BACHELOR'S DEGREE (C.B.C.S) EXAMINATION, MARCH 2024
2023 ADMISSIONS REGULAR
SEMESTER II - BCA (Cloud Technology and Information Security Management)
BC2B02B23 - Operating System

Time : 3 Hours   **Maximum Marks : 80**

Part A

I. Answer any Ten questions. Each question carries 2 marks   **(10x2=20)**

1. Write any two examples Windows and Unix system calls.

2. Describe an Operating System. Give examples.

3. Define a socket and its working.

4. Differentiate between process and threads.

5. List the various CPU scheduling algorithms.

6. Describe fragmentation.

7. Differentiate between load time and execution time.

8. Write a note on relocation register and limit register.

9. List the various operations that can be performed on a file.

10. Explain disk formatting.

11. Explain port scanning

12. Define OTP.

Part B

II. Answer any Six questions. Each question carries 5 marks   **(6x5=30)**

13. List the various functions of system call with example.

14. Differentiate between Command Interpreters and Graphical user interfaces.

15. Explain process states with a neat diagram.

16. Explain Producer-Consumer problem and its solution with example.

17. Write short note on thrashing in an operating system.

18. Explain any two page replacement algorithms.

19. Explain the techniques used for free space management.

20. Write a note on User Authentication techniques.

21. Explain the best practices to secure and protect passwords.

Part C

III. Answer any Two questions. Each question carries 15 marks   **(2x15=30)**

22. Explain the components of an Operating System.

23. Write short note on the following: i) Inter Process Communication ii) Remote Procedure call iii)Threads

24. Compare LRU and Optimal page replacement algorithms with an example. Also calculate the page hit ratio and page fault ratio.

25. Explain the concept "Computer Security Classification" in detail.