

SECOND SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2023
COMPUTER SCIENCE AND MATHEMATICS (DOUBLE MAIN)
GDCS2B02T: DATA STRUCTURE AND OPERATING SYSTEM

Time: 2 Hours

Maximum Marks: 60

SECTION A: Answer the following questions. Each carries *two* marks.
(Ceiling 20 Marks)

1. Write algorithm for push operation in stack.
2. List out any two characteristics of data structures.
3. What do you mean by expression tree?
4. Differentiate between path and branch.
5. Mention the activities of operating system in connection with device management.
6. Define process.
7. What are shared libraries?
8. What is meant by page fault?
9. What do you mean by CPU scheduling?
10. What is process synchronization?
11. Write note on critical section problem.
12. Define response time.

SECTION B: Answer the following questions. Each carries *five* marks.
(Ceiling 30 Marks)

13. What is linked list? Explain its types in detail?
14. Explain representation of array in memory.
15. Describe representation of graph in memory.
16. Write algorithm for pre-order operation.
17. Explain segmentation in detail.
18. What do you mean by distributed systems? Explain.
19. Explain FCFS in detail.

SECTION C: Answer any *one* question. Each carries *ten* marks.

20. What is circular queue? Explain algorithms for circular queue operations.
21. Explain algorithm of tree traversal.

(1 x 10 = 10 Marks)