April 2024

Time – Three hours
(Maximum Marks: 100)

[N.B.   1.   Answer all questions under Part-A. Each question carries 3 marks.

2.   Answer all the questions either (a) or (b) in Part-B. Each question carries 14 marks.]

PART – A

1.   What is the DOS operating system?

2.   Why do we need Memory Management component in an OS?

3.   Differentiate thread from process.

4.   What are the benefits of shared memory?

5.   What is Contiguous Memory allocation?

6.   Write down the disadvantages of paging.

7.   What are the three types of File allocation methods?

8.   Define security threats for an OS.

9.   List the operations that can be performed on group account management in Linux OS.

10.   What are the types of accounts?

[Turn over.....

PART – B

11. (a) Explain about Mainframe Operating System with an example.

    (Or)

    (b) Explain the Error detection and recovery services provided by operating system.

12. (a) (i) Explain the terms Throughput, Turnaround Time and Waiting Time. (7)
    (ii) Explain FCFS scheduling algorithm with an example. (7)

    (Or)

    (b) Discuss about deadlock detection and recovery mechanisms.

13. (a) Explain about any two page replacement algorithms with their examples.

    (Or)

    (b) With neat diagram, explain hardware and control structure used in virtual memory management.

14. (a) Discuss about any two RAID levels.

    (Or)

    (b) Explain File system structure with its types.

15. (a) Explain the Virtual File System.

    (Or)

    (b) Explain the components and architecture of the Linux Operating system.

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