

Introduction to Fuzzy Logic

Presented By
Prof S R Kabat
HoD ,Dept of EE

What is Fuzzy Logic

Fuzzy logic is a mathematical language to express something.

- **This means it has grammar , syntax, semantic like a language for communication.**

There are some other mathematical languages also known

- **Relational algebra (operation on sets)**
- **Boolean algebra(operation on Boolean variables)**
- **Predicate algebra(Operation on well formed formulae, also called predicate proposition.)**

Fuzzy logic deals with fuzzy set or fuzzy algebra.

What is FUZZY?

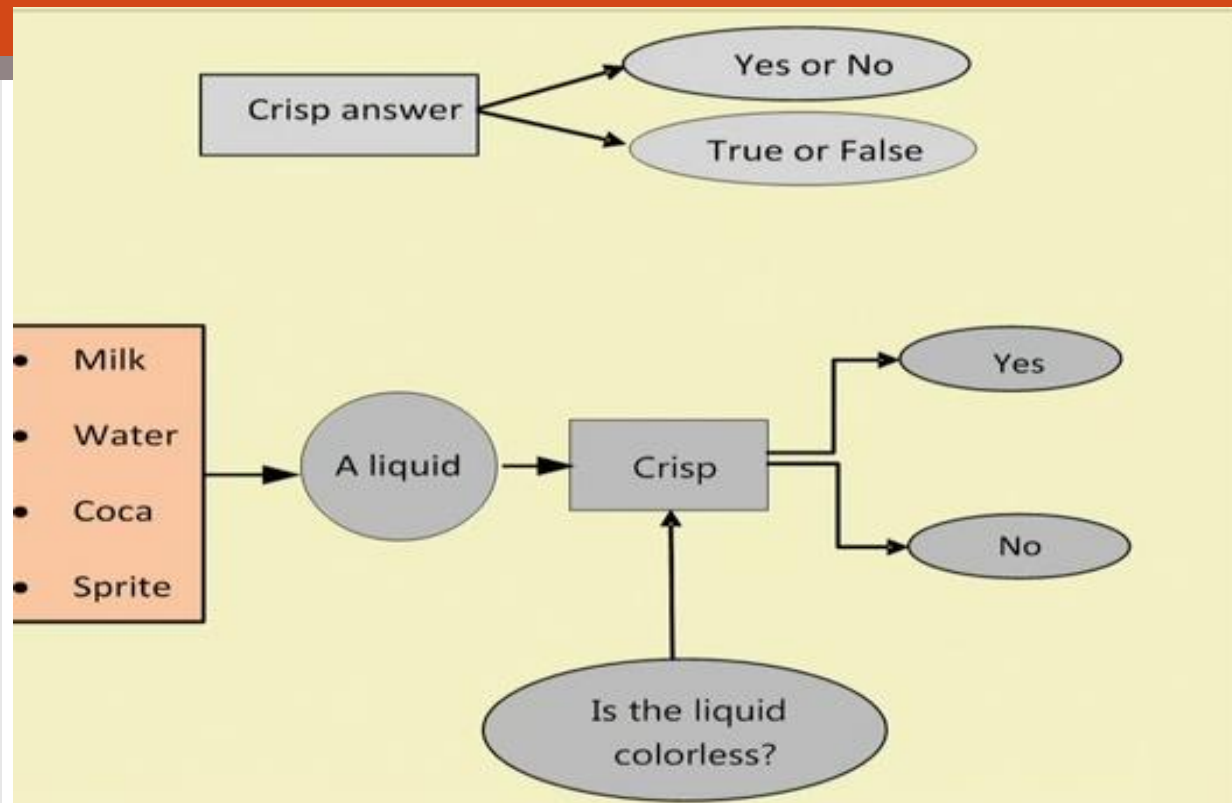
Dictionary meaning of fuzzy is **not clear , noisy etc.**

Antonym fuzzy is **Crisp**

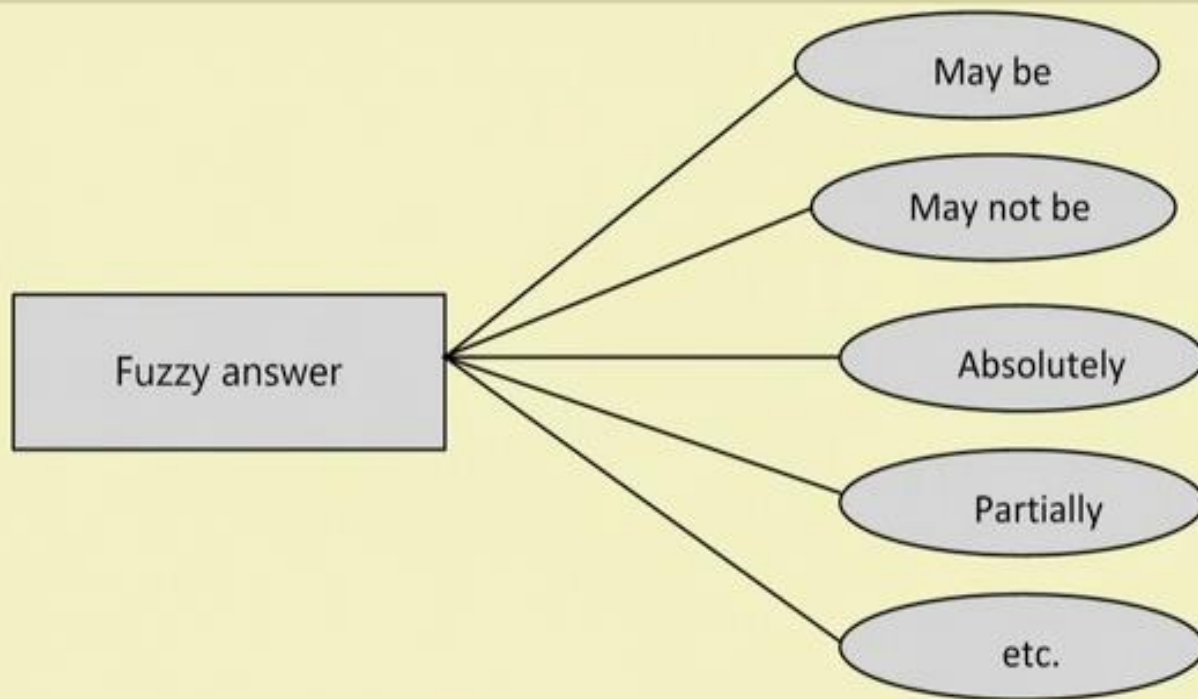
Eg-All chips are crisp



Fuzzy logic Vs Crisp Logic



Fuzzy logic Vs Crisp Logic



- Ankit
- Rajesh
- Santosh
- Kabita
- Salmon



Fuzzy

Is the person honest?

Extremely honest

Very honest

Honest at times

Extremely dishonest

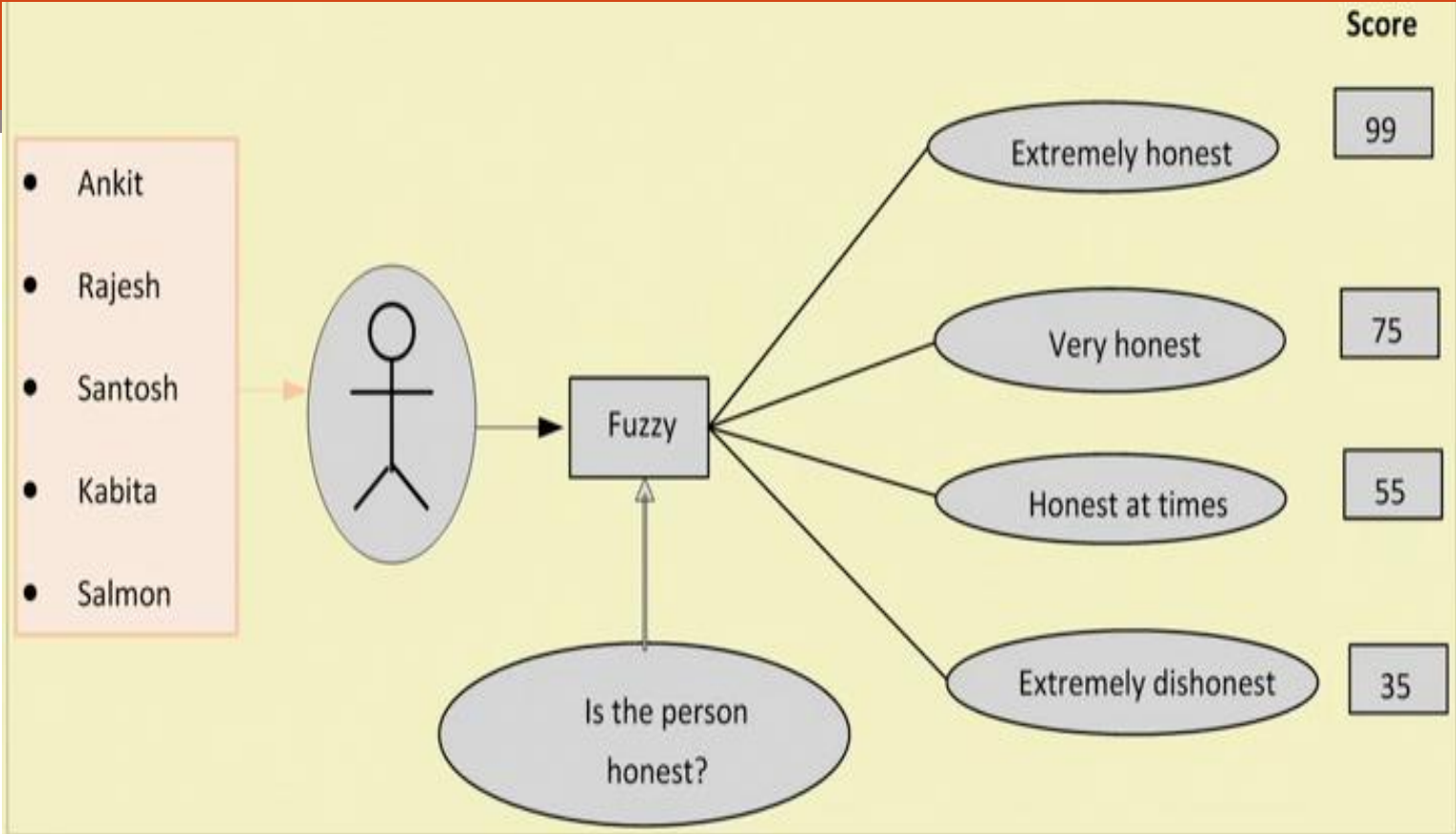
Score

99

75

55

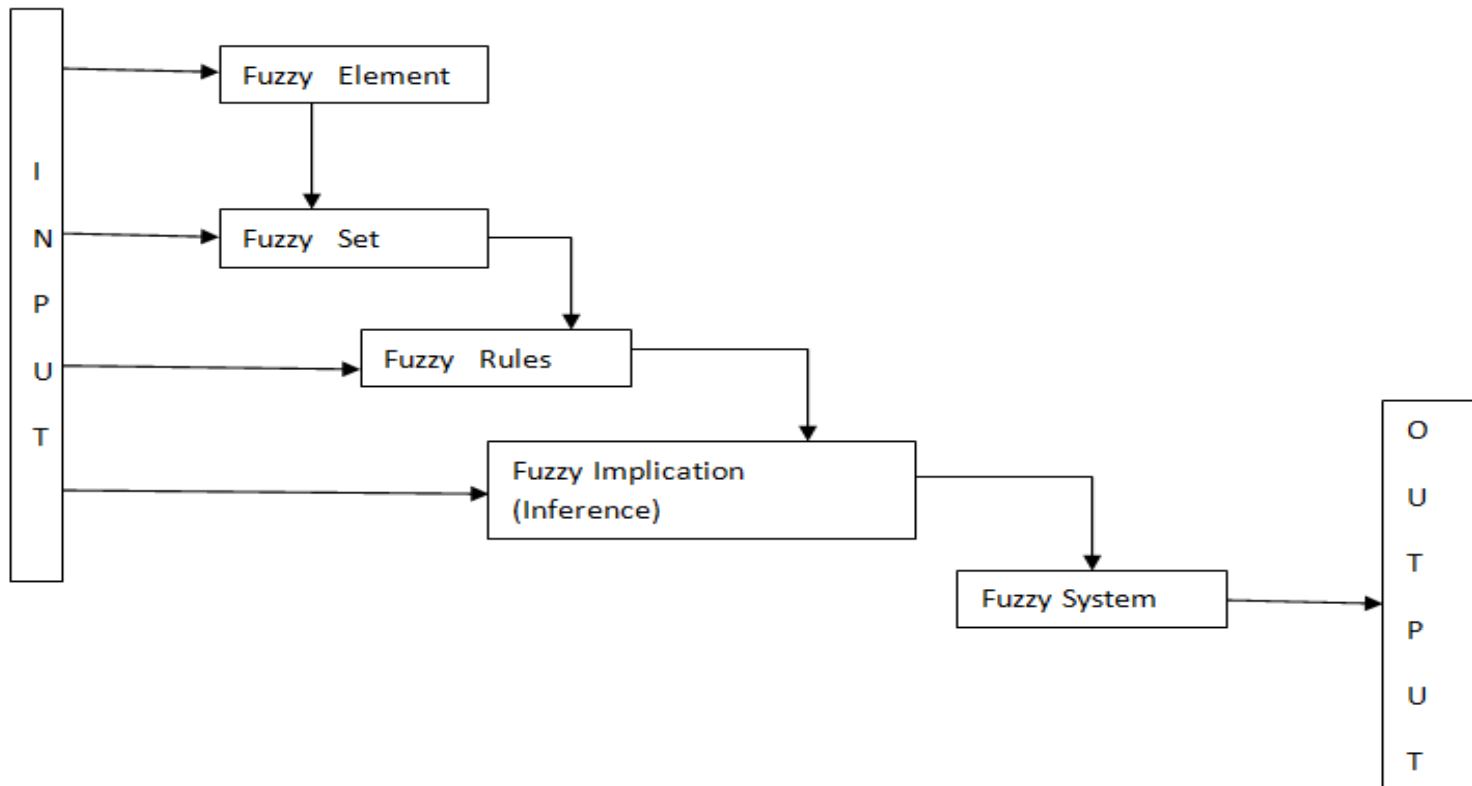
35



World is FUZZY



Concept of Fuzzy System



Concept of Fuzzy Set

To understand the concept of fuzzy set it is better if we first clear our idea about crisp set.

X=The entire population of india.

H=All Hindu population= $\{h_1, h_2, h_3, \dots, h_n\}$

M=All Muslim population= $\{m_1, m_2, m_3, \dots, M_n\}$

