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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Electronic &amp; Computer Engineering) (Sem.-5)

**COMPUTER ARCHITECTURE**

Subject Code : BTCS-301

Paper ID : [A2113]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

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

- a. Give the basic structure of cache and what is its use?
- b. Differentiate synchronous and asynchronous bus.
- c. What is Volatile memory?
- d. What is IO control method?
- e. What is strobe signal?
- f. What is a micro operation? List the different types of micro operations.
- g. What is an Instruction? What do you mean by Instruction code?
- h. What do you mean by Parallel Processing?
- i. What is Memory Interleaving?
- j. Explain CISC architecture.

### SECTION-B

2. What is a shift micro operation? Design a 4-bit combinational circuit shifter and explain it.
3. Write in detail about Micro program control unit.
4. What are interrupts? Explain the different types of interrupts.
5. Describe in detail about pipeline processing.
6. Design a Full Adder combinational circuit and explain its working.

### SECTION-C

7. What is an Addressing Mode? Explain in detail the different Addressing Modes.
8. What is virtual memory? Explain the steps involved in virtual memory address translation.
9. Explain with the block diagram the DMA transfer in a computer system.