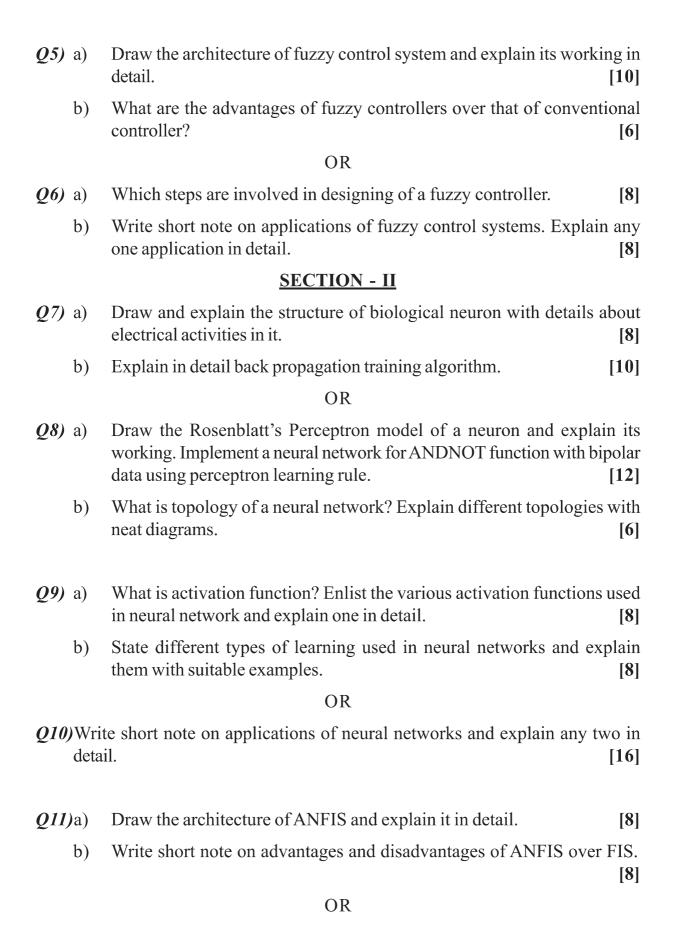
Total No. of Questions: 12]	SEAT No. :	
P3551	[Total No. of Pages : 3	

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B.E. (Electronics)

SOFT COMPUTING TOOLS

		(2008 Pattern) (Elective - III) (Semester - II)			
Time	e:31	Hours] [Max. Marks	: 100		
Insti	ructio	ons to the candidates:			
	1)	1) Answer one question each among Q1 OR Q2, Q3 OR Q4 and Q5 OR Q6.			
	2) Answer one questions each among Q7 OR Q8, Q9 OR Q10 and Q11 OR Q12				
	3)	Answers to the two sections should be written in separate answer book	ks.		
	4)	Neat diagrams must be drawn wherever necessary.			
	5)	Figures to the right indicate full marks.			
	<i>6)</i>	Use of electronic pocket calculator is allowed.			
	7)	Assume suitable data if necessary.			
		<u>SECTION - I</u>			
Q1)	a)	Draw the block diagram of an intelligent system and explain its working	ng.[6]		
	b)	Compare hard and soft computing.	[6]		
	c)	Write short note on Neuro-Fuzzy and soft computing characteristic	cs.[6]		
	,	OR			
Q2)	a)	Explain the role of neural networks in soft computing.	[6]		
	b)	What is fuzzy set theory? Where it is used in soft computing.	[6]		
	c)	Write short note on applications of soft computing.	[6]		
Q3)	a)	Explain any eight features of a membership function defining a fuzzin detail.	zy set		
	b)	Write short note on properties of and operations on fuzzy sets.	[8]		
		OR			
Q4)	a)	Explain in detail Centroid method and Max-Membership principle method for de-fuzzification.	ethod [8]		
	b)	Write short note on fuzzy rules.	[8]		



Q12)Use RBFN and train it to solve the XOR problem whose details are given below:

[16]

Input-Output table:- X_1 and X_2 are inputs and Y is ouput.

X_1	X_2	Y
0	0	0
0	1	1
1	0	1
1	1	0

Network parameters:

Assume two clusters with centers as $C_1=[0,\,0]$ and $C_2=[1,\,1]$. Select the two ϕ - functions as Gaussian with $\mu=0$ and $\sqrt{1/2}$, Use direct solution approach instead of gradient decent for the supervised training.

