

Self test Questions for Slides Set #5b

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February 13, 2025

[These questions should help review the key concepts presented in the slides!]

Neural Networks (NN):

1. What are the core components of a neural network?
2. How do neural networks mimic the biological brain?
3. What is the significance of synaptic strength in the functioning of a neuron in a neural network?

Neural Network Architecture:

4. What is the basic architecture of a neural network?
5. How does supervised learning work in a neural network, and why is it important for tasks like image recognition?

Neural Networks: Properties:

6. What are the key properties of neural networks?
7. Explain the role of adaptability and fault tolerance in neural networks.

Artificial Neuron Model:

8. How does the mathematical model of an artificial neuron compute the output?
9. What is the function of the threshold (u) in the artificial neuron model?

Biological Neuron Analogy:

10. Describe the crude analogy between a biological neuron and an artificial neuron in terms of their components.
11. What are the two main types of Artificial Neural Networks based on connection patterns? Explain their differences.