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14SCS11

First Semester M.Tech. Degree Examination, June/July 2016
Advances in Operating System

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

1. a. Discuss the objectives and evolutions of operating systems. (08 Marks)
b. List out and explain the major functions of operating system. (07 Marks)
c. Explain the security issues in design of operating system. (05 Marks)
2. a. Differentiate traditional UNIX Kernel with modern UNIX kernel with a neat sketch. (08 Marks)
b. What is process? Explain with a diagram the process states. (04 Marks)
c. Give description about the components of linux kernel along with a diagram. (08 Marks)
3. a. Distinguish between thread and process from a point of view of process management. (06 Marks)
b. What are the key benefits of thread derive from the performance implication? (04 Marks)
c. Highlight on the basic thread operation associated with a change in thread state. (04 Marks)
d. Explain categorization of thread implementation with advantages and disadvantages. (06 Marks)
4. a. List out and explain any two general approaches for multiprocessing thread scheduling. (08 Marks)
b. Explain characteristics and approach of real-time operating systems. (12 Marks)
5. a. Explain popular classes of real time scheduling algorithm. (08 Marks)
b. Explain LINUX scheduling classes and major modifications implemented in UNIX SVR4. (08 Marks)
c. Discuss how do you compare Windows/Linux scheduling. (04 Marks)
6. a. Explain characteristics and objectives of embedded operating system. (08 Marks)
b. Explain with layered structure of eCOS (embedded configurable operating system) the objectives of eCOS kernel. (08 Marks)
c. Explain eCOS schedulers. (04 Marks)
7. a. Discuss the key objectives of computer security. (06 Marks)
b. Discuss about intruders and classes of intruders. (06 Marks)
c. Describe four kinds of threat consequences and list the kinds of attacks that result in each consequence. (08 Marks)
8. Write a short notes on:
a. Virus, worms and Bots. (15 Marks)
b. Windows NT/2000 organization. (05 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.

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14SCS152

First Semester M.Tech. Degree Examination, June/July 2016
Advances in Storage Area Networks

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. Mention and explain different IT architectures. Discuss “Replacing a server with storage networks”. (15 Marks)
b. List the different benefits of storage networks an Business application. (05 Marks)
- 2 Compare and discuss different RAID levels. (20 Marks)
- 3 a. Discuss in detail Fibre channel protocol stack. (15 Marks)
b. Briefly explain shared Disk file system. (05 Marks)
- 4 a. Define NAS. Explain its hardware and software architectures. (12 Marks)
b. What is volume manager? How RAID1 can be realized in the volume manager. (08 Marks)
- 5 a. Define storage virtualisation. Mention and explain the different implementation consideration of storage virtualization (10 Marks)
b. Bring out the advantages and disadvantages of different levels where storage virtualization can be realized. (10 Marks)
- 6 a. Discuss symmetric and Asymmetric storage virtualization in the network. Bring out them advantages and disadvantages. (15 Marks)
b. Briefly explain virtualization on file level. (05 Marks)
- 7 a. Name the different components of SAN. Explain the different types of port of fibre channel switch. (08 Marks)
b. List the different supporting components that are critical to SAN configuration and operation. Explain any two in detail. (12 Marks)
- 8 Write short notes on:
a. Host bus Adapter
b. IP storage
c. DMI
d. WBEM (20 Marks)

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