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

Total No. of Questions : 09

MCA (2013 and 2014 Batch)   (Sem.–1)
COMPUTER ORGANIZATION AND ASSEMBLY LANGUAGE
Subject Code : MCA-103
M.Code : 26044

Time : 3 Hrs.   Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :
1. **SECTIONS-A, B, C & D contains TWO questions each carrying TWENTY 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

1. Discuss the basic computer organization.

2. Explain the various instruction formats using the following expression: (A-B) + C*D.

SECTION-B

3. Define Pipelining. What are the types of pipelining? What are the various problems and performance issues in pipelining?

4. What is DMA controller? What is DMA data transfer? Explain the burst mode and cycle stealing in DMA scheme.

SECTION-C

5. What is Cache memory? Explain the various memory mapping procedures involving cache memory.

6. Define Associative Memory and explain the matching logics as used in Associative Memory.

SECTION-D

7. What is Multiprocessing? Explain inter-processor communication and synchronization in multiprocessor computers.

8. Discuss the Architecture and operations of a Microprocessor.

SECTION-E

9. **Write briefly :**

a. Change (A-B) * (C+D) in reverse Polish notation.

b. Briefly explain the instruction cycle.

c. What is Input Output Interface?

d. What are priority interrupts?

e. What is cache coherence?

f. Differentiate between multiprocessing and parallel processing.

g. What is a vector instruction?

h. What are the reasons for page faults?

i. What is the difference between Handshaking and Strobe control?

j. What are the features of an Assembly language?

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.