(FOR THE CANDIDATES ADMITTED

DURING THE ACADEMIC YEAR 2023 ONLY)

23UCS308

REG.NO. [ ]

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI
END-OF-SEMESTER EXAMINATIONS : NOVEMBER 2024

B.Sc -COMPUTER SCIENCE(AIDED & SF)   **MAXIMUM MARKS: 75**

SEMESTER: III   **TIME : 3 HOURS**

PART - III
23UCS308 – OPERATING SYSTEM CONCEPT AND LINUX
SECTION – A   **(10 X 1 = 10 MARKS)**

ANSWER THE FOLLOWING QUESTIONS.   **(K1)**

1. When a Service is completed,a Blocked Process goes to _____stage.

   (a) ready (b) running (c) terminated (d) suspended

2. Which scheduling algorithm allocates the CPU first to the process that request the CPU first?

   (a) FIFO (b) Shortest Job Scheduling (c) Priority Scheduling (d) Round Robin

3. In ____, information is recorded magnetically on platters.

   (a) Electric disk (b) Magnetic disk (c) Assemblies (d) Cylinders

4. When the event for which a thread is blocked occurs,_____

   (a) Thread moves to ready queue (b) thread remains blocked (c) thread completes (d) a new thread is provided

5. Semaphore is an ____ to solve the critical section problem.

   (a) Hardware for a system (b) Special program for a system (c) Integer variable (d) Atomic variable

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES   **(K2)**

6. Define Operating System.

7. Define Preemptive scheduling.

8. List the advantages of Linux Operating System.

9. Define a Process in Linux.

10. What are pipes in Linux?

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SECTION – B **(5 X 5 = 25 MARKS)**
ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) Explain in detail Interrupt Processing
                        (OR)
     b) Compare Contiguous Non-contiguous storage allocation.

12. a) Discuss Random Page replacement algorithm with example.
                        (OR)
     b) Paraphrase Round Robin scheduling is with example.

13. a) Discuss why disk scheduling necessary in Operating System.
                        (OR)
     b) Discuss usage of Shell programming in Linux.

14. a) Describe Linux signals with example.
                        (OR)
     b) Illustrate how to create thread in Linux with example.

15. a) Explain shared memory in Linux.
                        (OR)
     b) Differentiate users and groups in Linux with example.

SECTION – C **(5 X 8 = 40 MARKS)**
ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.(K4 (Or) K5)

16. a) Explain in detail the different types of Process states in OS with diagram.
                        (OR)
     b) Illustrate the Multiprogramming with Fixed Partition.

17. a) Paraphrase FIFO Page Replacement Algorithm with suitable example.
                        (OR)
     b) Examine Shortest Job First Scheduling algorithm.

18. a) Sketch and explain operation of Moving Head Disk Storage.
                        (OR)
     b) Discuss the following (i) File Permission commands (ii) Vi Editing commands

19. a) Illustrate how the process is created and terminated.
                        (OR)
     b) Compare Process and Threads.

20. a) Discuss Sockets and its types in Linux.
                        (OR)
     b) Explain different types of File permissions with example.

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