(FOR THE CANDIDATES ADMITTED 22UBC101 DURING THE ACADEMIC YEAR 2022 ONLY)

21UBC308

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS): POLLACHI
END-OF-SEMESTER EXAMINATIONS: DECEMBER-2022
COURSE NAME: B.C.A   **MAXIMUM MARKS: 50**
SEMESTER: I   **TIME: 3 HOURS**

PART - III

OPERATING SYSTEM

SECTION – A   (10 X 1 = 10 MARKS)
ANSWER THE FOLLOWING QUESTIONS.   (K1)
MULTIPLE CHOICE QUESTIONS.

1. The systems of _____ were called as batch processing systems.
   a. 1960   b.1970   c.1980   d.1975

2. _____ mapping technique is used for translating virtual address to physical address.
   a. Associative   b. Direct   c. Set Associative   d. Page

3. A file is a _____ of bytes that store information.
   a. Structure   b. union   c. Array   d. Bits

4. Information is stored in a computer according to a _____ hierarchy .
   a. Data   b. String   c. Array   d. Integer

5. The kernel of UNIX wrote in _____ language **(K1)**
   a. C   b. Java   c. COBOL   d. C++

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

6. Differentiate OS with hardware.
7. Define Round Robin Scheduling.
8. Relate Auxiliary storage with primary memory.
9. Illustrate the three methods in file access permission.
10. Indicate the Super user Command in the shell script.

SECTION – B   (5 X 4 = 20 MARKS)
ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) Examine the Concept of Interrupt.
                         (OR)
    b) Describe the concept of Virtual memory.

12. a) Solve the Bankers Algorithm which is used for Deadlock avoidance.
                         (OR)
    b) Differentiate the preemptive and non-preemptive Scheduling.

13. a) Why is Disk Scheduling necessary?
                         (OR)
    b) How are files organized in the Secondary Storage devices?

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14. a) Define the concepts of pipes with example.

(OR)

   b) Compare the tail and head command in shell script with example.

15. a) Elaborate the logical operator in shell program with example.

(OR)

   b) Apply the security implication for your shell Script.
       (Consider yourself as a system admin)

SECTION - C (4 X 10 = 40 MARKS)

ANSWER ANY FOUR OUT OF SIX QUESTIONS

(16th QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS
(FROM Qn. No: 17 to 21)

16. What is Deadlock? How to prevent the Deadlock in Real-time?   **(K5)**

17. Explain the concept of semaphores and compare it with the general Semaphores.   **(K4)**

18. Determine the types of processor scheduling in detail.   **(K5)**

19. Elaborate the types of strategies in disk scheduling.   **(K5)**

20. Explain the three modes of Vi editor in detail.   **(K4)**

21. Explain the conditional and looping statement in shell script.   **(K4)**

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