



**PARVATHANENI BRAHMAYYA  
SIDDHARTHA COLLEGE OF ARTS & SCIENCE**

*Autonomous*

Siddhartha Nagar, Vijayawada-520010

*Re-accredited at 'A+' by the NAAC*

**23IOMIP121: Digital Electronics Lab**

Semester – II

Minor -1 (P)

Offered to : All UG Programs

**Credits: 01**

CO1 : Remember the binary number theory of digital circuits PO3

CO2 : To verify the truth table of Digital IC logic gates. PO1

CO3 : Apply design various logical inputs of different IC- logic families PO7

CO4: To verify the truth table of Flip-flops. PO1

CO5: To verify the truth table of ADDERS. PO1

CO-PO MATRIX								
	CO-PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
23IOMIP121	CO1			2				
	CO2	2						
	CO3							3
	CO4	3						
	CO5	3						

L=1 M =2 H =3

**LAB LIST:**

1. Verification of IC-logic gates
2. Verification of De-Morgan's laws
3. Verify one bit comparator
4. Realization of basic gates using Universal gates (NAND & NOR gates)
5. Verify Half adder and full adder using gates
6. Verify Half subtractor and full subtractor using gates.
7. Verify the truth table of RS-F/F using NAND gates
8. Verify the truth table of JK-F/F using NAND gates
9. 4-bit binary parallel adder and subtractor using IC 7483

Lab experiments are to be done on breadboard and simulation software (using Multisim) and output values are to be compared and justified for variation.

**LAB MANUAL ARE SUPPLIED BY DEPARTMENT**

**Question Paper Pattern for Core Lab Courses**

**SEE (LAB) Model Question Paper**

23IOMIP121

Offered to: BCA, B.Sc.-AI

Max.Marks: 35

Max.Time: 3Hours

Pass. Min: 14

**(A) Evaluation Procedure**

Max. Marks: 30

Each and every student must complete 10 practicals at the time of lab the student has to select one of the practical and perform practical on bread board using components.

- |   |     |
|---|-----|
| 1. Aim, Apparatus, Circuit diagram, Tabular form- | 10m |
| 2. Experiment -                                   | 10m |
| 3. Result-  | 5m  |
| 4. Viva-  | 5m  |
| 5. Record-  | 5m  |

(B) Continuous Assessment:

15 MARKS

TOTAL : (A)+(B) =

50MARKS