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

Total No. of Questions : 09

MCA (Elective-I) (2013 and 2014 Batch)   (Sem.–3)
PARALLEL PROCESSING
Subject Code : MCA-305C
M.Code : 70778

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. a) What are the Applications of Parallel Processing? Explain in detail.

   b) Explain Parallelism in Sequential machines in detail.

2. a) Discuss the abstract model of parallel computer.

   b) What are the issues in parallel processing? Explain.

SECTION-B

3. Explain the shared memory model in detail. Give illustrative examples to explain the model.

4. a) Describe in detail dependencies between instructions.

   b) What are the types of dependencies? Explain through examples.

SECTION-C

5. Explain the Thread management and implementation in detail.

6. a) Explain the message passing model in detail.

   b) Explain the parallel reduction steps.

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SECTION-D

7. Write an algorithm for solving linear system of equations.

8. Compare and explain the features of the parallel Programming Languages.

SECTION-E

9. **Answer briefly :**

   a) What is Superscalar architecture?

   b) What is loop dependency?

   c) What do you mean by programmability?

   d) What is a Thread?

   e) What is speedup?

   f) What are remote procedure calls?

   g) What is the need of computational speed?

   h) What is parallel virtual machine?

   i) Name the important considerations in parallel algorithms.

   j) What is array dependence?

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.