

Roll No.

Total No. of Pages 02

Total No. of Questions : 09

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 Hrs.

Max. 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 Marks)

Q1.

- a) What is buffering?
- b) What is logical address space?
- c) What is a thrashing?
- d) What is meant by critical section?
- e) What for are Resource Allocating Graphs used?
- f) What is real time processing?
- g) What are semaphores?
- h) What is spooling?
- i) What is garbage collection?

j) What are program threats?

SECTION - B

(4*5 = 20 Marks)

- Q2. Explain virtual memory and associative memory.
- Q3. Discuss in detail the Data Encryption Standard (DES) algorithm. What are its limitations?
- Q4. Write short notes on the following:
(a) Two-phase locking.
(b) Wait-die and Wound-wait.
- Q5. What do you mean by page-faults. When do page-faults occur. Describe the action taken by the O.S when page fault occurs?
- Q6. Explain the difference between internal fragmentation and external fragmentation. Which one occurs in paging system?

SECTION - C

(2*10 = 20 Marks)

- Q7. (a) How can you prevent circular waiting situation in a deadlock?
(b) Which is the main limitation of resource allocation graph?
- Q8. Compare and contrast Public-key cryptography technique with Conventional cryptography technique.
- Q9. What do you mean by file management? Explain the various access and allocation methods of files in detail.