

# **IBM**

## **Exam C2030-136**

### **Foundations of IBM Big Data & Analytics Architecture V1**

**[ Total Questions: 58 ]**

### Question No : 1

What is an example of a company struggling with the sheer number of quotes coming in to the algorithmic trading application?

- A. Variety
- B. Volume
- C. Velocity
- D. Veracity

**Answer: C**

### Question No : 2

What two statements are true about IBM InfoSphere Streams?

- A. It enables real-time analytics at scale.
- B. It is the IBM implementation of Apache Spark.
- C. It is a powerful parallel engine but it only can process structured data.
- D. It swaps data to disk when large amounts of data need to be processed in real-time.
- E. It enables predictive models from IBM SPSS to be deployed for extremely fast scoring.

**Answer: B,C**

### Question No : 3

Which statement is true when dealing with traditional and non-traditional data sources?

- A. Real time analytics is necessary to effectively leverage these data sources
- B. Traditional data sources are not included in the big data scope because it would require duplicate copies of the same data
- C. Big data tools and methodologies increase the scope, level of detail, or a time period of data that can be effectively analyzed.
- D. Traditional data sources are included in the big data scope only if they are correlated with new types of data collected from outside the enterprise

**Answer: C**

Reference:

**Question No : 4**

Which two statements are true about predictive analytics prerequisites?

- A. Predictive analytics require input data to be in aggregate form.
- B. Data for predictive analytics needs to be in third normal form (3NF)
- C. Raw data for predictive analytics needs to be stored in Hadoop first
- D. Data must be sufficient to train a predictive model for the business goal.
- E. Acceptance is required from a business users' community of a predictive analytics initiative and management sponsorship.

**Answer: C**

**Question No : 5**

A company quickly ingests, analyzes, and correlates data as it arrives from thousands of sensor devices spread throughout their utility network. Insights derived from this process are turned into actions for automated decision management. The company is performing analytics on which data?

- A. Relational
- B. Data-at-rest
- C. Semantic Data
- D. Data-in-motion

**Answer: C**

**Question No : 6**

A Solution Advisor is asked to recommend infrastructure capability to match the varying demands of a big data application. What should be the best choice to meet the business needs?

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- A. High systems availability with security.
  - B. Parallel processing with optimized computation,
  - C. Scalability in, out. and up to meet varying demands.
  - D. Best performing storage solution available like SSD.

**Answer: B**

#### **Question No : 7**

A Solution Advisor is requested to attend a new customer discovery call to support their Big Data & Analytics thinking and planning. The only information she is initially provided is the company background, how they support their industry, their purchasing history for hardware and software, and their general interest in doing more with information analysis. What is the typical first step that she should discuss with the customer?

- A. Identify their business objectives and use cases for Big Data & Analytics.
- B. Find out which competitors they are using or considering for Big Data & Analytics.
- C. Identify their frustrations and gaps with their current product usage for Big Data & Analytics.
- D. Discuss their current product installation and look for cross sell potential for Big Data & Analytics solutions.

**Answer: A**

#### **Question No : 8**

What are three major types of analytics?

- A. Predictive
- B. Descriptive
- C. Scorecards
- D. Prescriptive
- E. Dashboards
- F. Data Warehouse

**Answer: A,C,E**

#### **Question No : 9**

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A customer operating a quick serve restaurant chain uses an interactive menu system that has the capability to change the information presented based on the knowledge of the customer and the preplanned menu selection currently being promoted. The marketing department uses this information as well as other information such as weather readings, menu item profitability and menu item availability to determine which products to include in future promotions. What type of analytics does this represent?

- A. Structured Analytics
- B. Unstructured Analytics
- C. Data-at-Rest Analytics
- D. Data-at-Motion Analytics

**Answer: C**

**Question No : 10**

A customer is concerned about the vast amount of data they receive. They do not know the value of the data, but they want a cost efficient way to capture the data for further analysis. What is this scenario an example of in big data?

- A. Archive
- B. Landing
- C. Caching
- D. Exploration

**Answer: A**

**Question No : 11**

A client wants to determine if Social Media Sentiment information is coming from known customers and can be related to a known transaction. Which solution should be considered for identifying the customer who posted the comment?

- A. IBM Big Match
- B. IBM InfoSphere Streams
- C. IBM InfoSphere BigInsights
- D. IBM InfoSphere Information Server

**Answer: C**

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**Question No : 12**

What are the three core disciplines of the IBM Information Governance Capability Maturity Model?

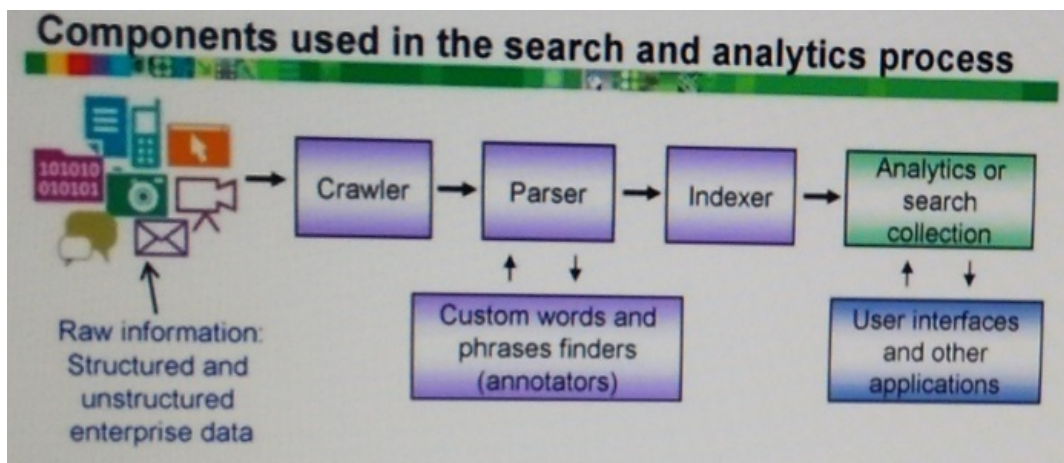
- A. Volume, Velocity, and Variety
- B. Governance, Risk, and Compliance
- C. Data Architecture. Classification and Metadata, and Audit Information Logging and Reporting
- D. Data Quality Management. Information Lifecycle Management, and Information Security and Privacy

**Answer: A**

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**Question No : 13**

The annotators perform which tasks in this information flow diagram for the search and analytics process?



- A. They work with custom dictionaries, rules, and annotators.
- B. They create searchable indexes/collections with annotations.
- C. They identify and mark concepts relevant for the organization.
- D. They collect documents specialized for types of data sources

**Answer: B**

**Question No : 14**

Which component of the IBM Social Media Analytics Framework answers the question, "What is driving social media activity, behavior, and sentiment?"

- A. Social Media Impact
- B. Social Media Discovery
- C. Social Media Relationships
- D. Social Media Segmentation

**Answer: D**

**Question No : 15**

IBM InfoSphere BigInsights is an example of what type of system architecture?

- A. SMP
- B. NUMA
- C. High performance computing
- D. Distributed computing with shared nothing architecture

**Answer: C**

**Question No : 16**

Which combination of IBM software solutions delivers up to 82 times faster reporting on an IBM POWER8-based server than a comparable x86 server?

- A. IBM SPSS on an IBM DB2 database
- B. IBMDB2 Analytics Accelerator and IBM CognosPowerCubes
- C. IBM DB2 with BLU Acceleration and IBM Cognos Dynamic Cubes
- D. Apache Hadoop integration with IBM InfoSphere BigInsights and IBM InfoSphere Streams

**Answer: C**

**Question No : 17**

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Which statement is true when comparing SQL used in Relational Database Management Systems (RDBMS) and SQL data on Hadoop type systems?

- A. When adding or updating information in Hadoop. HiveQL provides a flexible language construct for MapReduce developers.
- B. MapReduce developers and database specialist may both use their knowledge of SQL to add and update information in a Hive database.
- C. HiveQL is an ANSI SQL language that can be used by Oracle, IBM DB2. and other RDMS developers to rapidly insert information into Hive.
- D. Oracle and IBM DB2 are examples of SQL systems that are used to house business information and well suited for CRUD and read-only operations.

**Answer: D**

**Question No : 18**

Which two business value entry points are used when developing an improved IT economics solution?

- A. Retention
- B. Acquisition
- C. govern and protect ail data
- D. Financial performance management
- E. Optimize Big Data & Analytics infrastructure

**Answer: A,E**

**Question No : 19**

Data can come from a large number and variety of source systems. Based upon the IBM Big Data & Analytics Reference Architecture which two statement are true when considering analytics on these data sources?

- A. Data federation has the best performance and allows in place analytics directly at the source systems.
- B. Activity data hubs manage consolidated information about past activity based on the decisions related to entities in a master data hub.
- C. Data marts contain a subset of data from various input sources across the enterprise that can be easily updated in real time to provide faster analytics.



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- D. MapReduce processing does not require a schema when loading the data but does require an understanding of the data format prior to processing the data
- E. Customer and account data is consolidated under a master data hub. Whereas product, supplier and asset data are consolidated outside of a master data hub for better analytical efficiency.

**Answer: B,C**

**Question No : 20**

Using Brewer's CAP theorem as a guide for choosing between alternative data storage technologies, which two distributed system properties does Apache HBase (part of Hadoop) guarantee?

- A. Consistency - all nodes see the same data at the same time.
- B. Concurrency control - correct results for concurrent operations.
- C. Atomicity - if one part of a transaction fails, the entire transaction fails.
- D. Partition tolerance - the system continues to operate despite arbitrary message loss.
- E. Availability - every request receives a response about whether it was successful or failed

**Answer: A,C**

**Question No : 21**

A Solution Advisor reviews the IBM Big Data & Analytics Maturity Model with a customer and concludes that their information architecture framework exists but does not extend to new data sources or advanced analytics capabilities. Which stage of maturity are they in with the Architecture category?

- A. Ad Hoc
- B. Competitive
- C. Foundational
- D. Differentiating

**Answer: D**

**Question No : 22**

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Which item is a key benefit of IBM InfoSphere BigInsights (BigInsights) over other Hadoop distributions?

- A. BigInsights provides POSIX-compliant file connectors to files in HDFS.
- B. BigInsights provides a more robust and extensive columnar storage engine.
- C. BigInsights provides more comprehensive security capabilities using Kerberos.
- D. BigInsights provides built-in spreadsheet, SQL, and Text Analytics for processing data within Hadoop.

**Answer: C**

**Question No : 23**

Risk management is an important activity for most organizations today. Reducing operational risk may require setting up barriers which may reduce business activities and hurt profitability. How can Big Data & Analytics provide solutions that reduce risk while maintaining profitability?

- A. Predictive analytics can prevent in-flight transaction credit card fraud.
- B. Big data can support company-wide integrated data governance policies and procedures.
- C. Security/Intelligence Extension relies entirely on security technologies such as events, logs, and alerts.
- D. Focused and detailed fraud policy in each major department of a firm is more effective than an integrated, therefore slow, performing solution.

**Answer: B**

**Question No : 24**

Which characteristic best describes the IBM PureData for Analytics solution?

- A. A purpose built, high performance, single thread platform for massive data analytics.
- B. An advanced analytics platform that fuses data warehousing with in-database analytics in a massively parallel multi-purpose engine.
- C. An embedded, purpose-built analytics platform that fuses data warehousing and in-database analytics into a scalable massively parallel analytic platform.
- D. An advanced analytics platform designed to crunch terabytes of data using in-memory database, and parallelized algorithms that take advantage of Asymmetric Massively

**Answer: B**

**Question No : 25**

Which option best supports the capability of a real time business decision engine to optimize transactional decisions?

- A. IBM InfoSphere Streams
- B. IBM Business Process Management
- C. IBM Analytical Decision Management
- D. IBM Operational Decision Management

**Answer: A**

**Question No : 26**

What is the business objective of the Manage Risk Imperative?

- A. Helping businesses create value from their information assets.
- B. Performance evaluation and forecasting, reporting, and controls design.
- C. Designing governance processes and implementing mitigation strategies.
- D. Helping clients transform IT infrastructure to meet the demands of their Big Data & Analytics strategies.

**Answer: C**

**Question No : 27**

What is a use case example for the Transform Financial Processes business imperative?

- A. Portfolio optimization in the banking industry.
- B. Customer data monetization in the media and entertainment industry
- C. Distribution load forecasting and scheduling in the energy and utility industry
- D. Utilizing telematics to price risk and monitor exposure in the insurance industry.

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**Answer: D**

**Question No : 28**

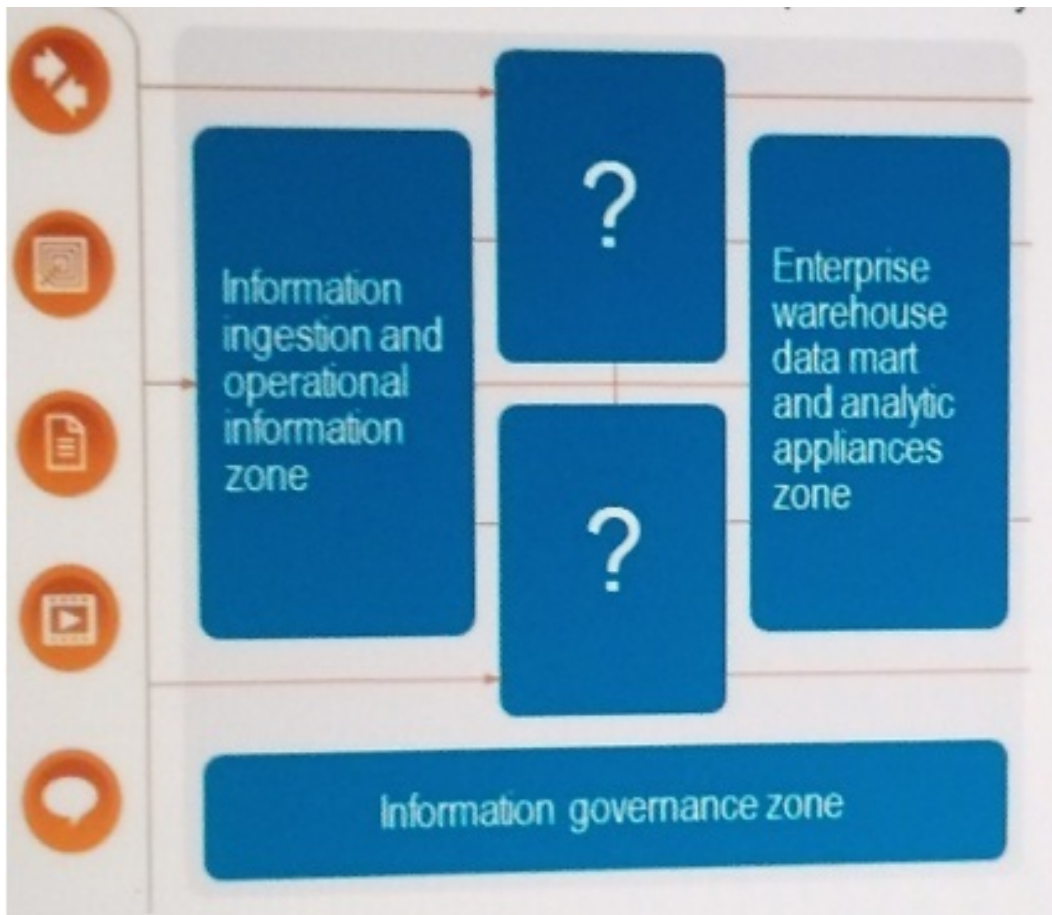
What is required of an integration tool to make it effective in a Big Data & Analytics environment?

- A.** Data transformations are performed in a specialized tool and dedicated environment.
- B.** Data transformations are performed in the source system to free the target system for analytics.
- C.** Data transformations are performed in parallel with the ability to push processing to the storage engines.
- D.** Data transformations are performed in the target system to free the source system for transactional processing.

**Answer: C**

**Question No : 29**

What are the names of the two zones represented by the question marks shown in this diagram?



- A. Real time analytics zone
- B. Information audit and logging zone
- C. Extract, translate, and loading zone
- D. Exploration, landing, and archive zone
- E. Information cleansing and preparation zone

**Answer: B,C**

**Question No : 30**

Information governance is most helpful in assessing and managing which dimension of big data?

- A. variety
- B. volume
- C. velocity
- D. veracity

**Answer: C**

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**Question No : 31**

What are the stages to the IBM Big Data & Analytics Maturity Model?

- A. Novice, Builder, Leader, Master
- B. Initial, Repeatable, Defined, Managed, Optimizing
- C. Ad Hoc, Foundational, Competitive, Differentiating, Breakaway
- D. Descriptive Analytics, Diagnostic Analytics, Predictive Analytics, Prescriptive Analytics

**Answer: C**

Reference:

[https://www.ibm.com/developerworks/community/blogs/bigdataanalytics/entry/big\\_data\\_analytics\\_maturity\\_model?lang=en](https://www.ibm.com/developerworks/community/blogs/bigdataanalytics/entry/big_data_analytics_maturity_model?lang=en)

**Question No : 32**

Which in-memory database design point helps use main memory more efficiently?

- A. Single Instruction Multiple Data processing.
- B. Automatic and always-on data compression.
- C. Processing data using multiple processor cores.
- D. Organizing data according to columns rather than rows.

**Answer: A**

**Question No : 33**

A police department needs to identify crime patterns by time and location so that the department is able to pinpoint hot spots of activity and better deploy police resources to deter crime. Which strategy can this police department use?

- A. Hire a team of data scientists to analyze 911 emergency call data.

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- B.** Build real time crime dashboards from computer aided dispatch and 911 emergency call data.
  - C.** Build a predictive model to analyze crime patterns to develop effective strategies for reducing crime rates while optimizing police resources
  - D.** Store all the historical crime, computer aided dispatch, and 911 emergency call data into a big data platform first, then predict crime pattern using this single source.

**Answer: A**

**Question No : 34**

What are the key features of IBM DB2 with BLU Acceleration - Power Systems Edition?

- A.** Dynamic In-Memory processing, Parallel Vector processing, and Data Tiering
- B.** Actionable Compression, Asynchronous Data Processing, Data Tiering, and Data Skipping
- C.** Dynamic In-Memory processing, Actionable Compression, and Asynchronous Data Processing
- D.** Dynamic In-Memory processing, Actionable Compression, Parallel Vector processing, and Data Skipping

**Answer: D**

**Question No : 35**

A public utility customer wants to detect anomalous conditions from data received from hundreds of thousands of sensors that monitor load and heat throughout their network. This data needs to be analyzed near real time in order to make adjustments before a piece of equipment shuts down or fails from an overload. This is an example of what type of data?

- A.** Relational Data
- B.** Streaming Data
- C.** Structured Data
- D.** Unstructured Data

**Answer: C**

**Question No : 36**

Company A is planning to sign up for IBM SoftLayer cloud to supplement their existing data centers which they own. Which solution can be deployed in a hybrid cloud model?

- A.** IBM Pure Data for Analytics on IBM SoftLayer.
- B.** IBM System z servers with some LPARS onsite and some on IBM SoftLayer
- C.** Perform analytics with on-premise database and IBM Cognos running on IBM Softlayer.
- D.** An IBM InfoSphere BigInsights Hadoop cluster with some data nodes on-premise and some on IBM SoftLayer.

**Answer: C**

**Question No : 37**

Which two statements are true when considering a solution for real-time data processing?

- A.** Real-time prediction and scoring can be performed by using the combination of IBM InfoSphere Streams and SPSS products within the IBM Big Data & Analytics platform.
- B.** Real-time data can be processed by IBM InfoSphere Streams and then optionally stored within IBM InfoSphere BigInsights as part of the IBM Big Data & Analytics platform.
- C.** Real-time analytics can be performed within IBM InfoSphere BigInsights by using the in-memoryquery engine in IBM BigInsights after data has first flowed through IBM InfoSphere Streams to capture data into memory.
- D.** Real-time data processing within IBM InfoSphere BigInsights can be performed with sub-second response times using Apache Hadoop Streaming, and IBM InfoSphere Streams is included for processing sensor-generated data.
- E.** Real-time analytics provided by IBM InfoSphere Streams can be used for fraud detection, health monitoring, or machine data processing, whereas other products in IBM's Big Data & Analytics platform are provided for sensor data and other real-time scenarios.

**Answer: C,E**

**Question No : 38**

A retail customer would like to analyze Twitter feeds from customers about their in-store purchases and respond to them in real time with offers or coupons. Which solution would be most appropriate?



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- A. IBM Information Server
  - B. IBM InfoSphere Streams
  - C. IBM InfoSphere BigInsights
  - D. IBM DB2 with BLU Acceleration

**Answer: B**

**Question No : 39**

What can be used as business value entry points when developing an Optimize Operations solution?

- A. Operation risk, retention
- B. Harness and analyze all data, govern and protect all data
- C. Business process operations, infrastructure and asset efficiency
- D. Enable full spectrum of analytics, optimize Big Data & Analytics infrastructure

**Answer: A**

**Question No : 40**

Which two processes transform unstructured data into structured data?

- A. text mining
- B. text analytics
- C. temporal filtering
- D. cognitive computing
- E. predictive data modeling

**Answer: B,D**

**Question No : 41**

IBM SPSS Data Modeler enables the use of data from which to types of nodes?

- A. Filters DB. SAP File
- B. Screen Capture

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- C. IBM Cognos TM1
  - D. Simulation Generate

**Answer: C**

Reference:

[ftp://public.dhe.ibm.com/software/analytics/spss/documentation/modeler/16.0/en/modeler\\_nodes\\_general.pdf](ftp://public.dhe.ibm.com/software/analytics/spss/documentation/modeler/16.0/en/modeler_nodes_general.pdf)

**Question No : 42**

Which statement is true about governance of big data?

- A. The big data domain is mostly limited to analyzing content generated outside the enterprise so strict governance is not critical.
- B Big data is all about exploration and discovery done in test and sandbox systems which do not need to be methodically governed.
- B. Information integration is needed to correlate new unstructured data with existing data sources which are already strictly governed.
- C. Information integration, data lineage, security, privacy, and master data management are key to long term success of big data analytics.

**Answer: C**

**Question No : 43**

What is the primary benefit of an in-database analytics solution?

- A. Preparing data for analysis
- B. Loading data into the analytic environment
- C. Reducing the elapsed time between query and result
- D. Moving data from the analytic engine to the reporting engine

**Answer: A**

**Question No : 44**

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Which IBM product uses the unique combination of UIMA pipeline for natural language processing and machine learning?

- A. IBM Watson Explorer
- B. IBM Info Share streams
- C. IBM Info Share BigInsights
- D. IBM Watson Content Analytics

**Answer: B**

**Question No : 45**

The Fair Information Practice Principles methodology recommends using personal information only for the purposes that are specified when collecting that information. What aspect of security is required to support this principle?

- A. Database activity monitoring
- B. Encryption scrambles sensitive data so that only authorized users can see the clear text information.
- C. Data masking substitutes real data with realistic looking fictitious data to minimize the risk of exposure.
- D. Auditability of where the data came from is needed to track which data was collected for what purpose

**Answer: D**

**Question No : 46**

A construction supply company has a lot of machine data ranging from sensors to GPS readings. They want to integrate and analyze this data to help them optimize their resource allocation and gain real time maintenance decision support while ensuring customer satisfaction. Which use case examples should the Solution Advisor review to guide them on their Big Data & Analytics adoption planning?

- A. Big Data Exploration
- B. Operational Analysis
- C. Data Warehouse Modernization
- D. Enhanced 360 View of the Customer

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**Answer: D**

**Question No : 47**

IBM Watson provides a cognitive system offering the latest combination of products used together to form a Big Data & Analytics platform. Why would a customer choose to use IBM Watson?

- A.** The customer requires an evidence-based response system in order to make better business decisions based upon a broader data set.
- B.** The customer needs to run a NLP (Natural Language Processing) system on their own hardware in their own data center.
- C.** The customer wants to build their own IBM Watson solution by purchasing the IBM products from the platform named Watson Foundations.
- D.** The customer wants a solution where the IBM Services team does the work required to load data and train Watson for the customers area of expertise.

**Answer: C**

**Question No : 48**

Which two statements are true for row oriented databases?

- A.** They are well suited for OLTP workloads which are more heavily loaded with interactive transactions.
- B.** They are not well suited for OLTP workloads which are more heavily loaded with interactive transactions.
- C.** They are self-indexing which makes use of less disk space compared to a columnar oriented database system.
- D.** They are ideal when many columns of a single row are required at the same time and when row-size is relatively small, as the entire row can be retrieved with a single disk read.
- E.** It has advantages for data warehouses, customer relationship management systems, and other adhoc inquiry systems where aggregates are computed over large numbers of similar data items.

**Answer: A,C**

**Question No : 49**

Which key technology enables elastic storage to be proven, scalable, high-performance data and file management solution?

- A. Tiering
- B. Compression
- C. Apache Hadoop
- D. General Parallel File System

**Answer: C**

**Question No : 50**

A System z customer wants to reduce the incidence of insurance claims fraud by policy holders. Which System z solution should be proposed?

- A. IBM zEnterprise Linux Server for Analytics
- B. The IBM Signature Solution - Next Best Action
- C. IBM Genelco Insurance Administration Solution
- D. IBMSmarterAnalytics.Anti-Fraud^aste.andAbuseSolutionforInsurance

**Answer: B**

**Question No : 51**

Deploying Big Data & Analytics solutions on a cloud platform requires several architectural decisions in order to achieve optimal design. Which statement is true?

- A. Analytic components generally run faster on physical hardware versus virtualized.
- B. Off premise cloud implementation is superior to on premise for data privacy for a big data solution.
- C. Big data solutions should always try to scale out (horizontal) instead of scale up (vertical) especially considering z/OS-based solutions.
- D. Requirements for read-heavy versus write-heavy requirements impact technology choices, but in-memory databases improve performance and scale.

**Answer: C**

**Question No : 52**

This individual is responsible for defining, developing, and implementing the strategy and methods by which the organization acquires, manages, analyzes, and governs data. Which role does this define Within Big Data and Analytics?

- A. Data Scientist
- B. Business Analyst
- C. Chief Data Officer
- D. Analytic Consumer

**Answer: B**

**Question No : 53**

A supermarket in New York wants to mine data from social media sites and offer coupons and promotions to its customers. In order to do this it plans to deploy a data reservoir which will contain data from Facebook, Twitter, and Pinterest as well as data from the supermarket's POS system. They would like to deploy a solution where they do not have to define a database schema before loading data. What should be the recommended solution?

- A. Oracle Exadata
- B. IBM InfoSphere Streams
- C. IBM InfoSphere BigInsights
- D. IBM DB2 with BLU Acceleration

**Answer: B**

**Question No : 54**

Which statement best defines the Create New Business Models business imperative?

- A. Lead the creation of new value and agility for the business using Big Data & Analytics while reducing cost.
- B. Explore strategic options for business growth using new perspectives gained from exploiting Big Data & Analytics.
- C. Plan, manage, and maximize operations, supply chains, and use of infrastructure assets to reduce costs, increase efficiencies and productivity, and limit threats.

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**D.** Use Big Data & Analytics to drive enterprise agility, anticipate outcomes to make better decisions, and drive business model innovation through a discipline of performance.

**Answer: B**

**Question No : 55**

Which IBM storage solution provides capabilities for improving data economics in an analytics environment based on these criteria?

- ✍ Self-tuning and always optimized
- ✍ Consistently delivering high performance
- ✍ Highly scalable storage services for a wide range of dynamic workloads
- ✍ Self-healing
- ✍ Providing support for data at rest encryption

- A.** IBM FlashSystem
- B.** IBM Storwize V7000
- C.** IBM XIV Storage System
- D.** IBM SAN Volume Controller

**Answer: D**

**Question No : 56**

What must occur before a bank's Chief Marketing Officer can understand the sentiments social media users are expressing about the bank's credit cards?

- A.** Monitor social media events in real time. Analyzing unstructured streaming data is necessary to produce immediately actionable insights.
- B.** Get access to a social media analytics platform. Unstructured data extracted from many external sources are analyzed in relevant context.
- C.** Add sentiment metrics into the data warehouse. This trusted structured information source is guaranteed to yield reproducible, high quality reports.
- D.** Buy a service offering from Twitter which provides insights into the behaviors of the bank's customers. The bank will need to disclose the customer names.

**Answer: B**

**Question No : 57**

What CO used be used as business value entry points when developing an Acquire. Grow. Retain customer solution?

- A. Personalization, profitability
- B. Harness and analyze all data, govern and protect ad data
- C. Business process operations, infrastructure, and asset efficiency
- D. Planning and performance management, disclosure management and financial close

**Answer: B**

**Question No : 58**

Which document from the IBM Big Data & Analytics Reference Architecture details the customer engagement model and sample discovery workshop template for building a customer's roadmap to adopt Big Data & Analytics?

- A. Use Cases
- B. Business Direction
- C. Architecture Overview
- D. Architecture Decisions

**Answer: B**