

Roll No.

DD-2764

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

MATHEMATICS

Paper Third (E)

(Mathematical Modelling)

Time : Three Hours

Maximum Marks : 50

Note : Attempt any *two* parts of each Unit. All questions carry equal marks.

Unit—I

1. (a) Explain quality solution sketching.
- (b) Explain difference and differential equation growth models.
- (c) Obtain the steady state solution of Leontief model.

Unit—II

2. (a) Explain single-species population models.
- (b) Explain population growth—An age structure model.
- (c) Explain the spread technological innovation.

Unit—III

3. (a) Explain A model for the detection of diabetes.

[2]

- (b) Explain Traffic models.
- (c) Explain Equilibrium distributions.

Unit—IV

4. (a) Explain model from Political Science.
- (b) Explain Cumulative voting.
- (c) Explain Comparison voting.

Unit—V

5. (a) Explain Urban water management planning.
- (b) Explain Applications in ecological.
- (c) Explain Mathematical model for logistic population growth.

DD-2764

80