

[REVISED COURSE]

CON/1823-05.

AM-6955

(3 Hours)

[Total Marks : 100

- N.B. : (1) Question No.1 is compulsory.
(2) Attempt four out of remaining six questions.

1. (a) Explain any two hardwired control unit design techniques. 10
(b) Explain microprogrammed control unit with suitable block diagram. 10
2. (a) What is virtual memory ? Explain it with suitable block diagram. What is hit ratio and efficiency of virtual memory ? 10
(b) What is paging and segmentation ? Explain any one page replacement Algorithm. 10
3. (a) What is bus arbitration ? Explain any one bus arbitration technique. 10
(b) Write detailed note on 'Parallel Computers'. 10
4. (a) Design a 16 k byte RAM using 256 x 4 bit RAM ICs and explain its operation. 10
(b) Give the steps for the design of ALU and explain with example. 10
5. (a) Explain Booth's Algorithm for multiplication of signed 2's complement numbers. 10
(b) Explain IOP and CPU interaction. 10
6. (a) Explain CPV organization with reference to general registers, instruction types, formats and addressing modes. 10
(b) Compare and contrast RISC and CISC computers. 10
7. Write detailed note on : 20
(a) Cache Memory.
(b) Programmed I/O.