

Suez Canal University Faculty of Computer and Information Computer science Dept.



Sheet-4 Neural Networks

Answer the following MCQs questions

1-What is the main function of pooling layer in a convolutional neural network (CNN)?

- a. To add non-linearity
- b. To increase model complexity
- c. To reduce the spatial dimensions of feature maps
- d. To add noise to the input data

2-What kind of layer is commonly used in neural networks to add non-linearity?

- a. Fully Connected Layer
- b. Pooling Layer
- c. Convolutional Layer
- d. Activation Layer

3-What are the key advantages of dropout in neural networks?

- a. It increases model complexity.
- b. It accelerates training.
- c. It introduces stochasticity to improve generalization.
- d. It reduces the number of neurons in the network.

4-What is the primary purpose of a Convolutional Neural Network (CNN)?

- a) Object detection
- b) Image classification
- c) Text generation
- d) Reinforcement learning

5- Which layer type is used to reduce the spatial dimensions in a CNN?

- a) Convolutional layer
- b) Pooling layer
- c) Fully connected layer
- d) Activation layer



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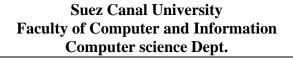
6-What is the primary advantage of using a CNN over a fully connected neural network for image processing tasks?

- a) CNNs can capture local spatial patterns in the input data
- b) CNNs can handle sequential data
- c) CNNs have a higher number of neurons
- d) CNNs have a higher training speed

7-What is the purpose of the output layer in a CNN?

- a) To compute the predicted output based on the final feature representation
- b) To reduce the spatial dimensions of the input data
- c) To apply non-linear transformations to the feature maps
- d) To initialize the weights and biases of the network
- 8-List a few applications of a CNN self driving, ATM, Smart phone 9-What are the advantages of using CNN over ANN?
- 10-What Are the Different Layers on CNN?
- 11-What is Pooling on CNN, and How Does It Work?
- 12-Draw CNN Architecture?
- 9CNNs are more suitable for image-related tasks due to their ability to capture spatial hierarchies, handle translation invariance, and be computationally efficient compared to traditional ANNs
- 10pooling, convolution layer, fully connection, dropout layer, activation layer







11a Convolutional Layer is followed by a Pooling Layer. The primary aim

a Convolutional Layer is followed by a Pooling Layer. The primary aim of this layer is to decrease the size of the convolved feature map to reduce the computational costs.



