

# I-259

B.Sc. (Part-III) Examination, 2020

## INFORMATION TECHNOLOGY

Paper - II

(Fundamental Data Structure)

*Time Allowed : Three Hours*

*Maximum Marks : 50*

*Minimum Pass Marks : 17*

**Note :** Attempt all five questions. One question from each unit is compulsory. All questions carry equal marks.

### Unit-I

**Q. 1.** What is an Algorithm? Discuss terminologies used in algorithm with suitable concept and example.

**OR**

Write a short note on various primitives operations of queue with suitable example.

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**P.T.O.**

**(2)**

### Unit-II

**Q. 2.** Discuss the concept of linked list of stack with suitable example.

**OR**

Discuss the concept of stack as a circular linked list with suitable example.

### Unit-III

**Q. 3.** What is Binary Tree? Explain with suitable example.

**OR**

Discuss B<sup>+</sup> and B\* trees with suitable example.

### Unit-IV

**Q. 4.** Explain Binary search with suitable example.

**OR**

Discuss insertion sort with suitable example.

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**Unit-V**

**Q. 5.** Discuss Depth First and Breadth First Search with suitable example.

**OR**

What is Hash Table? Explain with suitable example.



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**100**