| BICSE-018 |

B.Tech. – VIEP – COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

June, 2015   00285

BICSE-018 : PATTERN RECOGNITION

Time : 3 hours   *Maximum Marks : 70*

*Note : Answer any **seven** questions. All questions carry equal marks.*

1. Define pattern. Explain the design of pattern recognition system with the help of a neat sketch. *3+7*

2. Explain the concept of syntactic pattern recognition. *10*

3. What is meant by clustering ? Explain any one clustering algorithm in detail. Give some areas where clustering can be used efficiently. *3+5+2*

4. Explain any one method of edge detection that can be applied in digital image. *10*

5. What is the role of smoothing in noise reduction ? Explain about the smoothing transformation. *4+6*

6. Differentiate between supervised and unsupervised learning. Give some examples of both learning methods. *6+4*

7. Explain the different ways of representing data in neural network system. What are the advantages of neural networks over conventional computers? 5+5

8. Write short notes on the following : 5+5

   (a) Use of fuzzy approach in pattern recognition

   (b) Regular and irregular pattern

9. What is line detection ? Which detector is used to detect a line ? Explain. 3+7

10. What are the design parameters of Artificial Neural Network ? 10

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