

Reg. No:

--	--	--	--	--	--	--	--	--

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)B.Tech II Year I Semester Supplementary Examinations November-2020
COMPUTER ORGANIZATION & ARCHITECTURE
(Common to CSE & CSIT)

Time: 3 hours

Max. Marks: 60

PART-A

(Answer all the Questions 5 x 2 = 10 Marks)

- | | | | |
|---|---|--|----|
| 1 | a | What is bus structure? | 2M |
| | b | What is Booth algorithm? | 2M |
| | c | Define hardwired control unit. | 2M |
| | d | What is the role DMA in peripheral devices? | 2M |
| | e | What are characteristics of multiprocessors? | 2M |

PART-B

(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

- | | | | |
|---|---|--|----|
| 2 | a | Explain about Instruction Execution Cycle with neat diagram. | 5M |
| | b | Write in detail about Program Control Instructions. | 5M |

OR

- | | | | |
|---|---|---|----|
| 3 | a | What is Computer Registers and explain the types in it. | 4M |
| | b | Write in detail about Addressing Modes and its types. | 6M |

UNIT-II

- | | | |
|---|--|-----|
| 4 | Draw the H/W Flowchart and H/W Algorithm for Multiplication for positive numbers with an suitable example. | 10M |
|---|--|-----|

OR

- | | | | |
|---|---|---------------------------------|----|
| 5 | a | Explain Carry look-ahead adder. | 5M |
| | b | Explain Ripple carry adder. | 5M |

UNIT-III

- | | | | |
|---|---|--|----|
| 6 | a | Write about Bus transfer with neat diagram. | 5M |
| | b | Write out Register Representations and way it is used. | 5M |

OR

- | | | | |
|---|---|--|----|
| 7 | a | Explain about three- state bus buffers with neat sketch. | 6M |
| | b | Write about binary increment with neat sketch. | 4M |

UNIT-IV

- | | | |
|---|--|-----|
| 8 | What is Virtual Memory? Discuss how paging helps in implementing virtual memory. | 10M |
|---|--|-----|

OR

- | | | | |
|---|---|--|----|
| 9 | a | List out some differences between RAM & ROM. | 5M |
| | b | List out some differences between SRAM & DRAM. | 5M |

UNIT-V

- | | | | |
|----|---|--|----|
| 10 | a | Draw 8×8 omega switching network with explanation. | 5M |
| | b | Explain crossbar switch with neat sketch. | 5M |

OR

- | | | |
|----|--|-----|
| 11 | Define hazards. Explain in detail about instruction hazards. | 10M |
|----|--|-----|

END