| emblem | **GOVERNMENT OF PAKISTAN**  NATIONAL VOCATIONAL & TECHNICAL TRAINING COMMISSION  Headquarters, Plot No. 38, Kirthar Road, Sector H-9/4, Islamabad  Phone: 051-9044355, Fax: 051-9206638, http://navttc.gov.pk | navttc-mono.jpg |
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**PRIME MINISTER’S PRIME MINISTERS YOUTH SKILL DEVELOPMENT (PMYSDP) PROGRAM(PHASE-I, BATCH-IV)**

**Trainee Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Father Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**CNIC# \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**FINAL ASSESSMENT OF THREE MONTHS COURSE**

**COURSE NAME: Artificial Intelligence**

Duration: 4 Hours Total Marks: 100

**Theory Section 10 Marks**

**Question 1: Multiple Choice Questions (10 marks)**

**Instructions:**

1. This section consists of Multiple-Choice Questions (MCQs).
2. Choose the most appropriate option among the given choices.
3. Each question carries 1 mark.
4. There is no negative marking.
5. What is the purpose of feature engineering in machine learning?
6. Building better hardware
7. Selecting the most relevant features
8. Engineering new features using deep learning
9. Extracting features from images

2. In classification, what does the term "class label" refer to?

1. The name of the model
2. The output of a regression model
3. The predicted category of an input
4. The input features of a model

3. Which of the following is an expansion of Artificial Intelligence application?

a) Game Playing

b) Planning and Scheduling

c) Diagnosis

d) All of the mentioned

4. NLP is concerned with the interactions between computers and human (natural) languages.

1. True
2. False

5. Which of the following is an example of supervised learning?

a) Clustering

b) Reinforcement Learning

c) Regression

d) Association Rule Learning

6) If a robot is able to change its own trajectory as per the external conditions, then the robot is considered as the\_\_

1. Mobile
2. Non-Servo
3. Open Loop
4. Intelligent

7. What are/is the main challenge/s of NLP?

1. Handling Ambiguity of Sentences
2. Handling Tokenization
3. Handling POS-Tagging
4. All of the mentioned

8. Which of the following libraries is commonly used in Python for machine learning and deep learning?

a) Pandas

b) Matplotlib

c) TensorFlow

d) NumPy

9.Which type of neural network is primarily used for handling sequential data, such as time series and natural language data?

a) CNN (Convolutional Neural Network)

b) RNN (Recurrent Neural Network)

c) MLP (Multilayer Perceptron)

d) GAN (Generative Adversarial Network)

10. The fundamental unit of network is

1. brain
2. nucleus
3. neuron
4. axon

**Practical Section 90 Marks**

**Question 2:** Build a CNN Based Classifier for Classifying the Objects using CIFAR100 Dataset.

Requirements:

* Seven Number of Convolutional 2D Layers starting with 1024 filters.
* Kernel size 3 x 3
* Two Average Pooling Layers, in the sixth and seventh Convolutional Layer.
* Stride 2
* Padding ‘0’
* Optimizer Adam
* Loss function catagorical\_crossentropy

Best of Luck