Mock Test 2 (Lessons 5-10)

Question 1

1 Point

Learning in Neural Networks happens through the adjustment of weights

(A) True

(B) False

Clear selection

Question 2

1 Point

In computer vision implementations, classification is more difficult than segmentation

(A) True

(B) False

Clear selection

Attempts
Unlimited

Marking

	Maximum points	50 points

Question 3

ChatGPT uses LSTM models

(A) True

(B) False

Clear selection

Question 4

Generative AI models learn the patterns and structure of their input training data and then generate new data that has similar characteristics.

(A) True

(B) False

Clear selection

Question 5

3 Points

Identify the type of learning in which only labelled training data is used.

A Unsupervised learning

B Reinforcement learning

C Semi supervised learning

D Supervised learning

Question 6

3 Points

You are asked to implement a neural network that classifies samples into 5 groups. Each sample is represented by 3 values. How would you design your neural network?

A Input layer with 3 inputs, output layer with 5 outputs and multiple hidden layers.

B Input layer with 5 inputs, output layer with 3 outputs and multiple hidden layers.

C Input layer with 2 inputs, output layer with2 outputs, and multiple hidden layers,

D This neural network is not possible to implement.

Question 7

Select the primary purpose of large language models (LLMs)

(A) To create a new language

(B) To process and understand vast amounts of natural language data

(C) To translate languages in real-time

(D) To summarize text

Question 8

3 Points

You have a balanced dataset with 1000 samples. Which of the following data split strategies are correct?

A 50% train, 50% test

B 95% train, 5% test

C 80% train, 10% validation, 10% test

D 20% train, 10% validation, 70% test

Question 9

7 Points

In a CNN model the Input volume is 32x32x3. Applying 10 5x5 filters with stride 1 , padding 2 what is the output feature volume?

A 36x36x10

B 34x34x10

C 32x32x10

D 30x30x10

Question 10

In question 9, how many parameters in this convolutional layer?

(A) 760

(B) 750

(C) 1024

(D) 320

Question 11

Which of the following is the primary purpose of convolutional layers in a Convolutional Neural Network (CNN)?

(A) To reduce the dimensionality of the data using pooling techniques

(B) To extract spatial features such as edges, textures, and patterns

(C) To connect every neuron to every other neuron in adjacent layer

(D) To classify input data into predefined categories

Question 12

4 Points

What is the primary function of RELU activation function in a neural network?

(A) To update the weights during backpropagation

(B) To initialize the weights of the network

(C) To calculate the loss between predicted and actual outputs

(D) To introduce non-linearity into the model and help it learn complex patterns

Question 13

4 Points

What is a key characteristic of a Large Language Model (LLM)?

(A) It operates exclusively on structured data such as tables and graphs.

(B) It requires manual feature engineering for every natural language task.

(C) It uses billions of parameters to understand and generate human-like text.

(D) It is trained only on domain-specific datasets for niche applications.

Question 14

Which of the following techniques is commonly used to fine-tune a Large Language Model (LLM) for a specific task?

(A) Convolutional layers for feature extraction

(B) Hard-coding rules for natural language processing

(C) Using decision trees to interpret the model outputs

(D) Transfer learning with task-specific data

Question 15

Which of the following loss functions is most commonly used for multi-class classification problems?

(A) Categorical Cross-Entropy loss

(B) Mean Squared Error (MSE)

(C) Mean Absolute Error (MAE)

(D) Cosine similarity