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[5152]-572

S.E. (Information Technology) (I Sem.) EXAMINATION, 2017
COMPUTER ORGANIZATION AND ARCHITECTURE
(2015 PATTERN)

Time : Two Hours

Maximum Marks : 50

N.B. :— (i) All questions are compulsory.

(ii) Figures to the right indicate full marks.

(iii) Neat diagrams must be drawn wherever necessary.

1. (a) Multiply 101011 by 110011 using Booth's algorithm [6]
(b) List different addressing modes and explain any *two* with suitable diagrams and example. [6]

Or

2. (a) Draw diagram of instruction cycle states of a processor and explain. [6]
(b) Perform the division using non-restoring method 22/3. [6]

3. (a) Draw diagram of single bus processor organization and explain. [7]
(b) Explain any *one* type of cache mapping technique with diagram. [6]

Or

4. (a) Explain micro programmed control unit along with block diagram. [7]
(b) How virtual memory is managed using paging and TLB ? [6]

P.T.O.

5. (a) What are the hazards in pipeline architecture ? Explain its types. [6]
(b) Explain events of Execute cycle of MIPS pipeline. [6]

Or

6. (a) Explain events of Fetch cycle of MIPS pipeline. [6]
(b) Which are the different stages in 5 stage pipeline ? [6]
7. (a) What is cluster computing ? What are the types of clustering ? [6]
(b) Write a note on multicore architecture. [7]

Or

8. (a) Explain closely coupled and loosely coupled microprocessor system. [7]
(b) What is Flynn's taxonomy for multiple processor organizations ? Explain with diagram. [6]