

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(CSE)/(IT) (2011 onwards)

B.Tech.(3D Animation & Graphics) (2012 onwards)

(Sem.-3)

COMPUTER ARCHITECTURE

Subject Code : BTCS-301

Paper ID : [A1123]

Time : 3 Hrs.,

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

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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. Write briefly :
 - a) Compare SIMD and MIMD machine.
 - b) What is the difference between a direct and an indirect address instruction?
 - c) What is the difference between a software interrupt and subroutine call?
 - d) Give two applications of three- Address instructions.
 - e) What is virtual memory?
 - f) What is the relation between address and memory space in a virtual memory system?
 - g) What do you mean by parallel processing?
 - h) What is the difference between micro operation and micro program?
 - i) What is the role of registers in digital computers?
 - j) List various memory reference instructions.

SECTION-B

- 2 What are the various types of registers and their function in basic computer? Explain with block diagram the control unit of basic computer.
- 3 What are the reasons of Pipe-Line conflicts in a Pipe Lined processor? How are they resolved?
- 4 What is the difference between isolated I/O and memory mapped I/O? What are the advantages and disadvantages of each?
- 5 What is mapping process in cache memory? Explain.
- 6 Give five examples of external interrupt and five examples of internal interrupt.

SECTION-C

- 7 What is priority interrupt? Explain Daisy-Chaining priority with diagram.
- 8 Explain in detail the characteristics of RISC and CISC architecture.
- 9 What is associative memory? Explain the hardware organization of associative memory with suitable diagram.