

BCA-13

December - Examination 2025

BCA (3rd Year) Examination

OPERATING SYSTEM-II

Paper : BCA-13

[Time: 3 Hours]

[Maximum Marks: 70]

Note :- The question paper is divided into three Sections A, B and C. Write answers as per the given instructions.

Section-A

7×2=14

(Very Short Answer Type Questions)

Note :- Answer **all** questions. As per the nature of the question delimit your answer in one word, one sentence or maximum up to **30** words. Each question carries **2** marks.

1. (i) Give any two differences between CUI and GUI.
- (ii) Why is the superuser called root?
- (iii) List seven layers of OSI model.
- (iv) Explain “call by reference” vs “call by value”.
- (v) What do you mean by Null Buffering?
- (vi) Name any feature of multimedia systems.
- (vii) What do you understand by ‘Scalability’?

Section-B

4×7=28

(Short Answer Type Questions)

Note :- Answer **any four** questions. Each answer should not exceed **200** words. Each question carries **7** marks.

2. Explain difference between password file and shadow password file in Linux System.
3. What do you mean by Distributed computing? Explain various types of distributed computing models in short.
4. Write short notes on - (a) superblock (b) inode (c) indirect block
5. Explain the difference between NTFS and FAT with suitable example.
6. Write a shell script to swap two variables. Explain with an example.
7. Write short note on light-weight RPC.
8. Differentiate tightly coupled and loosely coupled systems with a neat diagram.
9. Explain the advantages and disadvantages of Linux System.

Section-C

2×14=28

(Long Answer Type Questions)

Note :- Answer **any two** questions. You have to delimit your each answer maximum up to **500** words. Each question carries **14** marks.

10. Explain Buffering, Spooling and Caching in the context of multimedia systems.
11. Discuss Concurrency control in distributed systems. Explain how consistency is maintained.
12. Describe distributed computing. Explain tightly coupled vs loosely coupled systems with examples.
13. Suppose that a disk has 500 cylinders. Numbered 0 to 499. The drive is currently serving the request at Cylinder 321, and the previous request was at cylinder 105. The queue of pending request in FIFO order is -
86, 1470, 913, 1774, 948, 1509, 1022, 1750, 130
