

Roll No

CS - 502**B.E. V Semester**

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Examination, December 2015

Operating System**Time : Three Hours****Maximum Marks : 70**

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) What is Bare machine?
- b) What is the purpose of system calls?
- c) How a time sharing operating system differs from batch operating system?
- d) How many types of operating system are there? Explain each of them.

OR

Discuss different structures of operating system with advantages and disadvantages.

Unit - II

2. a) What is kernel I/O subsystem?
- b) Define the term Disk Reliability.
- c) Explain free space management technique.
- d) Compare file system in windows and Linux.

OR

Explain various methods of accessing file with examples.

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Unit - III

3. a) Define deadlock.
- b) Write the use of Process Control Block and discuss its contents.
- c) What is hard and soft semaphore?
- d) What resources are used when a thread is created? How do they differ from those used when a process is created?

OR

Describe about how recovery from deadlock.

Unit - IV

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4. a) What is thrashing?
- b) Compare paging and segmentation.
- c) Differentiate between external and internal fragmentation.
- d) What advantages does segmentation offer over multiple variable partitions?

OR

Explain Cache Memory Organization.

Unit - V

5. a) What is Parallel Processing?
- b) Define Distributed Shared Memory.
- c) Give the difficulties which can be encounter while implementing a distributed operating system.
- d) Explain the major issues in implementing the Remote Procedure Call (RPC) mechanism in distributed operating system.

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OR

Write a brief notes on parallel operating system.
