**MULTIPLE CHOICE**

|  |  |
| --- | --- |
| **Quizlet Explanations:**  [**https://quizlet.com/766914730/101-data-science-interview-questions-flash-cards/**](https://quizlet.com/766914730/101-data-science-interview-questions-flash-cards/) |  |

**LECTURE1:**

* **Question 1**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | **Data Splitting:** Dividing the dataset into training, validation, and test sets for model evaluation and testing. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  True | | Answers: | Correct  True | |  | False | |  |  |  |

* **Question 2**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Data Collection and Data Preparation are not two crucial stages of the data lifecycle that lay the foundation for successful analysis and modeling. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  False | | Answers: | True | |  | Correct  False |  |  |  | | --- | --- | | Response Feedback: | Data Collection and Data Preparation are two crucial stages of the data lifecycle that lay the foundation for successful analysis and modeling. | |  |  |  |

* **Question 3**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Data scientists use various metrics and validation techniques to determine how well the model performs. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  True | | Answers: | Correct  True | |  | False | |  |  |  |

* **Question 4**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | **Data Integration:** Combining data from one source to create multiple datasets for analysis. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  False | | Answers: | True | |  | Correct  False |  |  |  | | --- | --- | | Response Feedback: | **Data Integration:** Combining data from multiple sources and formats to create a unified dataset for analysis. | |  |  |  |

* **Question 5**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | CRISP-DM provides a structured and systematic approach to guide data scientists and analysts. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  True | | Answers: | Correct  True | |  | False | |  |  |  |

* **Question 6**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Raw data is not often messy and may not contain missing values, inconsistencies, or errors. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  False | | Answers: | True | |  | Correct  False |  |  |  | | --- | --- | | Response Feedback: | Raw data is often messy and may contain missing values, inconsistencies, or errors, which need to be addressed before analysis. | |  |  |  |

* **Question 7**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Data collection is the process of gathering relevant information from various sources to build a dataset. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  True | | Answers: | Correct  True | |  | False | |  |  |  |

* **Question 8**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Data preparation involves cleaning, transforming, and formatting the collected data to make it suitable for analysis and modeling. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  True | | Answers: | Correct  True | |  | False | |  |  |  |

* **Question 9**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | **Feature Engineering:** Creating new features or transforming existing ones to extract valuable information and improve model performance. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  True | | Answers: | Correct  True | |  | False | |  |  |  |

* **Question 10**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Data Collection and Data Preparation are not iterative processes. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  False | | Answers: | True | |  | Correct  False |  |  |  | | --- | --- | | Response Feedback: | Data Collection and Data Preparation are iterative processes. | |  |  |  |

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|  |

* **Question 1**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | What is the main goal of linear regression? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctd.  To model and predict a continuous target variable based on input features. | | Answers: | a.  To predict the probability of an event occurring. | |  | b.  To classify data into distinct categories. | |  | c.  To perform clustering on data. | |  | Correctd.  To model and predict a continuous target variable based on input features. | |  |  |  |

* **Question 2**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Python's Scikit-Learn library is primarily used for natural language processing (NLP) tasks in data science. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  False | | Answers: | True | |  | Correct  False | |  |  |  |

* **Question 3**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | What is the primary purpose of descriptive statistics in statistical analysis? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctc.  To summarise and describe the characteristics of a dataset. | | Answers: | a.  To perform machine learning tasks. | |  | b.  To test hypotheses about the data. | |  | Correctc.  To summarise and describe the characteristics of a dataset. | |  | d.  To make predictions about future data. | |  |  |  |

* **Question 4**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Which of the following are considered part of statistical analysis (Select all that apply) |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correcta.  Regression Analysis | |  | Correctb.  Time Series Analysis | |  | Correctc.  Exploratory Data Analysi | | Answers: | Correcta.  Regression Analysis | |  | Correctb.  Time Series Analysis | |  | Correctc.  Exploratory Data Analysi | |  | d.  Deep Learning | |  |  |  |

* **Question 5**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Which Python library is commonly used for linear regression analysis? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctd.  Scikit-Learn | | Answers: | a.  Matplotlib | |  | b.  NumPy | |  | c.  Pandas | |  | Correctd.  Scikit-Learn | |  |  |  |

* **Question 6**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | What are some commonly used statistical hypothesis tests in data analysis with Python? (Select all that apply) |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correctb.  t-test | |  | Correctc.  ANOVA | |  | Correctd.  Chi-squared test | | Answers: | a.  K-means | |  | Correctb.  t-test | |  | Correctc.  ANOVA | |  | Correctd.  Chi-squared test | |  |  |  |

* **Question 7**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | What is the purpose of logistic regression in statistical analysis with Python? (Select all that apply) |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correctc.  Classifying data into two or more categories. | | Answers: | a.  Identifying outliers in a dataset. | |  | b.  Predicting a continuous outcome variable. | |  | Correctc.  Classifying data into two or more categories. | |  | d.  Analyzing time series data. | |  |  |  |

* **Question 8**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | In Python, the Pandas library provides powerful tools for data manipulation and analysis, including functions for data cleaning and transformation. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  True | | Answers: | Correct  True | |  | False | |  |  |  |

* **Question 9**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Applied statistical analysis in data science refers to the use of statistical techniques and methods to analyse and draw insights from data in practical, real-world applications. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  True | | Answers: | Correct  True | |  | False | |  |  |  |

* **Question 10**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | What is correlation analysis used for in statistics? (Select all that apply) |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correcta.  Identifying associations or relationships between variables. | |  | Correctb.  Assessing the strength and direction of a relationship. | | Answers: | Correcta.  Identifying associations or relationships between variables. | |  | Correctb.  Assessing the strength and direction of a relationship. | |  | c.  Determining causation between variables. | |  | d.  Visualizing data distributions. | |  |  |  |

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* **Question 1**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | In supervised learning, the algorithm learns to make predictions without labeled training data. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  False | | Answers: | True | |  | Correct  False | |  |  |  |

* **Question 2**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Machine learning models can make predictions without any training data. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  False | | Answers: | True | |  | Correct  False | |  |  |  |

* **Question 3**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Feature engineering is the process of creating new features from existing data to improve model performance. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  True | | Answers: | Correct  True | |  | False | |  |  |  |

* **Question 4**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Which machine learning approach is used when an agent interacts with an environment to learn optimal actions over time? (Select all that apply) |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correctc.  Reinforcement Learning | | Answers: | a.  Supervised Learning | |  | b.  Unsupervised Learning | |  | Correctc.  Reinforcement Learning | |  | d.  Semi-Supervised Learning | |  |  |  |

* **Question 5**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Which of the following are types of supervised learning algorithms? (Select all that apply) |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correctb.  Decision Trees | |  | Correctd.  Linear Regression | | Answers: | a.  K-Means Clustering | |  | Correctb.  Decision Trees | |  | c.  Principal Component Analysis (PCA) | |  | Correctd.  Linear Regression | |  |  |  |

* **Question 6**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Which model is an ensemble learning method that combines multiple decision trees? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctd.  Random Forest | | Answers: | a.  k-Nearest Neighbors | |  | b.  Support Vector Machine | |  | c.  Logistic Regression | |  | Correctd.  Random Forest | |  |  |  |

* **Question 7**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | What are the common evaluation metrics used for classification tasks? (Select all that apply) |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correcta.  Accuracy | |  | Correctc.  Recall | |  | Correctd.  F1-Score | |  | Correcte.  Precision | | Answers: | Correcta.  Accuracy | |  | b.  Mean Squared Error (MSE) | |  | Correctc.  Recall | |  | Correctd.  F1-Score | |  | Correcte.  Precision | |  |  |  |

* **Question 8**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Unsupervised learning algorithms are used for tasks like classification and regression. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  False | | Answers: | True | |  | Correct  False | |  |  |  |

* **Question 9**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Which evaluation metric is commonly used for binary classification problems when we want to minimize false positives? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctb.  Precision | | Answers: | a.  Accuracy | |  | Correctb.  Precision | |  | c.  Recall | |  | d.  F1-Score | |  |  |  |

* **Question 10**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | What is the primary goal of a regression model? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctb.  Predicting a continuous numeric value | | Answers: | a.  Classification | |  | Correctb.  Predicting a continuous numeric value | |  | c.  Dimensionality reduction | |  | d.  Clustering | |  |  |  |

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* **Question 1**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | **What is "Big Data"?** |  |  |  |
| |  |  | | --- | --- | | Correct Answer: | Correct  Extremely large and complex datasets that require specialized tools for storage and analysis. | |  |  |  |

* **Question 2**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | **Which of the following is NOT a step in the CRISP-DM model?** |  |  |  |
| |  |  | | --- | --- | | Correct Answer: | Correct  Data Visualization | |  |  |  |

* **Question 3**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | **Which machine learning algorithm is commonly used for classification tasks, such as spam email detection?** |  |  |  |
| |  |  | | --- | --- | | Correct Answer: | Correct  Support Vector Machine (SVM) | |  |  |  |

* **Question 4**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | **Which of the following is an example of structured data?** |  |  |  |
| |  |  | | --- | --- | | Correct Answer: | Correct  A database of customer orders with well-defined columns. | |  |  |  |

* **Question 5**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | **What is the purpose of cross-validation in machine learning?** |  |  |  |
| |  |  | | --- | --- | | Correct Answer: | Correct  To assess a model's performance and generalization ability. | |  |  |  |

* **Question 6**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | **What is data mining?** |  |  |  |
| |  |  | | --- | --- | | Correct Answer: | Correct  A process of extracting patterns and knowledge from large datasets. | |  |  |  |

* **Question 7**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | **Which of the following is NOT a commonly used data mining technique?** |  |  |  |
| |  |  | | --- | --- | | Correct Answer: | Correct  Linear Regression | |  |  |  |

* **Question 8**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | **In machine learning, what does "overfitting" refer to?** |  |  |  |
| |  |  | | --- | --- | | Correct Answer: | Correct  A model that fits the data too well and generalizes poorly. | |  |  |  |

* **Question 9**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | **What does the term "feature engineering" mean in machine learning?** |  |  |  |
| |  |  | | --- | --- | | Correct Answer: | Correct  A process of creating new features from existing data to improve model performance. | |  |  |  |

* **Question 10**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | **Which of the following is an unsupervised learning algorithm?** |  |  |  |
| |  |  | | --- | --- | | Correct Answer: | Correct  K-Means Clustering | |  |  |  |

|  |
| --- |
|  |

* **Question 1**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | What are the main responsibilities of the activation function in a neural network? (Select all that apply) |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correcta.  It maps the input to an output. | |  | Correctc.  It introduces non-linearity. | | Answers: | Correcta.  It maps the input to an output. | |  | b.  It calculates the loss. | |  | Correctc.  It introduces non-linearity. | |  | d.  It initializes the model's weights. | |  |  |  |

* **Question 2**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Which activation functions are commonly used in neural networks? (Select all that apply) |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correcta.  Sigmoid | |  | Correctb.  ReLU (Rectified Linear Unit) | | Answers: | Correcta.  Sigmoid | |  | Correctb.  ReLU (Rectified Linear Unit) | |  | c.  Linear | |  | d.  Logistic | |  |  |  |

* **Question 3**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Convolutional neural networks (CNNs) are primarily used for natural language processing tasks. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  False | | Answers: | True | |  | Correct  False | |  |  |  |

* **Question 4**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Which type of neural network is typically used for image and video analysis? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correcta.  Convolutional Neural Network (CNN) | | Answers: | Correcta.  Convolutional Neural Network (CNN) | |  | b.  Long Short-Term Memory (LSTM) | |  | c.  Perceptron | |  | d.  Recurrent Neural Network (RNN) | |  |  |  |

* **Question 5**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Backpropagation is the process of adjusting the weights and biases of a neural network to minimize prediction errors. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  True | | Answers: | Correct  True | |  | False | |  |  |  |

* **Question 6**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Which components are essential in a neural network? (Select all that apply) |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correcta.  Activation Function | |  | Correctc.  Loss Function | |  | Correcte.  Gradient Descent | | Answers: | Correcta.  Activation Function | |  | b.  Feature Engineering | |  | Correctc.  Loss Function | |  | d.  Data Preprocessing | |  | Correcte.  Gradient Descent | |  |  |  |

* **Question 7**

0 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Incorrect | Neural networks with a single layer are incapable of approximating complex functions. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Incorrect  False | | Answers: | Correct  True | |  | False |  |  |  | | --- | --- | | Response Feedback: | Single-layer networks, such as the perceptron, can approximate linearly separable functions. | |  |  |  |

* **Question 8**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | What is a neural network's primary building block? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correcta.  Perceptron | | Answers: | Correcta.  Perceptron | |  | b.  Loss Function | |  | c.  Activation Function | |  | d.  Gradient Descent | |  |  |  |

* **Question 9**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | What technique in deep learning leverages pre-trained models and fine-tunes them for specific tasks to save training time and resources? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctc.  Transfer Learning | | Answers: | a.  Reinforcement Learning | |  | b.  Ensemble Learning | |  | Correctc.  Transfer Learning | |  | d.  Supervised Learning | |  |  |  |

* **Question 10**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | In deep learning, feature engineering is always required to extract meaningful features from raw data. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  False | | Answers: | True | |  | Correct  False | |  |  |  |

|  |
| --- |
|  |

* **Question 1**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Which of the following are potential consequences of algorithmic bias in AI systems? (Select all that apply) |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correcta.  Discrimination against certain groups | |  | Correctb.  Legal and reputational risks | |  | Correctd.  Unfair treatment | | Answers: | Correcta.  Discrimination against certain groups | |  | Correctb.  Legal and reputational risks | |  | c.  Lower computational costs | |  | Correctd.  Unfair treatment | |  | e.  Increased model accuracy | |  |  |  |

* **Question 2**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Transparency in AI decision-making is unnecessary as long as the results are accurate. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  False | | Answers: | True | |  | Correct  False | |  |  |  |

* **Question 3**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | What is the responsibility of data scientists in ensuring ethical data usage? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctb.  To critically assess data sources and quality | | Answers: | a.  To focus solely on technical aspects | |  | Correctb.  To critically assess data sources and quality | |  | c.  To disregard data privacy regulations | |  | d.  To prioritize profit over privacy | |  |  |  |

* **Question 4**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Data scientists are not responsible for ethical considerations; they only work with data. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  False | | Answers: | True | |  | Correct  False | |  |  |  |

* **Question 5**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | What is the primary focus of ethical considerations in data science? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctb.  Protecting privacy and fairness | | Answers: | a.  Ensuring data security | |  | Correctb.  Protecting privacy and fairness | |  | c.  Achieving 100% accuracy | |  | d.  Maximizing profits | |  |  |  |

* **Question 6**

1 out of 1 points

|  |  |  |  |  |
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|  |  | | | |
| Correct | What is the role of fairness in ethical AI decision-making? (Select all that apply) |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correcta.  Fairness promotes equitable treatment of individuals. | |  | Correctd.  Fairness ensures that AI decisions are unbiased and just. | | Answers: | Correcta.  Fairness promotes equitable treatment of individuals. | |  | b.  Fairness only applies to small-scale AI applications. | |  | c.  Fairness is important, but it's secondary to model accuracy. | |  | Correctd.  Fairness ensures that AI decisions are unbiased and just. | |  | e.  Fairness is irrelevant in AI. | |  |  |  |

* **Question 7**

1 out of 1 points

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| Correct | When should informed consent be obtained when working with data? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctb.  Before collecting and using data from individuals | | Answers: | a.  Only when mandated by law | |  | Correctb.  Before collecting and using data from individuals | |  | c.  Only after data analysis is complete | |  | d.  Only for sensitive data | |  |  |  |

* **Question 8**

1 out of 1 points

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| Correct | It is acceptable to use personal data for analysis without obtaining explicit consent from individuals. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  False | | Answers: | True | |  | Correct  False | |  |  |  |

* **Question 9**

1 out of 1 points

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|  |  | | | |
| Correct | Which of the following data protection regulations are well-known? (Select all that apply) |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correcta.  HIPAA (Health Insurance Portability and Accountability Act) | |  | Correctb.  POPIA (Protection of Personal Information Act) | |  | Correcte.  GDPR (General Data Protection Regulation) | | Answers: | Correcta.  HIPAA (Health Insurance Portability and Accountability Act) | |  | Correctb.  POPIA (Protection of Personal Information Act) | |  | c.  SAFE (Security and Fairness in Data Ethics) | |  | d.  DASH (Data Access and Security Hub) | |  | Correcte.  GDPR (General Data Protection Regulation) | |  |  |  |

* **Question 10**

1 out of 1 points

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|  |  | | | |
| Correct | Data anonymization is a foolproof way to protect individuals' privacy. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  False | | Answers: | True | |  | Correct  False | |  |  |  |