

Roll No.

67214

**MCA 5th Semester (New) for full
subject candidates Examination-
December, 2013**

SOFT COMPUTING

Paper MCA-504

Time : 3 hours

Max. Marks : 80

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 the examination.

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

UNIT - I

1. (a) What is soft computing ? How is it useful and used ? Discuss with examples. 8
- (b) Discuss uses and advantages of fuzzy sets with examples. 8

2. Explain the following briefly with suitable examples. 8

(i) Fuzzy logic systems

(ii) Genetic algorithms and their uses in problem solving 8

UNIT - II

3. (a) What are artificial neural networks ? How are these useful and used ? Explain with suitable example. 8

(b) Discuss neural network applications in control systems with examples. 8

4. Describe the following with examples :

(i) Learning in artificial neural networks 8

(ii) Neural network models 8

UNIT - III

5. (a) What are fuzzy interface systems ? How are these useful and used ? Explain with suitable example. 8

(b) Discuss fuzzy clustering with suitable examples. 8

6. Explain the following with examples :

$$8 \times 2 = 16$$

- (i) Neuro fuzzy modeling
- (ii) Applications of fuzzy systems

UNIT - IV

7. (a) What is image processing ? How is it useful and used ? Discuss with examples. 10

(b) Explain biological sequence alignment with an example. 6

8. Explain the following with examples :

- (i) Natural language processing 8
- (ii) Pattern recognitions 8