

- 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 Convert 05
i) 147 in to binary
ii) $(23A)_{16}$ in to Decimal
iii) $(135)_8$ in to decimal
iv) 234 in to BCD
v) 23 in to gray code
B Write a short note on Encoder 05
C Differentiate between Hardwired control unit and Micro programmed control unit 05
D Differentiate between SRAM & DRAM 05
- Q2 A Draw the flow chart of Non Restoring division algorithm and Perform $4 \div 2$ 10
B Explain Flynn's classification 10
- Q3 A Explain the instruction cycle with the help of a neat state diagram 10
B Explain the various addressing modes 10
- Q4 A Using booth's algorithm perform -5×-3 10
B Represent -786.25 using IEEE 754 standards (both single and double precision format) 10
- Q5 A Explain different memory Mapping Techniques 10
B List & Explain the Characteristics of Memory 05
C What do you mean by cache coherence 05
- Q6 A Draw and explain 4 stage instruction pipelining and briefly describe the hazards associated with it 10
B Describe various Bus Arbitration methods 10
