

KRISHNA KANTA HANDIQUI STATE OPEN UNIVERSITY

PGDCA/MCA 2nd Sem. Examination, 2015

Paper Code: PGDCA (S2) 05 / MCA(S2) 05

Paper : Computer Organization and Architecture

Time: 3 hours Maximum marks: 80

The figures in the margin indicate full marks for the questions

- 1 Answer any five questions from the following : $2 \times 5 = 10$
- Define CAM.
 - Differentiate between DRAM and SRAM.
 - What is auxiliary memory?
 - What do you mean by sequential access memory?
 - Define cycle time of the CPU and memory cycle time.
 - What is bidirectional shift registers?
 - What are MIMD computers?
- 2 Answer any three questions from the following : $4 \times 3 = 12$
- What do you mean by circular shift and arithmetic shift?
 - Discuss briefly about the typical registers found in most computers.
 - Discuss briefly the different types of interconnection networks.
 - Write briefly about the possible techniques for resolving hazards in pipe lining.
 - What do you mean by memory mapped I/O and isolated I/O?
- 3 Answer any three questions from the following : $6 \times 3 = 18$
- What do you mean by Input/Output Interrupts? What are the causes and benefits of Input/Output interrupt?
 - Briefly explain the memory hierarchy system.
 - Discuss briefly the page replacement algorithm FIFO and LRU.
- d What are different addressing modes available?

- Explain briefly.
- e Distinguish between the dingle bus multiprocessor organization and multi bus multiprocessor organisation.
- 4 Answer any four questions from the following : $10 \times 4 = 40$
- What do you mean by cache memory? What are the different mapping process used to transform data from main memory to the cache memory.
 - What are DMA and DMA controller? What are the steps involved in transferring data through DMAC?
 - What do you mean by RISC? Give the characteristics of RISC. Give the differences between the RISC and CISC.
 - Discuss briefly with block diagram the Flying Classification of parallel computers.
 - What do you mean by array processor? What are its different types. Discuss briefly.
 - Write short notes on (any two)
 - Storage device
 - Associative Memory
 - Universal Serial Bus
 - Impact printing and non impact printing.