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Total No. of Pages : 02

Total No. of Questions : 07

B.Sc. (CS) (2013 & Onwards) (Sem.-2)
COMPUTER SYSTEM ARCHITECTURE
Subject Code : BCS-206
Paper ID : [A2610]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **SIX** questions carrying **TEN** marks each and a student has to attempt any **FOUR** questions.

SECTION-A**1) Answer briefly :**

- a) Define SISD, SIMD and MIMD.
- b) What is the role of data bus?
- c) Explain the interrupt cycle.
- d) Differentiate between direct and indirect address instructions.
- e) Explain DMA controller.
- f) Explain the principle of locality.
- g) Differentiate between logical and physical addresses.
- h) How many 128×8 RAM chips and 512×8 ROM chips are required to provide a memory capacity of 4096×16 ?
- i) Explain the FIFO page replacement algorithm in brief.
- j) Name the commonly used mobile devices architectures.

SECTION-B

- 2) Discuss with examples various arithmetic, logic and shift micro-operations.
- 3) Explain the various types of instructions with examples.
- 4) Define and distinguish between Hardwired and Micro-programmed control.
- 5) What is Input-output Interface? Briefly discuss and compare the following I/O schemes:
 - a) Programmed I/O
 - b) Interrupt initiated I/O
- 6) Discuss in detail the stack organization and explain how expressions are evaluated using stack organization.
- 7) Explain the various cache memory mapping techniques.

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