

Roll No.

DD-2760

**B. A./B. Sc./B. Sc. B. Ed. (Part III)
EXAMINATION, 2020**

MATHEMATICS

(Optional)

Paper Third (A)

(Principles of Computer Science)

Time : Three Hours

Maximum Marks : 50

Note : Attempt any *two* parts from each question. All questions carry equal marks.

Unit—I

1. (a) Explain different boolean operations with example.
- (b) What is mass storage ? Explain, how to data can be store in magnetic tap ?
- (c) What is instruction ? Explain Arithmetic and Logic operation.

Unit—II

2. (a) What is Operating System ? Explain the different components of operating system.
- (b) Write a note on Semaphores and Deadlock.
- (c) Discuss software ownership and liability.

(A-69) P. T. O.

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Unit—III

3. (a) What is Algorithms ? How are algorithms represented ? Explain.
- (b) Write a binary search algorithm.
- (c) Explain the three major steps in the translation process of Programming language.

Unit—IV

4. (a) Describe, how a stack can be implemented in a high level language in term of a one-dimensional array.
- (b) What is customised data type ? Explain in details.
- (c) Differentiate between text file and index file.

Unit—V

5. (a) Write a note on Image analysis in AI.
- (b) What is Artificial Neural Network ? Explain its basic properties.
- (c) How to measure a complexity in turing machine's problem ?

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