GOVERNMENT COLLEGE (AUTONOMOUS), RAJAHMUNDRY

(Accredited by NAAC "A+" Grade)

DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS

IV B.Sc. Semester-VIII

NEURAL NETWORKS

MODEL QUESTION PAPER (W.E.F 2023-2024)

Time: 2 ½ Hrs. **Max Marks: 50**

SECTION - I

Answer any FIVE Questions **5 X 3= 15M**

1. What are the features of neural networks?
2. Give the terminology of Artificial Neural Networks.
3. Define perceptron and its structure
4. Write about various notations used in back propagation algorithm derivation.
5. List any three applications of Back Propagation network.
6. What is Self-Organization?
7. Draw the architecture of SOM and explain in detail.
8. List some applications of RBF network...

SECTION - II

Answer following question **5 X 7 = 35M**

9. Explain the taxonomy of artificial neural network architectures.

(OR)

10. List the important learning laws in ANN. Discuss briefly Hebbian learning.

11. Write and explain initialization, activation, computation of actual response adaptation of weight vector and continuation operations of perceptron convergence theorem

(OR)

12. What kind of operations can be implemented with perceptron? Show that it cannot implement Exclusive OR function.

13. Write the flowchart of error back-propagation training algorithm.

(OR)

14. What is cross-validation? Give its significance in feed forward n/w design

15. What are Self-organizing neural networks? Explain briefly.

(OR)

16. What is Support Vector Machine? Explain how it separates non-separable patterns.

17. Draw the architecture of RBF network and explain in detail.

(OR)

18. Explain about Neuro Dynamical Models