

15093

M.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

FIRST SEMESTER

Computer Science

Paper III — DATA STRUCTURE

Time : Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. Give an overview of data structures.
2. Describe about boundary tap system.
3. Write a brief note on the applications of queues.
4. Write a brief note on the applications of stack.
5. Differentiate between the B trees and B+ trees.
6. Write short note on the concept of trees.
7. Define the terminology that are being used in graphs.
8. What are the applications of sets?

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. What is an array? Explain about one dimensional and two dimensional arrays with an illustration.

Or

10. What is linked list? Explain the circular linked list and circular double linked list with an example.

11. Define stack. Explain the representation and operations of stack with an illustration.

Or

12. Define Queue. Explain the representation and operations of queues with an illustration.

13. Explain the following

- (a) Representation of binary tree
- (b) Operations on binary tree.

Or

14. Explain the types of binary trees and tree indexing with an example.

15. Explain the following

- (a) Representation of graphs
- (b) Operations on graphs.

16. Explain about Representation and Operations of sets with an illustration.

