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Question Paper Code: 33205

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Third Semester

Computer Science and Engineering

01UCS305 - OPERATING SYSTEMS

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. What is meant by user visible processor registers?
2. Define interrupt. How will you handle interrupt?
3. What is meant by context switch?
4. Write the methods for handling deadlocks?
5. What is Belady's anomaly?
6. Define effective access time.
7. What are the functions of virtual file system (VFS)?
8. What is disk stripping?
9. What is meant by Para virtualization?
10. List out the components of DNS.

PART - B (5 x 16 = 80 Marks)

11. (a) (i) Explain how hardware protection can be achieved and discuss in detail the dual mode of operations. (8)
- (ii) Explain in detail about multiprocessor and multi-core organization. (8)

Or

- (b) (i) Discuss about the services provided by the operating system. (8)
- (ii) What are the different types of Multithreading models? Explain. (8)
12. (a) (i) Explain how an operating system controls the processes and manage the resources for processes. (8)
- (ii) With a help of diagram discuss the structure of a monitor. (8)

Or

- (b) What is meant by a process? Explain states of process with neat sketch and discuss the process state transition with a neat diagram. (16)
13. (a) (i) Summarize about fragmentation. (8)
- (ii) Recall any two page replacement strategies. (8)

Or

- (b) Give the basic concepts about paging and give a note on techniques for structuring the page table. (16)
14. (a) Explain in detail the free space management with neat diagram. (16)

Or

- (b) Discuss about different types of disk scheduling algorithm. (16)
15. (a) Outline the concept kernel I/O subsystem. (16)

Or

- (b) (i) Explain in detail about setting up a Linux multifunction server. (8)
- (ii) Define virtualization. Discuss the various methods of virtualization and its benefits. (8)
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