

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Civil Engineering/Electrical Engineering/Electronics & Communication Engineering) (Sem-6)

OPERATING SYSTEM

Subject Code : BTCS 402-18

M.Code : 79262

Date of Examination :20-06-2023

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) Discuss structure of a disk.
- b) What is a process? Discuss states of a process.
- c) Discuss layered architecture of an operating system.
- d) Write main features of UNIX.
- e) What is a deadlock? Write necessary conditions for deadlock occurrence.
- f) What do you mean by a Scheduler? Discuss its types.
- g) What is a Process Control Block (PCB). What information is stored in this?
- h) What do you mean by process synchronization?
- i) What is swapping? Explain.
- j) What do you understand by locality of reference?

SECTION-B

2. What do you mean by an operating system? Explain functionality of Batch and Multiprogramming operating Systems.
3. Explain various page replacement algorithms.
4. What are semaphores? How can they be used to implement mutual exclusion?
5. **Explain real time scheduling algorithms :**
RM and EDF.
6. Discuss FIFO, SSTF and C-SCAN methods of disk scheduling with example.

SECTION-C

7. What do you mean by CPU scheduling? Explain various scheduling algorithms.
8. Explain various memory management schemes in detail.
9. What is a file? Discuss various file access methods. Explain the directory structure in detail.

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.