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.

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 ?