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Total No. of P

Total No. of Questions : 09

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

OPERATING SYSTEMS

Subject Code : BTIT-402-18

M.Code : 77539

Date of Examination : 17-12-2024

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 :

- (a) List various Operating System Services.
- (b) Define the term System calls.
- (c) List various states of a Process.
- (d) Write Advantages of threads.
- (e) Differentiate between Monitors and Semaphores.
- (f) Differentiate between Internal and external fragmentation.
- (g) Explain in brief about the term Compaction.
- (h) Define deadlock avoidance.
- (i) Explain in brief about the term seek time in reference to disk storage.
- (j) Explain in brief about device controllers.

SECTION-B

2. Write a detailed note on Operating system generations.
3. Explain in detail about the Types of Process Schedulers.
4. Explain the Peterson's Solution in detail.
5. Define the term Deadlock. Explain in brief about deadlock prevention.
6. Write a detailed note on Protection and sharing in reference to paging.

SECTION-C

7. Write a detailed note on following in reference to operating system structure.
 - (a) Layered
 - (b) Monolithic
 - (c) Microkernel approach
8. **Write a detailed note on following :**
 - (a) Deadlock Recovery
 - (b) Contiguous Memory Allocation
9. Write a detailed note on Directory Structure and File System Structure.

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.