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Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

EC-5005(1)-CBGS

B.E. V Semester

Examination, June 2020

Choice Based Grading System (CBGS)

Computer System Organization

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Draw the circuit for control unit of basic computer and explain its working.
   b) What is the difference between microprocessor and micro program? Is it possible to design a microprocessor without a micro program? Are all micro programmed computers also microprocessors? Define micro operation, micro instruction, micro program and micro code in short

2. a) Explain the Booth's algorithm with the help of flowchart.
   b) What do you understand by Reduced Instruction Set Computers? What are Complex Instruction Set Computers? List important characteristics of CISC and RISC computers. Also in a tabular form compare their relative advantages/disadvantages.

3. a) Explain Von Newman model of a computer using suitable block diagram.
   b) Explain what do you mean by instruction cycle, explain with the help of flow chart?

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4. a) Write short notes on virtual memory organization. What do you mean by Paging?
   b) What are the three memory mapping procedures of cache memory? Explain using suitable examples.

5. a) Differentiate simplex, half duplex and full duplex data transmission.
   b) Draw block diagram and explain Daisy chaining method of establishing priority.

6. a) Name three methods of cache mapping. Explain any one in detail.
   b) Explain various page replacement method.

7. a) With the help of a block diagram explain DMA method of data transfer.
   b) Is the advantage of pipelining. Discuss pipeline hazards in detail. Differentiate instruction and arithmetic pipelines in short.

8. Write short notes on any two of the following :
   i) Vector processing
   ii) Simplex, half-duplex and Duplex data transfer
   iii) Virtual memory

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