

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Information Technology) (Sem.-4)

OPERATING SYSTEMS

Subject Code : BTIT-402-18

M.Code : 77539

Date of Examination : 02-06-23

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Write briefly :

- a) List the various operating system services.
- b) What do you mean by Time-sharing systems?
- c) What is a thread?
- d) What is process control block?
- e) Differentiate between Deadlock Prevention and Deadlock Avoidance.
- f) Explain in brief about the term Compaction.
- g) Explain briefly the term Demand Paging
- h) What is critical section problem?
- i) Explain in brief about mutual exclusion in reference to Inter-process communication.
- j) Explain in brief about Bad Blocks.

SECTION-B

2. What is a process? Explain about process scheduling? Explain the different types of schedulers in detail.
3. Write a detailed note on Reader's & Writer's problem.
4. Write a detailed note on Deadlock Detection and Recovery.
5. Write short note on following in reference to memory management :
 - a) Page Fault
 - b) Working set
6. Write a detailed note on Direct Memory Access.

SECTION-C

7. Explain the following structure of an operating system in detail :
 - a) Layered
 - b) Monolithic
 - c) Microkernel
8. Write a detailed note on following :
 - a) Device independent I/O software
 - b) Device Controllers
 - c) Interrupt handler
9. Write a detailed note on following in reference to Inter-process communication :
 - a) Dining philosopher problem
 - b) Monitors

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.