Registration no: | | | | | | | | | | |

Total Number of Pages: 02 **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)

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.