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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)

**B. Tech II Year I Semester Supplementary Examinations November-2022**  
**COMPUTER ORGANIZATION & ARCHITECTURE**

(Common to CSE, CSIT, CSM &amp; CIC)

Time: 3 hours

Max. Marks: 60

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

**UNIT-I**

- 1 a Define Computer architecture, organization and list basic functional units in Computer. L1 4M  
b Sketch the basic functional unit of computer and explain each unit in detail. L3 8M

OR

- 2 a Discuss about Program counter and Memory Address register. L2 4M  
b Explain Program Control Instructions. L2 8M

**UNIT-II**

- 3 a Compare fixed and floating point representations. L5 8M  
b Describe about Character representation. L2 4M

OR

- 4 a Develop a Flowchart for Addition and Subtraction. L3 4M  
b Illustrate the steps for Addition and Subtraction with an example. L3 8M

**UNIT-III**

- 5 a Examine the Bus transfer with neat diagram. L3 8M  
b Draw and explain four bit adder-subtractor circuit L2 4M

OR

- 6 What is Hardwired Control? Explain in detail with a neat diagram. L4 12M

**UNIT-IV**

- 7 a Distinguish between SRAM & DRAM? L4 4M  
b Discuss briefly about synchronous DRAMs? L2 8M

OR

- 8 a Define Cache Memory? Explain in detail its mapping functions. L3 4M  
b Explain about hit and miss in the memory? L2 8M

**UNIT-V**

- 9 a Explain in detail about basic pipeline processing? L2 6M  
b Sketch the arithmetic pipeline for floating point multiplication? L3 6M

OR

- 10 Describe the Interconnection Structures in detail. L3 12M

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