

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 × 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

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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 : $2 \times 10 = 20$
(a) Fuzzy propositions
(b) Linguistic hedges
7. Write short note on : $2 \times 10 = 20$
(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