Roll No……..….. **Total No. of Printed Pages: [1]**
Total No. of Questions: [11]

M. Tech. CSE (Semester -1st)
DISTRIBUTED SYSTEMS
Subject Code: MCSCE1160
Paper ID: [190208]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It carries 16 marks. It consists of 4 questions of 4 marks each.
2. Section B consist of 4 questions of 8 marks each. The student has to attempt any 3 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(4 marks each)**

Q1. Discuss the problems in query optimization.

Q2. Define Transaction .What are the termination conditions for Transaction.

Q3. What are various Advantages and Disadvantages of Distributed Database System?

Q4. Explain the Types of failures in DDBMS.

Section – B **(8 marks each)**

Q5. Describe the architecture of distributed database management system along with detailed description of its major components.

Q6. What is the concept of semantic data control? Briefly discuss about semantic integrity control and its importance.

Q7. Write about the recovery methods of distributed transactions.

Q8. Explain general architecture of a parallel database system & shared memory architecture.

Section – C **(10 marks each)**

Q9. What do you mean by Deadlock? Discuss in detail various control organizations for distributed deadlock detection.

Q10. Explain 2 Phase commit protocol in detail using any example.

Q11. Write short note on:-

a) Mobile Databases
b) Recovery Protocols.