Code No: I0504/R16

M.Tech. I Semester Regular Examinations, January-2017

ADVANCED OPERATING SYSTEMS

(Common to Computer Science and Computer Science & Engineering)

Time: 3 Hours **Max. Marks: 60**

Answer any FIVE Questions
All Questions Carry Equal Marks

1. a List out communication primitives and briefly explain design issues in remote procedure calls. [6]
   b State and prove Huang's Termination detection algorithm. [6]

2. a Analyze the performance of Singhal's heuristic algorithm by explain it briefly. [6]
   b Discuss hierarchical deadlock detection algorithms in detail. [6]

3. a Explain applications of agreement algorithms. [6]
   b Describe the mechanisms for building distributed file systems. [6]

4. a Give the advantages of distributed shared memory by explaining its architecture. [6]
   b Discuss the four components of a load distributing algorithm. [6]

5. a Define failure recovery. Explain about classification of failures. [6]
   b Explain rollback recovery algorithm. [6]

6. a Briefly explain access control list method with its implementation. [6]
   b Explain public key cryptography in detail. [6]

7. a Discuss various types of interconnection networks for multiprocessor systems. [6]
   b Write short notes on the following: [6]
      i) User-level threads
      ii) Kernel-level threads

8. a Discuss briefly serializability theory. [6]
   b Explain timestamp based concurrency control algorithms. [6]

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