QP CODE: 24027774

24027774

Reg No : .....

Name : .....

B.Sc /BCA DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, OCTOBER 2024

Third Semester

Core Course - CS3CRT08 - DATA STRUCTURE USING C++

Common to Bachelor of Computer Applications, B.Sc Computer Applications Model III Triple Main, B.Sc Computer Science Model III, B.Sc Information Technology Model III

2017 Admission Onwards

E8550EE1

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. What are data structures?
2. Why binary search operation is better for lager arrays? Justify.
3. Why stack is called a LIFO list?
4. Why we use priority queues?
5. Mention the disadvantages of circular list.
6. What do you mean by linked stack and linked queue?
7. Define AVAIL list.
8. What are the various types of binary trees?
9. Describe the advantages of binary search tree.
10. What are sequential files?
11. What is Direct Access Storage Device (DASD)?
12. What is linked file organization?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Explain sparse matrix representation with an example.
14. Explain quick sort with an example.
15. Explain multiple stack representation.
16. Define circular queues and advantages of them over linear queues.
17. Write a short note on dynamic data structures.
18. Write an algorithm or program for inserting a node after a given node into an unsorted linked list .Give an example.
19. Describe different tree terminologies.
20. Explain extended binary tree with an example.
21. What is Linear Probing? Explain its implementation.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. What are arrays? Describe how they are represented in memory. Explain the different operations can be possible with arrays.
23. Explain organization and operations on queue with example.
24. What is the need of tree traversing? Write about various tree traversing methods with example and it's traversing diagrams.
25. How collision is occurred? How can we resolve collision? Explain.

(2×15=30)