

MID SEMESTER EXAMINATION- March, 2019

EP 420 Fuzzy Logic and Neural Networks

Time: 1:30 Hours

Max. Marks: 25

Note: Answer all FIVE questions.
Assume suitable missing data, if any.

1. (a) Define fuzzy logic and name few consumer products in which fuzzy electronics is used. 1.5
(b) Explain defuzzification and methods of defuzzification. 2

2. (a) Define classical set and linguistic variables with example. 1.5
(b) Differentiate fuzzy set from classical set and explain the properties of both fuzzy and classical sets. 5

3. (a) Using your own institution and your own definitions of the universe of discourse, plot fuzzy membership functions for the following variables 3
(i) Age of people
(ii) Very Young.
(iii) Young.
(iv) Middle-aged.
(v) old.
(vi) Very old.
(b) Distinguish between the feed forward and feedback neural networks. 2
Compare their input-output mapping.

4. (a) Define Artificial Neural Network and enlist the various phases of neural network. 2
(b) Explain Recurrent and Neural network. 2

5. (a) Compare and contrast a biological neuron and an artificial neuron. 2
(b) Distinguish between supervised and un-supervised training. 2
(c) Explain activation functions and its various types used in neural network. 2