

Roll No.

Total No. of Pages : 02

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M.Tech.(EPDT) (2018 Batch) (Sem.-1)

SOFT COMPUTING TECHNIQUES

Subject Code :MTEP-PE2A-18

M.Code :75232

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1.Attempt any FIVE questions out of EIGHT questions.

2.Each question carriesTWELVE marks.

1. a) Differentiate between crisp and fuzzy set with an example. (4)
- b) Differentiate between fuzzification and de-fuzzification with example. (8)
2. a) Using predicate logic solve the following : (6)
All men are mortal
Confucius is a man
Prove Confucius is mortal
- b) Let $X=\{a,b,c,d\}$ & $Y=\{1,2,3,4\}$ (6)
where $A=\{(a,0) (b,0.8) (c,0.6) (d,1)\}$ $B=\{(1,0.2) (2,1) (3,0.8) (4,0.1)\}$ $C=\{(1,0) (2,0.4) (3,1) (4,0.8)\}$
Determine implication relations
ifx is A then y is B
ifx is A then y is B else is C
3. a) Explain the ART network in details with suitable diagram. (6)
- b) Explain real time recurrent learning algorithm. (6)

4. a) Compare and contrast the difference between biological neuron and artificial neuron. (6)
b) Explain the organization of the brain in details with suitable diagrams. (6)
5. a) Explain the ANFIS system in details with suitable diagram. (6)
b) Explain the structure and functioning of an ANN network that uses Radial basis function as activation functions. (6)
6. Write short notes on :
a) Competitive learning rule (6)
b) Hebbian learning rule (6)
7. What is the principle of SVM? Explain the different kernels used in it. (12)
8. Write short notes on :
a) Encoding in genetics (6)
b) Flowchart and procedure of genetic algorithm (6)

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.