

M.Tech.

NEURAL NETWORKS AND FUZZY LOGIC

SUBJECT CODE : CS - 518 (Elective - II)

Paper ID : [E0692]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 100

Instruction to Candidates:

- 1) Attempt any **Five** questions.
- 2) **All** questions carry equal marks.

Q1) Show how the Hopfield net may be used to maximize an objective function by recasting the objective as one to be minimized.

Q2) Explain what do you mean by the terms ADALINE and MADALINE?

Q3) Explain Back propagation training method along with its limitations.

Q4) In implementing the c-means algorithm, can the order in which samples are presented influence the results of the algorithm? Provide justification for your answer.

Q5) If A and B are two fuzzy events of a sample space S, prove that

$$P(A / B) + P(A^C / B) = 1$$

Q6) Explain what do you mean by BAM.

Q7) What is the difference between similarity and possibility approaches for fuzzy databases? What are the advantages and disadvantages of these approaches? Give examples where you would tend to favor one approach over the other.

Q8) Write short notes on the following:

- (a) Kohonen self organizing maps.
- (b) Hebb's rule.

