22643

M. Tech 2nd Semester (CSE) CBCS
Scheme Examination – May, 2018

SOFT COMPUTING

Paper : MTCSE22C1

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

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

Note :   Question No. 1 is *compulsory*. Attempt any *five* questions taking at least *one* question from each Unit. All question carry equal marks.

1. (a) Differentiate between biological neuro-system & ANN. $5 \times 4 = 20$

 (b) What do you mean by classical set ?

 (c) What is classical logic ?

 (d) What is uncertainty ?

 (e) What is Hopfield networks ?

UNIT – I

2. Explain ANN architecture. Write its application.   20

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

UNIT – II

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

    (b) How fuzzy rules are generated ? 10

5. Define fuzzy set and fuzzy number and explain following operation on fuzzy set : Complement, Intersection, Union. 20

UNIT – III

6. Write short note on : 2 × 10 = 20

    (a) Fuzzy propositions

    (b) Linguistic hedges

7. Write short note on : 2 × 10 = 20

    (a) Fuzzy Qualifiers

    (b) Classical logic

UNIT – IV

8. (a) Explain information & uncertainty in Detail. 10

    (b) Explain non-specificity of fuzzy and crisp set. 10

9. Explain fuzziness of fuzzy sets. 20