

MASTER OF TECHNOLOGY (COMPUTER ENGINEERING) (CBCS - 2015 COURSE)
M. Tech. (Computer Engineering) Sem-IV :SUMMER- 2022
SUBJECT : SELF-STUDY PAPER-II:SOFT COMPUTING

Day : Wednesday
Date : 15-06-2022

S-14562-2022

Time : 10:00 AM-01:00 PM
Max. Marks : 60

N.B. :

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Both the sections should be written in **SEPARATE** answer books.
 - 4) Draw neat diagrams **WHEREVER** necessary.
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SECTION – I

Q.1 What is ANN? List its characteristics? Compare biological neural network with ANN. (10)

OR

Q.1 What is expert system? Explain in detail components of expert system. Enlist applications of expert system. (10)

Q.2 What is neural network? Explain in detail basic models of neural network. (10)

OR

Q.2 Explain in detail single layer neural network. Compare it with multilayer neural network. (10)

Q.3 What is back propagation network? List its applications. Also explain in brief error back propagation algorithm. (10)

OR

Q.3 Explain the factors that improve the convergence of learning in BPN network. (10)

SECTION - II

Q.4 What is fuzzy set? Illustrate its mathematical representation with example. Also describe the operations that are performed on fuzzy sets. (10)

OR

Q.4 Explain the significance of fuzzy logic in control systems. Also describe the assumptions in fuzzy logic control design. (10)

Q.5 What is survivor selection? Compare age based selection and fitness based selection. (10)

OR

Q.5 What is mutation? Explain different mutation operations. Discuss its significance in genetic algorithm. (10)

Q.6 What is Hybrid system integration of neural network? Explain in detail how fuzzy logic is used in neural network implementation. (10)

OR

Q.6 Explain in detail fuzzy associative memories. (10)

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