

Reg. No:

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

**B.Tech II Year I Semester Supplementary Examinations December-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. | L3 | 6M |
|   | b | Explain the Instruction Cycle with neat diagram.                        | L4 | 6M |

**OR**

- |   |  |  |    |     |
|---|--|--|----|-----|
| 2 |  | Illustrate any four addressing modes with neat sketch. | L3 | 12M |
|---|--|--|----|-----|

**UNIT-II**

- |   |  |   |    |     |
|---|--|---|----|-----|
| 3 |  | Show the steps of signed operand multiplication with example? | L2 | 12M |
|---|--|---|----|-----|

**OR**

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|---|--|---|----|-----|
| 4 |  | Describe the Floating point numbers, its operations and implementation. | L2 | 12M |
|---|--|---|----|-----|

**UNIT-III**

- |   |   |  |    |    |
|---|---|--|----|----|
| 5 | a | Examine the Bus transfer with neat diagram.                | L3 | 6M |
|   | b | Summarize the Register Representations and way it is used. | L5 | 6M |

**OR**

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|---|---|---|----|----|
| 6 | a | What is Hardwired Control? Explain in detail with a neat diagram. | L4 | 8M |
|   | b | Describe about 4-bit incrementer with suitable example?           | L2 | 4M |

**UNIT-IV**

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|---|--|--|----|-----|
| 7 |  | What is Main Memory and what are the types in it? Explain in detail. | L4 | 12M |
|---|--|--|----|-----|

**OR**

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

**UNIT-V**

- |   |   |  |    |    |
|---|---|--|----|----|
| 9 | a | Describe the concept of Pipelining with clear example. | L2 | 8M |
|   | b | Write the characteristics of Multiprocessor.           | L3 | 4M |

**OR**

- |    |  |   |    |     |
|----|--|---|----|-----|
| 10 |  | Implement three types multiprocessor system with neat sketch. | L6 | 12M |
|----|--|---|----|-----|

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