M.C.A. Sem - V (Choice Based Credit System 2011 & 2012 Course) :
WINTER - 2018
SUBJECT : SOFT COMPUTING

Day : Wednesday **W-2018-1937** Time : 02.00 PM TO 05.00 PM
Date : 14/11/2018 Max. Marks : 100

N. B. :

1) Attempt **ANY FOUR** questions from Section - **I** .
2) Attempt **ANY TWO** questions from Section - **II** .
3) Answers to both the sections should be written in the **SAME** answer book.
4) Figures to the **RIGHT** indicate full marks.

SECTION - I

Q. 1 **a)** What are Genetic Algorithms? **(05)**

b) Illustrate Mutation with an example of your choice. **(10)**

Q. 2 **a)** Explain supervised learning model. **(08)**
b) What is a hopefield network? Discuss. **(07)**

Q. 3 **a)** How are fuzzy sets different from crisp sets? **(08)**
b) How is fuzz logic different from traditional (Two Values) logic? **(07)**

Q. 4 Discuss Rough sets and operations on rough sets in detail. **(15)**

Q. 5 Write short notes on any three of the following: **(15)**

a) Fuzzyfication
b) Perceptron
c) Back propagation
d) Synaptic gap
e) Energy function

SECTION - II

Q. 6 Draw a neat network diagram of a BPN. State the important steps in the algorithm. **(20)**

Q. 7 Assume one perceptron separates alphabets and numeric and the second perceptron separate capitals and small letters. Represent the situation as a two layered separation process. **(20)**

Q. 8 Book classification in library is a process of 'AI' and hence can be considered as 'soft computing'. Elaborate. **(20)**

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