

22639

M.Tech 1st Semester (CSE) CBCS Scheme

Examination, December-2017

ADVANCED OPERATING SYSTEM

Paper-MTCSE 21 C2

Time allowed : 3 hours]

[Maximum marks : 100

Note: Question No. 1 is compulsory. Attempt one question from each section.

1. (a) Explain critical section problem. 5×4=20
- (b) What is the utility of knot in general resource graph?
- (c) Explain blocking Vs Non blocking primitives.
- (d) Explain System Failure.
- (e) What is mounting in DFS ?

Section-A

2. (a) Explain how deadlock is detected, prevented and avoided. 10
- (b) Explain the following models of deadlock : 10
 - (i) OR Request Model
 - (ii) P out of Q request model

or

3. (a) What is an operating system ? Explain various design approaches of operating system. 10

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- (b) Explain various types of advanced operating systems. 10

Section-B

4. Explain Byzantine agreement problem with its solution. 20

or

5. (a) Explain various issues in the design of distributed operating system. 10
(b) What are the various algorithms for implementing distributed shared memory? 10

Section-C

6. (a) Explain non blocking commit protocol for single site failure. 10
(b) Explain rollback recovery algorithm. 10

or

7. (a) Explain checkpointing in distributed database systems. 10
(b) Explain two phase commit protocol. 10

Section-D

8. Explain two phase locking algorithm. Discuss various problems with two phase locking algorithm. 20

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or

9. (a) What is database operating system and explain its requirements? 10
(b) Explain various design issues of Operating System. 10