**Assignment – 3**

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| **1** | Explain asynchronous data transfer using timing diagrams. |
| **2** | What is Instruction Pipeline? Explain the Four-Segment Instruction Pipeline with the suitable diagram. |
| **3** | Design and explain a common bus system for four register each of 4 bit using multiplexer |
| **4** | List and explain different types of shift microoperation. |
| **5** | Explain the design of accumulator logic with block diagram |

**Assignment – 4**

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| **1** | Explain the basic working principle of the Control Unit of basic computer using diagram. |
| **2** | Explain Address Sequencing process in a microprogrammed control unit using suitable diagram |
| **3** | Explain the Common Bus System with its diagram. |
| **4** | Discuss the phases of Instruction Cycle with flowchart. |
| **5** | Explain the following instructions: SPA, SNA, SZA, SZE |