**5 Questions – Apply/Analysis (should be the level of 2-3 marks)**

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 1 | |
| **Question** | **List the three types of peripherals**. | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Easy | Understand |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Peripheral Devices | |
| **Sub Topic** | Input/output devices | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 2 | |
| **Question** | What are the types of data transfer used in i/o organization? | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Medium | Understand |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Data Transfer | |
| **Sub Topic** | Asynchronous Data Transfer | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 3 | |
| **Question** | State the two types that are common to implement interrupt | |
| **Solution** |  | |
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| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Medium | Analyse |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Interrupt | |
| **Sub Topic** | Types of interrupt | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 4 | |
| **Question** | Classify the different types flynn’s classification  . | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Easy | Analyse |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Flynn’s classification | |
| **Sub Topic** | Multiple data sets | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 5 | |
| **Question** | Recall pipeline bubble? | |
| **Solution** |  | |
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| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Easy | Remember |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Pipelining | |
| **Sub Topic** | Instruction fetch | |

**5 Questions (10 marks – Analysis level)**

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 1 | |
| **Question** | (i)Distinguish between a synchronous and an asynchronous data transfer  (ii) Explain DMA operation? State its advantages? | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Easy | Apply |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Direct Memory Address | |
| **Sub Topic** | DMA Opreation | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 2 | |
| **Question** | Define the Priority Interrupt and explain its types with neat diagram. | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Medium | Analyse |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Priority Interrupt | |
| **Sub Topic** | Daisy-Chaining Method | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 3 | |
| **Question** | Explain about the following concepts (i)SISD  (ii)SIMD  (iii)MISD  (iv)MIMD | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Easy | Apply |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Flynn’s Classification | |
| **Sub Topic** | Flynn’s Operations | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 4 | |
| **Question** | i) Give the concept of parallel processing.  ii) Summarize the challenges faced by parallel processing | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Medium | Apply |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Parallel processing | |
| **Sub Topic** | Parallel processing challenges | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 5 | |
| **Question** | Write about the following concepts : a. RISC pipeline b. Vector processing c. Array processors | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Hard | Apply |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Parallel Processing | |
| **Sub Topic** | Vector Processing | |

**10 Questions (5 marks – Comprehension / Application level)**

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 1 | |
| **Question** | Describe input-output-processor (IOP) Organization in detail? | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Easy | Analyse |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | input-output-processor | |
| **Sub Topic** | Mapped I/O | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 2 | |
| **Question** | Explain in detail about Peripheral Devices and its types. | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Easy | Analyse |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Peripheral Devices | |
| **Sub Topic** | Input-Output peripherals | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 3 | |
| **Question** | Discuss Strobe Control method of Asynchronous data transfer technique? | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Medium | Apply |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Asynchronous data transfer | |
| **Sub Topic** | Strobe Control | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 4 | |
| **Question** | Discuss various techniques used for Modes of Transfer? | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Medium | Apply |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Data Transfer | |
| **Sub Topic** | Destination Initiated | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 5 | |
| **Question** | List the different methods used for handling the situation when multiple Interrupts occur? | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Medium | Remember |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Interrupt | |
| **Sub Topic** | Interrupt service | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 6 | |
| **Question** | Explain the concept Communication Interface with architecture diagram. | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Medium | Remember |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Communication Interface | |
| **Sub Topic** | Read/Write control logic | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 7 | |
| **Question** | Differentiate synchronous and asynchronous data transfer? | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Medium | Understand |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Data transfer | |
| **Sub Topic** | Framing | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 8 | |
| **Question** | Explain three segment instruction pipelines. Show the timing diagram and show the Timing diagram with data conflict | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Medium | Apply |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Instruction pipelines | |
| **Sub Topic** | data conflict | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 9 | |
| **Question** | Describe about pipeline? Explain arithmetic pipeline | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Medium | Remember |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Pipeline | |
| **Sub Topic** | arithmetic pipeline | |

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| **Question Type** | Subjective / Analysis | |
| **Question number** | 10 | |
| **Question** | Explain Daisy-Chaining Priority interrupt method | |
| **Solution** |  | |
|  | | |
| **Question Metadata** | **Difficulty Level** | **Bloom’s Taxonomy** |
|  | Easy | Remember |
| **Tags** |  | |
| **Subject** | COA | |
| **Topic** | Daisy-Chaining | |
| **Sub Topic** | Priority interrupt | |

INSTRUCTIONS:

1. Don’t Edit Question Type.
2. In question number, you can enter both numbers, text and special characters.
3. Question - it can be **text and images.[Mandatory]**
4. Only maximum of 5 options can be added. Unused options can be left empty. Under Description Column add option content (it can be both **text and image**). **[Mandatory]**
5. In correct(Y) Column, if option is correct answer then include `Y` . Only one option can have the value ‘Y’ other options can be left empty **[Mandatory]**
6. Optional - Select Manual Difficulty of a question (Default: Easy). To change, click over the value present in Manual Difficulty to enable Dropdown.
7. Optional - Select Bloom’s Taxonomy only from Dropdown list. To access dropdown list, click existing value for Bloom’s Taxonomy.