Roll No. ....

Total No. of Questions : 09]

[Total No. of Pages : 02

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

(10 × 2 = 20)

Q1)

a) Why size of page is always power of 2?

b) Differentiate between preemptive and non preemptive scheduling.

c) Define swapping.

d) What is the use of system calls?

e) What is kernel?

f) What is the need of segmentation?

g) Differentiate between process and thread?

h) Differentiate between virus and Trojan horse.

i) What is a Process Control Block?

j) What is a distributed system?

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Section - B

(4 × 5 = 20)

Q2) Define Operating System? Discuss various classification of operating system?

Q3) What is the need of paging? When do page-faults occur? Describe the action taken by the O.S when page fault occurs?

Q4) Differentiate between internal fragmentation and external fragmentation?

Q5) Discuss different factors which are taken in to account while selecting a CPU scheduling algorithm?

Q6) Discuss multiprocessor and distributed operating systems with their merits and demerits.

Section - C

(2 × 10 = 20)

Q7) What is Deadlock? List and explain four necessary conditions for dead lock to occur? Explain different algorithms for prevention and avoidance of deadlocks?

Q8) List different scheduling algorithms? Explain Preemptive Shortest Job First(SJF) and Round robin scheduling algorithms with the help of suitable examples?

Q9) (a) Explain the architecture of LINUX Operating System.

(b) List and discuss various methods of file allocation?

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