| BICSE-018 |

B.TECH. COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

June, 2013

BICSE-018 : PATTERN RECOGNITION

Time : 3 hours *Maximum Marks : 70*

Note : (i) Answer **any seven** questions.

(ii) All questions **carry equal** marks.

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1. (a) Define pattern ? Explain about the design of pattern recognition system with a neat sketch.   6

    (b) Discuss about the postulates of pattern recognition.   4

2. What are the major assumptions in edge linking ? Explain about the edge linking by adaptive mathematical morphology.   10

3. Write *short notes* on the following :

    (a) Morphological Segmentation   4

    (b) Shape region   3

    (c) Boundary detection   3

4. Explain the relationship of fuzzy classifier to statistical classifier and neural classifier. **10**

5. Explain about the Genetic algorithm in pattern recognition. **10**

6. (a) Differentiate supervized learning and unsupervized learning. **5**

   (b) Explain about the Bayer classifier in detail. **5**

7. Define Laplacian of a continuous image ? Explain about the discrete Laplacian operator with an example. **10**

8. Explain about the following :
   (a) Medium filter **4**
   (b) Rank order smoothing operators **3**
   (c) Linear operators **3**

9. Explain about the feature detection in computer vision in detail. **10**

10. List the areas in which pattern recognition concept can be applied and explain the techniques applied for two applications clearly ? **10**

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