15093

M.Sc. DEGREE EXAMINATION, OCTOBER/NOVEMBER 2018.

FIRST SEMESTER

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. What is buddy system?

2. What is boundary tap system?

3. Describe the applications of queues.

4. Describe the applications of stacks.

5. Differentiate between B-Trees and B+-Trees.

6. What is tree indexing?

7. What are the applications of sets?

8. Give a note on the types of graphs.

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Answer ONE question from each unit.

Each answer should not exceed 6 pages.

UNIT I

9. What is linked list? Explain the types of linked list.

10. What is an array? Explain the types of arrays.

UNIT II

11. What is a Queue? Discuss on the operations, representations of queues with an example.

12. What is a stack? Discuss on the operations, representation of stacks with an example.

UNIT III

13. What is a tree? Explain the types of binary trees with a diagram.

14. Discuss about the operations and representations of binary tree.

UNIT IV

15. Differentiate and explain the BFS & DFS on a example graph.

16. Discuss on the operations, representation, and applications of graphs.
