MORNING

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Uni. Roll No. ....

Program: B.Tech. (Batch 2018 onward)
Semester: 3rd
Name of Subject: Computer Architecture
Subject Code: PCEC-105
Paper ID: 16035
Scientific calculator is NotAllowed

Time Allowed: 03 Hours

Max. Marks: 60

NOTE:

1) Parts A and B are compulsory
2) Part-C has Two Questions Q8 and Q9. Both are compulsory, but with internal choice
3) Any missing data may be assumed appropriately

Part – A [Marks: 02 each]

1)

   a) Demonstrate history of computers.

   b) Explain different principles for cache memory.

   c) What is scheduling in operating system?

   d) Make use of NUMA in parallel processing.

   e) Relate different types of memories.

   f) Construct any one interconnection for computer architecture.

Part – B [Marks: 04 each]

2) Recall any two performance metrics used in computer architecture.

3) Explain PCI express and point to point interconnection in detail.

4) Outline advanced drum organization in detail.

5) Justify the use of microinstruction sequencing in operating system.

6) Discuss cache coherence and MESI protocol for multi-core computer with diagrams.

7) Elaborate Vector computation in multiprocessors and multi-core processors.

Part – C   0 9 JAN 2023   [Marks: 12 each]

8) Contrast Flynn's classification of computers.

OR

Compare RISC v/s CISC in detail with their characteristics and example.

9) Construct a intel x86 multi-core organization and explain associated hardware and software performance issues.

OR

Design architecture of charged couple device used for semiconductor memories with their frame working and different type of regions.

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