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

Total No. of Questions : 09

M.Sc.(IT) (2015 Onwards) (Sem.–1)

COMPUTER ORGANIZATION AND ASSEMBLY LANGUAGE

Subject Code : MSIT-103

M.Code : 72519

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students has to attempt any ONE question from each SECTION.**
2. **SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.**

SECTION-A

Q1. a) What are different operations performed in bus and memory transfer process? Explain.

b) Explain various CPU general purpose registers.

Q2. a) Compare memory reference instructions with register reference instructions.

b) What is meant by addressing modes? Illustrate register indirect addressing mode by taking suitable example.

SECTION-B

Q3. Differentiate between the following :

a) Vector processing and pipelining.

b) Isolated I/O and Memory mapped I/O

Q4. a) Discuss the phenomenon of Handshaking in detail.

b) Demonstrate the working of DMA controller.

SECTION-C

Q5. a) How main memory communicates with CPU? Explain.

b) What is associative memory? How associative memory is referred to read contents from memory? Explain.

Q6. Explain the following :

a) Segmented page mapping

b) Multiport Memory

SECTION-D

Q7. a) Compare and contrast time shared common bus with crossbar switch.

b) Discuss different stack and base registers in microprocessor 8085.

Q8. a) Write an assembly language code to sort list of ten different integers.

b) Write an assembly language program using logical and arithmetic instructions to find minimum and maximum in a list of ten different integers. Also find the average.

SECTION-E

Q9. Answer briefly :

a) Explain briefly instruction cycle.

b) What is meant by reverse polish notation?

c) What are maskable interrupts?

d) Define Array processor.

e) Describe briefly the process of asynchronous data transfer.

f) What is the difference between cache memory and main memory?

g) Does set associative mapping faster than direct mapping? Justify.

h) What kinds of connections are present in hypercube interconnection?

i) Give two examples of program control instructions of 8085.

j) List two characteristics of multiprocessor architecture.

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.