

1911000102030001
B.C.A. F.Y (Sem – II)
Examination October -2023
Operating System - I

Seat No:

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[Time: Three Hours]

[Max. marks: 70]

Student's Signature

Q.1 A) Select Appropriate correct option.

10

- 1) PDA stand for ____
 - a) Personal Digital Association
 - b) Personal Digital Assistant
 - c) Provide Digital Assistant
 - d) Provide Data Association
- 2) Which one of the following explains the sequential file access method?
 - a) Random access according to the given byte number
 - b) Read bytes one at a time, in order
 - c) Read/write sequentially by record
 - d) Read/write randomly by record
- 3) Which of the following statement is FALSE regarding Linux Operating System?
 - a) Linux source code is freely available and it is community based development project.
 - b) Linux is a multiuser operating system.
 - c) Linux does not provide any security to the user.
 - d) Linux provides a hierarchical file structure in which system files/ user files are arranged.
- 4) Which of the following is the extension of archive file?
 - a) doc
 - b) zip
 - c) obj
 - d) bin
- 5) In which system each computer may acts as client or server on response and request?
 - a) Distributed OS
 - b) Peer to Peer
 - c) Cluster system
 - d) Network
- 6) -----itself is a file owned by the operating system
 - a) Database
 - b) Directory
 - c) Logical File
 - d) Record
- 7) The heads of the magnetic disk are attached to a _____ that moves all the heads as a unit.
 - a) Disk arms
 - b) Heads
 - c) Tracks
 - d) Spindle
- 8) The full boot strap program is stored in a partition called ____
 - a) Boot block
 - b) Bad block
 - c) Swap management
 - d) format

- 9) In the _____ algorithm, the disk arm goes as far as the final request in each direction, and then reverses direction immediately without going to the end of the disk.
a) C-LOOK b) SCAN c) LOOK d) C-SCAN

- 10) In Linux, _____ has all administrative privileges.
a) Administrator b) Standard User c) Root user d) Child User

B) Answer The Following. (Any 5)

- 1) What are disadvantages of tree-level directory structure?
- 2) Difference between relative Path and Absolute path
- 3) List out operating system which are multi-tasking, but not multi-user.
- 4) Difference between SCAN and C-SCAN disk scheduling policy.
- 5) What do you mean by multiprocessing system?
- 6) What is file? List out Basic types of files.
- 7) Does contiguous allocation suffer from external Fragmentation? Justify the answer.

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Q.2 Answer The Following. (Any two)

14

- a) Explain File management functions in detail.
- b) Discuss the advantages and disadvantages of batch processing over multiprogramming.
- c) Define spooling. Explain its working with necessary diagram.

Q.3 Answer The Following. (Any two)

14

- a) Write a note on Linked Allocation with its advantages and disadvantages.
- b) Write a note on to manage user account in Linux.
- c) Explain Time Sharing System in detail with example.

Q.4 Answer The Following. (Any two)

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- a) Differentiate various file access methods.
- b) Write a note on Linux operating system with its version.
- c) Explain Function and role of device controller.

Q.5 Do the following.

12

Suppose a disk drive has 200 cylinders number from 0-199. drive is currently served the request at cylinder number 87. The queue for pending request in FIFO order is as follows:
12,38,141,90,70,176,134,122,66,42,33,8.

Show the disk scheduling for the following algorithm.

- | | |
|---------|---------|
| 1) FCFS | 3) SCAN |
| 2) LOOK | 4) SSTF |