Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 07

B.Sc. (IT) (2015 & Onward) (Sem.–3)

COMPUTER SYSTEM ARCHITECTURE

Subject Code : BSIT-301

M.Code : 74059

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 SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

Q1) Answer briefly :

a) Differentiate between Computer architecture and Organisation.

b) What do you understand by Instruction Cycle?

c) What is the main difference between Memory stack and Register stack?

d) Differentiate between Logical and Physical addresses.

e) Give the significance of page replacement algorithms.

f) Write two pros of Layers Approach of Computer Architecture.

g) Differentiate between Synchronous and asynchronous modes of data transfer.

h) Give one example each for zero address, one address and two address and three address instructions.

i) Differentiate between SISD and SIMD.

j) List various shift operations.

SECTION-B

Q2) What is stored program Concept? Discuss in brief the Flynn's Classification of architecture.

Q3) Design 4-bit arithmetic circuit that implements eight arithmetic operations.

Q4) What is Cache memory? Differentiate between Direct Mapping and associative Mapping by taking Suitable Example.

Q5) What do you mean by initialization of DMA controller? How DMA Controller works? Explain with suitable block diagram.

Q6) Define an addressing mode. Discuss the various addressing modes by taking suitable examples for each.

Q7) Differentiate between Hardwired and Micro programmed control Unit.

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.