Roll No. ....   **Total No. of Printed Pages : 3**

B04-503

Fourth Semester Online Examination, May-June, 2022

M. Sc. MATHEMATICS

Paper - V

FUZZY SETS AND THEIR APPLICATIONS - II

Time : Three Hours]   [Maximum Marks : 80

Note : (i) *Part A and B of each question in each Unit consist of very short answer type questions which are to be answered in one or two sentences.*

(ii) *Part C (Short answer type) (Word limit* **200-250**) *and Part D (Long answer type) of each question should be answered within the word limit* (**400-450** *words) mentioned.*

UNIT-I

1. (A) What do you mean by Multivalued logics ? 2

   (B) What do you mean by Fuzzy Quantifiers ? 2

   (C) Describe Linguistic variable and hedges. 4

Or

Describe relative quantities with example.

(D) Explain Fuzzy-Logic an overview of classic logic. 12

Or

Explain inference from conditional fuzzy propositions.

UNIT-II

2. (A) What do you mean by approximate Reasoning? 2

   (B) Define Zadeh implication. 2

   (C) Explain role of fuzzy equations. 4

Or

Explain fuzzy implications and their selection.

(D) Explain multiconditional approximate reasoning. 12

Or

Explain the role of fuzzy relation equation.

UNIT-III

3. (A) What do you mean by fuzzy logic control ? 2

   (B) What do you mean by expert system ? 2

(C) Explain Fuzzy inference engine.   4

Or

Explain fuzzification of inputs with an example.

(D) Write short note on fuzzy rule base.   12

Or

Explain defuzzification and various defuzzi-fication method.

UNIT-IV

4. (A) Define a feasible set.   2

(B) Define multistage decision making.   2

(C) Explain multiperson decision making.   4

Or

Explain Fuzzy ranking methods.

(D) Explain multicriteria decision making.   12

Or

Explain Fuzzy linear programming with example.

❏ ❏ ❏ ❏ ❏ d ❏ ❏ ❏ ❏ ❏