

Code No: **R32052**

R10

Set No. 1

III B.Tech II Semester Supplementary Examinations, Dec - 2015

COMPUTER ARCHITECTURE

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 75

**Answer any FIVE Questions
All Questions carry equal marks**

- 1 a) Draw and explain the functional design of an MIMD multiprocessor system. [7]
b) List and explain the Elements of Modern Computers. [8]
- 2 a) Define Virtual memory. Explain the concept of virtual memory with an example. [7]
b) Explain the Optimization of Cache Performance. [8]
- 3 a) Write the Characteristics of typical CISC architecture. [8]
b) Give a brief note on Inclusion, Coherence and Locality. [7]
- 4 a) Discuss about the Asynchronous and Synchronous models. [7]
b) Briefly explain the Nonlinear pipeline processors. [8]
- 5 a) Describe the Multistage Networks in Real Systems. [7]
b) Explain the structure of general purpose multiprocessors with a neat diagram. [8]
- 6 a) Write the Requirements of Multipoint Routing Algorithms. [7]
b) Explain the Dijkstra's Shortest Path Algorithm with an example. [8]
- 7 a) Give a brief note on CM-2 Architecture. [7]
b) Discuss about Control Processors and Processing Nodes. [8]
- 8 Explain the following: [15]
 - a) Stream Processing
 - b) Structural Parallelism
 - c) Instruction Level Parallelism.

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