

(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
