UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 3rd Semester Examination, 2023

CC6-COMPUTER SCIENCE (32)

OPERATING SYSTEMS

Time Allotted: 2 Hours   Full Marks: 40

The figures in the margin indicate full marks.

GROUP-A

Answer any *five* questions   1×5 = 5

1. What is starvation?
2. What is turnaround time?
3. What is cycle stealing?
4. What is reentrancy?
5. Define synchronization.
6. What is mutual exclusion?
7. When does page fault occur?
8. What is paging?

GROUP-B

Answer any *three* questions   5×3 = 15

9. Discuss the goals and functions of an operating system.
10. Discuss the benefits of multithreading in an operating system.
11. What is Semaphore? Discuss different types of semaphores in operating system.
12. Discuss the different conditions that lead to deadlock.
13. Explain throughput, turnaround time, waiting time and response time.

GROUP-C

Answer any *two* questions   10×2 = 20

14. Explain best fit, first fit and worst fit algorithms.
15. Explain different file access methods.
16. The queue of requests in FIFO is 86, 147, 91, 177, 94, 150, 102, 175, 130

    What is the total head movement needed to satisfy the requests for the following scheduling algorithms?
    (i) FCFS
    (ii) SJF
    (iii) SCAN
    (iv) LOOK
    (v) C-SCAN
17. Explain different methods used to solve the problems of security at the operating system level.

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