Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER - III • EXAMINATION - WINTER • 2013

Subje	ect co	de: 730103 Date: 28-11-2013	
Subje	ect Na	ame: Soft Computing	
Time	: 10.3	30 am – 01.00 pm Total Marks: 70	
Instr			
	1. A	ttempt all questions.	
		Take suitable assumptions wherever necessary.	
	3. F	igures to the right indicate full marks.	
Q.1	(a)	Explain Rosenblatt's Perceptron model.	07
	(b)		07
Q.2			07
	(b)	1	07
	(h	OR What are variations of standard backgroungstion algorithm?	07
Q.3	(b) (a)		07
Q.S	(a) (b)	•	07
	(10)	String fitness	0,
		01101 5	
		11000 2	
		10110 1	
		00111 10	
		10101 3	
		00010 100 Find out synapted number of agrics of the best string in shove nagulation	
		Find out expected number of copies of the best string in above population of the mating pool under.	
		(i) Roulette wheel selection.	
		(ii) Tournament selection.	
		OR	
Q.3	(\mathbf{a})	Find out solution of above Q.3 (b) using: Elitism.	07
	(b)		07
Q.4	(\mathbf{a})		07
		$0 \le X_1, X_2 \le 6.$	
	(h	Use bitwise operator and show at least two generations.	07
	(b)	Explain convergence of Genetic Algorithm. OR	U/
Q.4	(a		07
Q.4	(b)		07
Q.5	(a	· · · · · · · · · · · · · · · · · · ·	07
		suitable example. Perform uniform cross over using mask on given pair of	
		chromosomes.	
		P1 = 10100011101 P2 = 01010100110	
	/1	Mask = 10010111001.	0=
	(b)		07
Q.5	(a	OR Explain GA based backpropagation network.	07
Ų.3	(a _. (b)		07
	(D)	**************************************	37

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