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Question Paper Code: 53P31

M.E. DEGREE EXAMINATION, NOV 2017

Third Semester

Computer Science and Engineering

15PCS301 - MULTI CORE ARCHITECTURE

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. The maximum sustained data transfer rate between main memory and cache/CPU is called as
 - (a) Memory Bandwidth
 - (b) Memory cycle
 - (c) Access time
 - (d) Delay time
2. Uniprocessor memory model operates
 - (a) Only one at a time
 - (b) Two at a time
 - (c) More than two
 - (d) many times
3. The performance of a processor can be measured using
 - (a) Clock period
 - (b) Cycles per Instruction
 - (c) Throughput
 - (d) All the above
4. Virtual memory is a
 - (a) Primary memory
 - (b) Secondary memory
 - (c) false memory
 - (d) Dislocated memory
5. Message passing interface that involves factors called as
 - (a) Parameters passing
 - (b) Variables passing
 - (c) Static arguments passing
 - (d) None of these

PART - B (5 x 3 = 15 Marks)

6. List out the limitations of ILP.
7. List out the Models of Memory Consistency.
8. Sketch the chip design of Intel version cell architecture.
9. What is mean by virtual memory?
10. Define performance tuning.

PART - C (5 x 16 = 80 Marks)

11. (a) Analyze the concepts and relate the connections between the SMT& CMP Architectures. (16)

Or

- (b) Discuss the basic fundamentals of Computer design. (16)

12. (a) Describe the functions of buses and crossbars in interconnection networks. (16)

Or

- (b) Discuss the Multistage interconnection networks. (16)

13. (a) Compare the features and relate the connections between the Intel & SUN CMP Architecture. (16)

Or

- (b) Implement the concept of heterogeneous architecture in the multi-processing issues. (16)

14. (a) State and explain the different optimization techniques. (16)

Or

- (b) Illustrate the designing methodologies that involved in the memory hierarchy. (16)

15. (a) Explain the architecture of warehouse Scale computers. (16)

Or

- (b) List the contents of your open MP subdirectory and explain in detail. (16)