

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

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

OPERATING SYSTEMS

Subject Code : BTCS402/18

M.Code : 79262

Date of Examination 21-05-2024

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 :

- (i) Discuss access methods of a file.
- (ii) Differentiate between physical and logical address space.
- (iii) Discuss criteria used to measure CPU performance.
- (iv) What is real time operating system? Explain briefly.
- (v) Briefly explain the functions performed by an Operating System.
- (vi) What is multithreading?
- (vii) Discuss directory structure.
- (viii) What is dining philosopher problem?
- (ix) Discuss EDF real time scheduling method.
- (x) What is the importance of PCB (Process Control Block)?

SECTION-B

2. What do you understand by a process? Draw the state transition diagram and explain the purpose of each state.
3. Explain with example FCFS and Round Robin scheduling algorithms.
4. Compare static and dynamic contiguous partitioned memory management schemes.
5. What are semaphores? How can they be used to implement mutual exclusion?
6. Explain Multi programming and Time Sharing operating systems.

SECTION-C

7. What is a deadlock? Explain necessary conditions for deadlock occurrence. Discuss any method used for deadlock avoidance with example.
8. What do you mean by virtual memory? How it is implemented? Explain-various techniques used to manage the virtual memory.
9. What do you mean by disk scheduling? Explain in detail various disk scheduling algorithm with the help of suitable example.

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.