Sea	t No.:	Enrolment No	·
GUJARAT TECHNOLOGICAL UNIVERSITY M.E. SEMESTER III-EXAMINATION – WINTER 2015			
Subject code: 2730207			Date: 04/12/2015
	•	Name: Pattern Recognization	
Time: 2:30 PM to 5:00 PM Instructions:			Total Marks: 70
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		Attempt all questions. Make suitable assumptions wherever necessary.	
		Figures to the right indicate full marks.	
Q.1	(a)	i) Explain Pattern Recognization with example.ii) Compare Supervised, Unsupervised and Semisupervised Lea	07 arning.
	(b)	Explain Discriminant function.	07
Q.2	(a)	Write short note on, i) Maximum likelihood estimation ii) Bayesian estimation	07
	(b)	What is perceptron algorithm? Explain with example. OR	07
	(b)	What is back propagation algorithm? Explain with example.	07
Q.3	(a) (b)	What is clustering? Explain different clustering techniques. What is hierarchical clustering? Explain agglomerative algorithm OR	m. 07
Q.3	(a) (b)	Explain different categories of clustering algorithms. What is sequential clustering? Explain BSAS.	07 07
Q.4	(a) (b)	Explain feature selection based on statistical hypothesis testing. Write short note on wavelet packets. OR	07 07

OR

Show the orthogonality of the hadamard transform.

How to train markov models via neural networks.

Explain optimal path searching techniques.

Explain haar transform.

Explain Viterbi algorithm.

Explain hidden markov models.

Q.4

Q.5

Q.5

(a)

(b)

(a)

(b)

(a) (b) **07**

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