2nd	3.13Distinguishbetweensynchronousandasynchronouscounters.
	3rd	3.14StatetheneedforaRegisterandlistthefourtypesofregisters.
	4th	3.15WorkingofSISO,SIPO,PISO,PIPORegisterwithtruthtable using flip flop.
	5th	3.15WorkingofSISO,SIPO,PISO,PIPORegisterwithtruthtable using flip flop.
10th	1st	4. 8085MICROPROCESSOR IntroductiontoMicroprocessors,Microcomputers
	2nd	4.2ArchitectureofIntel8085AMicroprocessoranddescriptionofeach block.
	3rd	4.2ArchitectureofIntel8085AMicroprocessoranddescriptionofeach block.
	4th	4.2ArchitectureofIntel8085AMicroprocessoranddescriptionofeach block.
	5th	4.3Pindiagramanddescription.
11th	1st	4.3Pindiagramanddescription.
	2nd	4.3Pindiagramanddescription.
	3rd	4.4Stack,Stackpointer&stacktop
	4th	4.5Interrupts
	5th	4.6Opcode&Operand,
12th	1st	4.7Differentiatebetweenonebyte,twobyte&threebyteinstruction with example.
	2nd	4.8Instructionsetof8085example
	3rd	4.9Addressingmode
	4th	4.9Addressingmode
	5th	4.10FetchCycle,MachineCycle,InstructionCycle,T-State
	1st	4.11TimingDiagramformemoryread,memorywrite,I/Oread,I/O write

13th	2nd	4.11TimingDiagramformemoryread,memorywrite,I/Oread,I/O write
	3rd	4.12TimingDiagramfor8085instruction
	4th	4.13Counterandtimedelay.
	5th	4.14Simpleassemblylanguageprogrammingof8085.
14th	1st	5. INTERFACINGAND SUPPORTCHIPS BasicInterfacingConcepts,Memorymapping&I/Omapping
	2nd	BasicInterfacingConcepts,Memorymapping&I/Omapping
	3rd	BasicInterfacingConcepts,Memorymapping&I/Omapping
	4th	5.2Functionalblockdiagramanddescriptionofeachblockof Programmable peripheral interface Intel 8255
	5th	5.2Functionalblockdiagramanddescriptionofeachblockof Programmable peripheral interface Intel 8255
15th	1st	5.2Functionalblockdiagramanddescriptionofeachblockof ProgrammableperipheralinterfaceIntel8255
	2nd	5.2Functionalblockdiagramanddescriptionofeachblockof Programmable peripheral interface Intel 8255
	3rd	5.3Applicationusing8255:SevensegmentLEDdisplay,Squarewave generator, Traffic light Controller
	4th	5.3Applicationusing8255:SevensegmentLEDdisplay,Squarewave generator,TrafficlightController
	5th	5.3Applicationusing8255:SevensegmentLEDdisplay,Squarewave generator, Traffic light Controller