Roll No. ....

23070

M. Tech. 2nd Semester (Computer Engg.) Examination – January, 2012

SOFT COMPUTING

Paper : MTCE-602-A

Time : Three hours]   *[Maximum Marks : 100*

Before answering the question, candidates should ensure that they have been supplied the correct and complete question paper. No complain in this regard, will be entertained after examination.

Note :   Attempt only *five* questions. All questions carry equal marks.

1. Explain Artificial Neural Network architecture ? Write its applications.   20

2. What is learning ? Explain different types of learning. 20

3. Explain :

  (a)   Hopfield networks.   10

  (b)   Associative Memory.   10

4. (a) What is a membership function ? Explain with the help of examples. 10

(b) What is Fuzzy sets ? Explain the characteristics of Fuzzy sets. 10

5. (a) What are the properties which a fuzzy set A on R (set of real numbers) must possesses to qualify as a fuzzy Number ?

(b) Explain any four arithmetic operations on closed interval with examples.

6. Explain the concepts of non-specificity and fuzziness of fuzzy set with the help of suitable examples. 20

7. Write short notes on :

(a) Fuzzy qualifier. 10

(b) Multi-valued logic. 10

8. (a) What are the applications of fuzzy logic ? 10

(b) Define linguistic variable and explain with example. 10