

sem-IV-

Computer - COA

27/5/15

CBGS

QP Code : 3546

(3 Hours)

Total Marks: 80

- N.B.:- (1) **Question no.1 is compulsory.**
(2) Solve any **three** questions out of remaining five questions.
(3) Assume suitable data if necessary.

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| 1. (a) What are applications of Microprogramming? | 3 |
| (b) What is stored program concept in digital computer? | 3 |
| (c) List the Flynn's Classification of Parallel Processing Systems. | 3 |
| (d) Draw flowchart for Booth's Algorithm for Twos Complement Multiplication. | 3 |
| (e) What is Associative memory? | 4 |
| (f) Explain in brief Programmed I/O. | 4 |
| 2. (a) Explain with diagram functioning of Hardwired Control Unit. | 8 |
| (b) Using Unsigned Binary Division method, divide 7 by 3. | 6 |
| (c) Explain IEEE 754 standards for Floating Point number representation. | 6 |
| 3. (a) Describe what are the features of cache design? | 8 |
| (b) What are the differences between RISC and CISC processors? | 6 |
| (c) Explain concepts of Nano programming. | 6 |
| 4. (a) What are major requirements for an I/O module? | 6 |
| (b) Explain in details Virtual Memory, Segmentation and Paging. | 7 |
| (c) Explain in details Cache Coherency | 7 |
| 5. (a) What is instruction pipelining? What are advantages of pipelining? | 6 |
| (b) Explain DMA based data transfer technique for I/O devices. | 7 |
| (c) Explain Microinstruction sequencing and execution. | 7 |
| 6. Write short note on: | |
| (a) Pipeline Hazards. | 7 |
| (b) Scanner. | 7 |
| (c) Interrupt driven I/O. | 6 |