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 :

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.