

III B. Tech I Semester Supplementary Examinations, July – 2023
COMPUTER ARCHITECTURE & ORGANIZATION
 (Electronics and Communication Engineering)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**
 All Questions Carry Equal Marks

UNIT-I

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|----|----|---|------|
| 1. | a) | Describe functional units of computer with neat sketch. | [7M] |
| | b) | Explain instruction execution with neat sketch. | [7M] |
| | | (OR) | |
| 2. | a) | Describe use of processor clock, | [7M] |
| | b) | Describe the structure of the Bus. | [7M] |

UNIT-II

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|----|----|--|------|
| 3. | a) | Summarize the addressing modes. | [7M] |
| | b) | Describe branch instructions. | [7M] |
| | | (OR) | |
| 4. | a) | Describe the role of stacks in computer programming equation | [7M] |
| | b) | Explain shift and rotate instructions | [7M] |

UNIT-III

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|----|----|---|------|
| 5. | a) | Illustrate role of Interrupt hardware with neat sketch. | [7M] |
| | b) | Describe Universal Serial Bus (USB). | [7M] |
| | | (OR) | |
| 6. | a) | Explain Direct memory access (DMA) with neat sketch. | [7M] |
| | b) | Explain handling of multiple devices with interrupts. | [7M] |

UNIT-IV

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|----|----|---|------|
| 7. | a) | Describe ROM, PROM and EPROM. | [7M] |
| | b) | Summarize types of mapping functions in cache memory. | [7M] |
| | | (OR) | |
| 8. | a) | Explain hierarchy of memory systems with neat sketch. | [7M] |
| | b) | Describe features of optical disk. | [7M] |

UNIT-V

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|-----|----|--|------|
| 9. | a) | Explain Hardwired control | [7M] |
| | b) | Explain micro programming sequencing | [7M] |
| | | (OR) | |
| 10. | a) | Explain role of micro instructions with an example. | [7M] |
| | b) | Describe the logical operations execution procedure. | [7M] |

