

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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