

(3 hours)

Total Marks: 80

- N.B.**
1. Question No. 1 is compulsory
 2. Attempt any three questions from remaining five questions
 3. Assume suitable data if necessary and justify the assumptions
 4. Figures to the right indicate full marks

- | | | | |
|----|---|--|----|
| Q1 | A | Differentiate between Computer organization and computer architecture | 05 |
| | B | Draw the flow chart for of Restoring division algorithm | 05 |
| | C | Differentiate between Hardwired control unit and Micro programmed control unit | 05 |
| | D | Explain IEEE 754 floating point representations. | 05 |
| Q2 | A | Draw the flow chart Booths algorithm for multiplication and Perform 6×2 | 10 |
| | B | Describe the detailed Von-Neumann Model with a neat block diagram | 05 |
| | C | Explain Cache coherence | 05 |
| Q3 | A | Explain the different addressing modes. | 10 |
| | B | Define Instruction cycle and draw the state diagram of instruction cycle | 05 |
| | C | Explain Bus arbitrations | 05 |
| Q4 | A | Explain Micro instruction format and write a micro program for the instruction
MUL R_1, R_2 | 10 |
| | B | Explain Hardwired Control Unit and the various design methods associated with it. | 10 |
| Q5 | A | Explain various Memory mapping techniques | 10 |
| | B | Explain the concept of Locality of reference | 05 |
| | C | List & Explain the Characteristics of Memory | 05 |
| Q6 | A | Explain Flynn's classification. | 10 |
| | B | Describe Instruction Pipelining and its hazards. | 10 |
