19U331S (Pages: 2) Name: ………..………..

Reg. No…..……………….

THIRD SEMESTER B.C.A. DEGREE EXAMINATION, NOVEMBER 2020
(CUCBCSS-UG)
CC15U BCA3 B04 - DATA STRUCTURES USING C++
(Computer Application - Core Course)
(2015, 2016 Admissions – Supplementary)

Time: Three Hours   Maximum: 80 Marks

PART I
Answer *all* questions. Each question carries 1 mark.

1. What is Boundary Tag System?

2. What is Heap Tree?

3. What is Row Major Representaion?

4. The complexity of Quick Sort is _____

5. ADT stands for _____

6. What is Self Loop?

7. What is AVL tree?

8. What is Weighted Path Length?

9. What is Best Fit?

10. What is Pendant Vertex?

(10 x 1 = 10 Marks)

PART II
Answer *all* questions. Each question carries 2 marks.

11. What is Pointer Array?

12. Differniate between External and Internal Fragmentation?

13. What is Biconnected Graph?

14. Differniate between Euler Path and Hamiltonian Path?

15. What is Trie?

(5 x 2 = 10 Marks)

PART III
Answer any *five* questions. Each question carries 4 marks.

16. Explain Stack and its operations using Linked List with algorithm and example?

17. Explain Linear Queue and its operations using Array with algorithm and example?

18. Explain Deletion Operation in Binary Search Tree with algorithm and example?

19. Explain B-Tree?

20. Explain Sparse Matrix with algorithm and example?

21. Explain Threaded Binary Tree?

22. Explain Kruskal's Algorithm?

23. Explain Binary Search with algorithm and example?

(4 x 5 = 20 Marks)

PART IV
Answer any *five* questions. Each question carries 8 marks.

24. Explain Conversion of Infix to Postfix with algorithm and example?

25. Explain Doubly Linked List and its operations with algorithm and example?

26. Explain Dequeue and its operations with algorithm and example?

27. Explain Quick sort with algorithm and example?

28. Explain Hashing and Collision Resolution Techniques?

29. Explain Graph Traversals and its operations with algorithm and example?

30. Explain Tree Traversals and its operations with algorithm and example?

31. Explain Asymptotic Notations in detail?

(5 x 8 = 40 Marks)

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