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B. Tech. (Sem. - 4th)

OPERATING SYSTEM

SUBJECT CODE : CS - 202

Paper ID : [A0458]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours **Maximum Marks : 60**

Instruction to Candidates:

1) Section - A is **Compulsory**.
2) Attempt any **Four** questions from Section - B.
3) Attempt any **Two** questions from Section - C.

Section - A

Q1) *(10 × 2 = 20)*

a) Differentiate between parallel systems and distributed systems.

b) Differentiate between process scheduling and job scheduling.

c) What is the need of revocation of access rights?

d) How is the security ensured in an operating system?

e) Define thrashing.

f) List some properties of logical address space.

g) What is semaphore? Explain.

h) What do you understand by FAT? Explain.

i) What is the domain of protection? Explain.

j) What is virtual memory? Explain.

Section - B

(4 × 5 = 20)

Q2) What resources are used when a thread is created? How do they differ from those when a process is created?

Q3) Analyze the impact of time quantum in round robin scheduling algorithm.

Q4) How can timer be used as a CPU protection mechanism? Explain.

Q5) Explain why it's less costly to enforce controlled access in segmented memory management than in pure paging.

Q6) Differentiate between multitasking and multiprogramming systems.

Section - C

(2 × 10 = 20)

Q7) What are the various techniques available for secondary storage management? Describe any two techniques.

Q8) Explain the security and protection mechanism of LINUX operating system.

Q9) Explain the Banker's algorithm for detection and avoidance of deadlock with the help of suitable example.

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