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**Question Paper Code: 33205**

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

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. Write the advantage of microkernel over monolithic kernel.
2. What is system call? Give examples.
3. What is busy - waiting? Is it preferable over blocking wait? Give reason.
4. What is non - preemptive scheduling? Write two examples for non-preemptive scheduling algorithms
5. What is Belady's anomaly?
6. Define effective access time.
7. What is the information associated with an open file?
8. What are the functions of virtual file system (VFS)?
9. What is meant by Para virtualization?
10. List out the components of DNS.

PART - B (5 x 16 = 80 Marks)

11. (a) Write a note on the following operating systems
  - (i) Mainframe systems (5)
  - (ii) Multiprogramming systems (5)
  - (iii) Distributed systems. (6)

**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) What is meant by a process? Explain states of process with neat sketch and discuss the process state transition with a neat diagram. (16)

**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) Explain the concept of demand paging. How can demand paging be implemented with virtual memory? (8)
- (ii) Explain in detail about thrashing. (8)

**Or**

- (b) Give the basic concepts about paging and give a note on techniques for structuring the page table. (16)
14. (a) (i) Explain various file allocation methods in detail. (8)
- (ii) Explain in detail the free space management with neat diagram. (8)

**Or**

- (b) Discuss about different types of disk scheduling algorithm. (16)
15. (a) Explain about the following in a LINUX system.
- (i) Block Devices (8)
  - (ii) Character Devices. (8)

**Or**

- (b) Write notes about disk management and swap-space management. (16)