

Roll No.

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M.Tech.(IT)E-1 (2015 & Onwards)/(CSE Engg.)EI-I (2015 to 2017)
(Sem.-2)

ADVANCED OPERATING SYSTEM

Subject Code : MTCS-205

M.Code : 72889

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

1. a) Explain the evolution of distributed computing systems.
b) Discuss the issues in designing a distributed operating system.
c) What is DCE ? Discuss about DCE components and DEC cells.
2. a) Explain the features of good message passing system.
b) Explain group communication briefly.
c) Explain the implementation of RPC in a distributed system.
3. a) Explain the various protocol used for implementing sequential consistent DSM.
b) Explain the replacement strategy used in distributed shared memory.
4. a) Explain the desirable features of a good global scheduling algorithm.
b) Explain load balancing approach.
5. In your opinion, where(in server memory, in client disk, or in client memory) should a cache for caching data be located in the following type of distributed file systems with reason for the your answer in detail.
 - a) One that support diskless workstation
 - b) One that uses file level transfer model as unit of data access
 - c) One that uses session semantics
 - d) One in which ratio of clients to number of file servers is very large
 - e) One that support client disk

6.
 - a) A file system allows links from one directly to another. In this way, a directory can “include” a subdirectory. In this context, what is the essential criterion that distinguishes a tree-structured directory system from a general graph-structured system?
 - b) What is a kernel in distributed operating system? Explain with example of an OS.
7.
 - a) What is clock synchronization? Explain various clock synchronization algorithms.
 - b) Explain process migration mechanisms.
8. Write short notes on :
 - a) Real time multitasking
 - b) Voting Protocols

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.