1. What is Big Data characterized by?

a) Small volume, structured format
b) Limited variety, low velocity
c) High volume, variety, and velocity
d) Low volume, unstructured format

Answer: c) High volume, variety, and velocity

Explanation: Big Data is characterized by the three Vs: Volume (large amount of data), Variety (different types of data), and Velocity (speed at which data is generated and processed).

2. Which type of data involves structured and semi-structured data from traditional sources like databases and spreadsheets?

a) Structured data
b) Unstructured data
c) Semi-structured data
d) Meta data

Answer: a) Structured data

Explanation: Structured data refers to organized and easily searchable data that fits neatly into databases and spreadsheets.

3. What distinguishes Big Data from traditional data?

a) Small scale
b) Homogeneity
c) Predictability
d) Large scale

Answer: d) Large scale

Explanation: Big Data is characterized by its massive volume, which far exceeds the capacity of traditional data processing systems.

4. Which technology is commonly used for handling Big Data processing tasks in a distributed manner?

a) SQL
b) Hadoop
c) Excel
d) MATLAB

Answer: b) Hadoop

Explanation: Hadoop is a widely used open-source framework for distributed storage and processing of large datasets across clusters of computers using simple programming models.

5. What is a major challenge associated with Big Data?

a) Lack of data variety
b) Slow data velocity
c) Difficulty in data storage

d) Data security and privacy concerns

Answer: d) Data security and privacy concerns

Explanation: With the large-scale collection and storage of data, ensuring its security and preserving privacy become significant challenges in the realm of Big Data.

6. Which infrastructure is commonly used for storing and processing Big Data?

a) Mainframes
b) Personal computers
c) Cloud computing
d) Mobile devices

Answer: c) Cloud computing

Explanation: Cloud computing offers scalable storage and computing resources, making it a popular choice for storing and processing Big Data.

7. What role does data analytics play in Big Data?

a) Data visualization only
b) Data storage optimization
c) Data processing and analysis
d) Data transmission management

Answer: c) Data processing and analysis

Explanation: Data analytics involves processing and analyzing large datasets to uncover insights, patterns, and trends, which is crucial in extracting value from Big Data.

8. Which property is desired in a Big Data system to ensure data availability in case of failures?

a) Scalability
b) Fault tolerance
c) Data consistency
d) Low latency

Answer: b) Fault tolerance

Explanation: Fault tolerance ensures that a Big Data system can continue operating even in the presence of hardware or software failures, thereby maintaining data availability.

9. What is the term for the process of combining multiple types of data to gain deeper insights?

a) Data segmentation
b) Data integration
c) Data anonymization
d) Data reduction

Answer: b) Data integration

Explanation: Data integration involves combining data from different sources to provide a unified view, enabling deeper analysis and insights.

10. Which type of data involves text documents, social media posts, and multimedia content?

a) Structured data
b) Semi-structured data
c) Unstructured data
d) Meta data

Answer: c) Unstructured data

Explanation: Unstructured data lacks a predefined data model or format, making it challenging to analyze using traditional methods. Examples include text documents, social media posts, and multimedia content.

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