**Reg. No. :** | | | | | | | | | | |

# Question Paper Code: 33205

B.E. / B.Tech. DEGREE EXAMINATION, MAY 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. Write the advantage of microkernel over monolithic kernel.
2. What is system call? Give examples.
3. Recall dispatch latency. State the various scheduling criteria for CPU scheduling.
4. What is meant by context switch?
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. Define rotational latency and disk bandwidth?
10. Differentiate between the file systems in Linux and Windows 2000.

PART - B (5 x 16 = 80 Marks)

11. (a) (i) Explain briefly about the operating system services. (8)

(ii) What is mean by Thread? Explain the different types of Threads. (8)

**Or**

(b) Explain how hardware protection can be achieved and discuss in detail the dual mode of operations. (16)

12. (a) (i) With a help of diagram discuss the structure of a monitor. (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) Summarize about fragmentation. (8)

(ii) Recall any two page replacement strategies. (8)

Or

(b) Discuss the hardware support for segmentation and explain the mapping of logical address to physical address. (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) Illustrate the system components in Windows 2000 along with the design principles. (16)