

**B.Tech. – VIEP – COMPUTER SCIENCE AND
ENGINEERING (BTCSVI)****Term-End Examination****December, 2015****BICSE-018 : PATTERN RECOGNITION***Time : 3 hours**Maximum Marks : 70*

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

1. What are the different steps in pattern recognition ? Also discuss how we can effectively remove the irrelevant features. 5+5
2. Why is edge detection not a trivial task ? What are the different approaches to edge detection ? Explain in short any one of them. 2+4+4
3. What is Bayes' theorem and how is it applied in the case of classification ? 3+7
4. What is smoothing ? Explain any one smoothing method applied in the field of image processing. 4+6
5. Explain how fuzzy approach can be used in pattern recognition. 10
6. What is the difference between boundary and edge ? How is boundary detection performed ? 4+6

7. What are the different preprocessing techniques used in the case of feature detection? 10
8. What is fuzzy logic? Where are fuzzy expert systems used? 5+5
9. Draw and explain the architecture of a back propagation network. 10
10. Write short notes on the following : 5+5
- (a) Irregular Pattern
 - (b) Fuzzy Grammar
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