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**B.Tech COMPUTER SCIENCE ENGINEERING
(BTCSVI)**

Term-End Examination

June, 2013

BICS-019 : OPERATING SYSTEMS

Time : 3 hours

Maximum Marks : 70

Note : Attempt any seven questions. Each question carries equal marks.

1. (a) What is an operating system ? Discuss the main services of the operating system. 5
(b) Discuss the differences between a time sharing system and real time system. 5
2. Define drivers. Explain the device management techniques in details. 2+8
3. (a) Compare and contrast the use of monitors and semaphores operation. 5
(b) Explain different state of process with the help of state transition diagram. 5
4. What is deadlock ? Describe the deadlock detection and prevention. 4+6

5. What is virtual memory ? Describe Page Replacement algorithms in brief. 5+5
 6. Differentiate between paging and segmentation. Explain how protection is ensured in paging scheme ? 5+5
 7. What are the different file organisation ? Discuss their access mechanisms. 4+6
 8. Explain the following : 5+5
 - (a) Directory system.
 - (b) File protection.
 9. Explain Handling of allocation and re-allocation techniques in operating system. 10
 10. Write short notes on *any two* of the following : $2 \times 5 = 10$
 - (a) Windows NT
 - (b) Buffering
 - (c) Unix kernel file system
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