IV Semester B.A./B.Sc. Examination, September/October 2022
(CBCS) (Semester Scheme) (F+R)
COMPUTER SCIENCE – IV
Operating System and UNIX

Time : 3 Hours   Max. Marks : 70

Instruction : Answer **all** the Sections.

SECTION – A

I. Answer **any ten** questions. **Each** question carries **two** marks.   (10×2=20)

1) Mention any two functions of operating system.

2) What is Real time operating system ?

3) What is dispatcher ?

4) What is Monitor ?

5) What are the requirements for critical section problem ?

6) What is Thrashing ?

7) What are the file attributes ?

8) Define Seek time.

9) What is the purpose of sort command ?

10) List the types of shells in UNIX.

11) What is Ownership of files ?

12) Write the syntax for cp and mv commands.

SECTION – B

II. Answer **any 5** questions. **Each** question carries **ten** marks.   (5×10=50)

13) a) Explain any two types of Operating System in detail.   5

    b) What is CPU Scheduling ? Explain different scheduling criteria.   5

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14) a) Explain Batch processing operating system in detail.   5

    b) What are semaphores ? Explain the types of semaphores.   5

15) a) Explain any one classical problem of synchronization in detail.   5

    b) Explain the concept of Deadlock Detection in detail.   5

16) a) Explain single-level directory and two-level directory.   5

    b) Write a note on Segmentation.   5

17) a) Consider the reference string
{7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2, 0, 1, 7, 0, 1} with frame size 3,
explain FIFO page replacement algorithm.   5

    b) Explain the functions of memory management.   5

18) a) Write a note on UNIX components.   5

    b) Write a shell programming to reverse a given number.   5

19) a) Write a note on directory related commands.   5

    b) Write a note on vi editor.   5

20) a) Explain any two-looping statement in shell programming.   5

    b) Write a note on process communication command.   5