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M.Tech.(IT)E1 (2015 & Onwards)/(CSE Engg.)EI-I (2015 to 2017)  
(Sem.-2)

**ADVANCED OPERATING SYSTEM**

Subject Code : MTCS-205

Paper ID : [72889]

Time : 3 Hrs.

Max. Marks : 100

**INSTRUCTION TO CANDIDATES :**

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

1. 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?
2. a. What is a distributed operating system? Explain with example of an OS.  
b. In a certain workstation-based system, the workstations have local disks that hold the system binaries. When a new binary is released, it is sent to each workstations. However, some workstations may be down (or switched off) when this happens. Devise an procedure that allows the updating to be done automatically, even though workstations are occasionally down.
3. a. Why do some distributed systems use two-level naming?  
b. 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?
4. What is a deadlock in distributed system? How is it handled? Explain.
5. What are the various memory management issue in the distributed system? Explain.
6. a. What is the difference between a multiprocessor and a multicomputer?  
b. What is an atomic commit protocol? Explain with an example.
7. a. What is DCE? Discuss about DCE components and DEC cells.  
b. Explain how Mutual Exclusion is implemented in distributed systems.
8. Write short notes on :
  - a. Client server Communication.
  - b. Distributed transactions.