



B.C.A. III Semester (CBCS) Degree Examination, March/April - 2022

COMPUTER SCIENCE

Paper No. 3.6 - Operating System

Time : 3 Hours

Maximum Marks : 70

SECTION - A

I. Answer all the questions. Each question carries two marks. 10x2=20

1. What is Operating System ? Give example.
2. Define Virtual Machine.
3. What is Process ? Mention types of process.
4. Define Physical Address and Logical Address.
5. Mention different operations of process.
6. What do you mean by Swapping ?
7. Define File and Directory.
8. Write operations on file.
9. What is protection and security ?
10. Define Thrashing.

SECTION - B

II. Answer any four questions. Each question carries five marks. 4x5=20

11. With a neat diagram explain layered structure of Operating System.
12. Explain different states of a process with neat diagram.
13. Differentiate between preemptive and non-preemptive scheduling algorithm.
14. What is Fragmentation ? Explain different types of Fragmentation.
15. Write a short note on Disk Formatting.
16. Define Directory. Explain Two-level Directory.



P.T.O.

SECTION - C

III. Answer any three questions. Each question carries ten marks.

3x10=30

17. What is System Call ? Mention different system calls available. Explain any two system calls.
18. Explain priority scheduling with an example.
19. Explain Paging Technique with neat diagram.
20. Consider the following page reference string :
7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2.
Assume that there are 3 memory frames are empty. Apply FIFO and Optimal Page Replacement (OPR) algorithm and calculate total number of page faults.
21. Explain SSTF and SCAN Disk scheduling algorithm with example.

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