

Roll No.

Total No. of Pages : 02

Total No. of Questions : 18

B.Tech.(CSE)/(IT) (2011 Onwards)
B.Tech.(3D Animation & Graphics) (2012 Onwards)
(Sem.-3)

COMPUTER ARCHITECTURE

Subject Code : BTCS-301

M.Code : 56591

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

- Q1 Differentiate between Computer Architecture and Organization.
- Q2 What do you understand by Fetch Cycle?
- Q3 Differentiate between Arithmetic Shift Left and Arithmetic Shift Right.
- Q4 What is a microprogram sequencer?
- Q5 What is instruction-level parallelism?
- Q6 Why does increasing the capacity of cache tend to increase its hit rate?
- Q7 What do you mean by memory hierarchy?
- Q8 Draw a neat diagram for handshaking mode of data transfer.
- Q9 How many 128×8 ROM memory chips are needed to provide a memory capacity of 4096×16 ?
- Q10 What do you mean by Inter-processor Communication?

SECTION -B

- Q11 Give the comparison between hardwired control unit and micro programmed control unit.
- Q12 Compare RISC and CISC architecture.
- Q13 Explain all the phases of instruction cycle.
- Q14 What are the various types of interrupts? Explain.
- Q15 Formulate a six-segment instruction pipeline for a computer. Specify the operations to be performed in each pipeline.

SECTION -C

- Q16 Explain with an example, how effective address is calculated in different types of addressing modes?
- Q17 Explain in detail the different mappings used for cache memory. Compare them.
- Q18 With neat block diagram, explain how DMA controller is initialized for DMA data transfer?

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.