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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech II Year I Semester Supplementary Examinations August-2021
COMPUTER ORGANIZATION & ARCHITECTURE
(Common to CSE & CSIT)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- 1 a Write in detail about the Basic Operational Concepts with neat diagram. 7M
 b Write a note on basic I/O operations. 5M

OR

- 2 Summarize the Addressing Modes with neat sketch. 12M

UNIT-II

- 3 Show the step by step signed-operand multiplication process using Booth algorithm When (-9) and (-13) are multiplied. Assume 5-bit registers to hold signed numbers and (-9) to be the multiplicand. 12M

OR

- 4 Develop a Flowchart and Algorithm for Add/Sub with an example. 12M

UNIT-III

- 5 a Illustrate the three- state bus buffers with neat sketch. 6M
 b What is Hardwired Control? Explain in detail with a neat diagram. 6M

OR

- 6 Explain shift micro operations and draw 4 bit combinational circuit shifter. 12M

UNIT-IV

- 7 a Differentiate between RAM & ROM. 6M
 b Distinguish between SRAM & DRAM. 6M

OR

- 8 What is Virtual Memory? Discuss how paging helps in implementing virtual memory. 12M

UNIT-V

- 9 Implement three types multiprocessor system with neat sketch. 12M

OR

- 10 Categorize and discuss various forms of parallel processing based on Flynn's taxonomy with a neat sketch. 12M

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