

M.Sc. DEGREE EXAMINATION, NOVEMBER 2017

FIRST SEMESTER

Branch – Computer Science

Paper III — DATA STRUCTURES

(New Syllabus)

Time : 3 Hours

Max. Marks : 70

PART - A

Answer any FOUR questions each question carries 5 marks.

(Marks : 4×5 marks = 20 marks)

1. Define linked list. Write the types of linked list
2. Explain briefly about Big Oh notation
3. Differentiate between trees and graphs
4. Describe briefly about graph traversals
5. Explain red black trees
6. Explain types of heap
7. Differentiate between linear and binary search.
8. Explain polyphase merge.

PART - B

Answer ALL questions each question carries 12.5 marks.

(Marks : 4×12.5 marks = 50 marks)

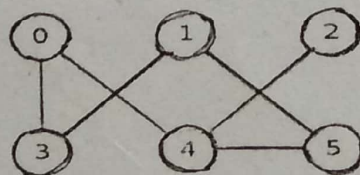
9. Explain Abstract data types and Asymptotic notations.

Or

10. Explain the operations of Dqueue using an Example.
11. What is non linear data structures? Explain the types of non linear data structures with an example.

Or

12. Find the path for given graph using Graph Traversal Technique.



13. Differentiate between AVL and Threaded Binary Trees with an Example.

Or

14. Explain Splay Tree

15. Solve step by step using Merge sort

39, 32, 41, 23, 21, 37, 15, 26, 18, 11, 3, 52.

Or

16. Explain how to search 67 using binary search in the given list

12, 19, 27, 36, 43, 51, 67, 72, 83, 98, 103.
