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PAPER ID-410933	Subject Code: KCS05
Roll No:	
B.TECH (SEM V) THEORY EXAMINATION 2021- APPLICATION OF SOFT COMPUTING Time: 3 Hours Note: 1. Attempt all Sections. If require any missing data; then choose	Total Marks: 100
	sultably.
SECTION A 1. Attempt all questions. a. Define Soft Computing. How is it different from conventional b. What is difference between auto associative memory and heter c. Write down the applications of genetic algorithm. d. What is a self organizing map? e. What is a membership function in a fuzzy set? f. If A = {1/1, 0.7/1.5, 0.2/2, 0.6/2.5} and B = {0.2/1, 0.3/1.5} Algebraic sum of the given fuzzy sets. g. What are the basic components of ANN? h. What is meant by threshold logic unit? i. Why do we use bias function in neural network? j. What is Adaptive learning?	ro associative Memory?
SECTION B 2. Attempt any three parts of the following: a. How crossover used in a GA? Explain the types of crossover with b. How is weight adjustment done in back propagation network? c. What is Defuzzification? Explain all the three methods which are with an example? d. What is Multilayer perceptron? How is different from single layer. e. Discuss neuro fuzzy system and rule base structure identification.	re used in Defuzzification er perceptron?
SECTION C 3. Attempt any one part of the following: (a) How back propagation network works in ANN? Write an algorithm (b) Explain supervised and unsupervised learning in detail. 4. Attempt any one part of the following:	10X1=10 for it. 10X1=10
(a) Why preceptron is not able to handle the tasks which are not line your answer using XOR Problem. (b) Write a short notes on the following: (i) Feedback control system (ii) Fuzzy Automata 5. Attempt any one part of the following:	arly separable? Justify 10X1=10

(a) Explain the architecture of Kohnen self of mizing network. (b) Explain Fuzzy Inference System with the components in detail.

(a) What are fuzzy sets? Discuss the various properties of fuzzy sets?

flowchart.

7. Attempt any one part of the following:

(b) Write short note on the following:

(i) Fuzzy Controllers

6. Attempt any one part of the following:

(a) How can Fitness functions be found for any optimization problem? Maximize the

function $f(x)=x^2$, with x in the integer interval [0,31) with the help of Genetic Algorithm. (b) What is Genetic Algorithm? Discuss the working of Genetic Algorithm with the help of

(ii) Fuzzy and Crisp relations

10X1=10

10X1=10