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Total Number of Pages: 02

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MTech
CSPC202

2nd Semester Back Examination 2016-17

DISTRIBUTED OPERATING SYSTEM

**BRANCH: , COMPUTER ENGG, COMPUTER SCIENCE, COMPUTER SCIENCE AND ENGG,
COMPUTER SCIENCE AND TECH.**

Time: 3 Hours

Max Marks: 70

Q.CODE:Z360

**Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.**

- Q1 Answer the following questions: (2 x 10)
- a) What are the applications of parallel computing?
 - b) What is pipelining? How it is help full in achieving parallelism.
 - c) What is branch dependency give one suitable example?
 - d) What is spatial locality?
 - e) what is UMA and NUMA architecture.
 - f) What is Cache hit ratio?
 - g) What do you mean by false sharing?
 - h) Explain the difference between starvation and deadlock?
 - i) What is the role of name server and cache manager in distributed operating system?
 - j) What are the parameter require that determine the message passing communication in parallel system ?
- Q2 a) Explain the communication cost in parallel machines. (5)
- b) What is superscalar execution explain with example ? (5)
- Q3 a) Explain store and forward routing technique. (5)
- b) What is Data decomposition in parallel computing explain with example? (5)
- Q4 What is RPC communication model ? Explain the working mechanism of an RPC. (10)
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- Q5 a) Explain different characteristics of task and interaction of task. (5)
- b) Explain client-server communication in distributed system. (5)
- Q6 a) Explain different issues in distributed operating systems? (5)
- b) Explain Lamport logical clock and how it is useful in message passing technique in distributed system. (5)
- Q7 a) Explain Ricart-Agrawala algorithm for distributed mutual exclusion and how it is better than Lamport's mutual exclusion algorithm. (5)
- b) Explain the mechanism for building distributed file system? (5)

Q8

Answer any TWO of the following

(5 x 2)

- a) VLIW
 - b) Stateless Server.
 - c) The Two Phase commit protocol.
 - d) Classification of cryptographic system.
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