



**CERTIFIED PUBLIC ACCOUNTANT
OPERATIONAL LEVEL EXAMINATIONS**

DF2.2 DIGITAL FINANCE

DATE: TUESDAY 26, MAY 2026

INSTRUCTIONS:

1. Time allowed: **3 hours and 15 minutes**
2. The examination has two sections: **A&B**
3. Section A has **30 compulsory multiple-choice questions** equal to **2 marks each**.
4. Section B has **5 compulsory multiple- task questions** equal to **8 marks each**.
5. Questions marked “**select all that apply**” have multiple correct answers. Candidates must choose all correct options in order to be awarded 2 marks.
6. The question paper should not be taken out of the examination room.

SECTION A

QUESTION ONE

Big Data management has introduced the concept of the "3Vs" (Volume, Velocity, and Variety), but organizations often struggle with ensuring data quality during collection.

Which of the following most effectively addresses data quality challenges in Big Data systems?

- A Implementing real-time analytics to flag inconsistencies.
- B Employing robust data cleaning algorithms to remove errors before storage.
- C Collecting only structured data to reduce potential inconsistencies.
- D Using data lakes to store raw data for easier manipulation later.

(2 Marks)

QUESTION TWO

Organizations transforming raw data into actionable insights need to follow systematic processes to ensure reliability and validity.

Which of the following are critical stages of the data lifecycle?

- i) Data Collection
- ii) Data Destruction
- iii) Data Enrichment
- iv) Data Sharing

- A (i) and (ii)
- B (ii) and (iii)
- C (iii) and (iv)
- D (i) and (iv)

(2 Marks)

QUESTION THREE

An organization is considering implementing a new analytics system but is concerned about ensuring long-term data integrity.

Which strategies effectively ensure data integrity over time? Select all that apply.

- A Enforcing strict access controls to prevent unauthorized changes.
- B Utilizing automated backup systems for regular data snapshots.
- C Periodically reprocessing archived data to maintain relevancy.
- D Establishing immutable data logs to track modifications.

(2 Marks)

QUESTION FOUR

In industries like telecommunications, real-time analytics requires consistent data sourcing across diverse systems.

What is the primary challenge in identifying reliable data sources for real-time analytics?

- A Variation in update cycles across sources.
- B High licensing costs for proprietary data.
- C The dominance of unstructured data formats.
- D Limited availability of APIs for data extraction.

(2 Marks)

QUESTION FIVE

A public procurement authority is designing a new digital procurement system to improve efficiency and transparency.

Which feature is most critical for ensuring transparency in the digital procurement system?

- A Role-based access controls to limit unauthorized actions.
- B Real-time tracking and display of procurement stages.
- C Integration with financial systems to track expenditures.
- D User training programs to reduce operational errors.

(2 Marks)

QUESTION SIX

An education management information system (EMIS) must address several objectives to support national education planning.

Which features best align with the objectives of an EMIS?

- i) Centralized student performance tracking
- ii) Integration with workforce data for skills mapping
- iii) Predictive analytics for future student enrolment trends
- iv) Real-time parent-teacher communication portals

- A (i) and (ii)
- B (ii) and (iii)
- C (i) and (iii)
- D (ii) and (iv)

(2 Marks)

QUESTION SEVEN

A tax revenue authority is implementing a machine learning algorithm to improve compliance monitoring.

Which approaches enhance the algorithm's effectiveness? Select all that apply.

- A Training the algorithm using anonymized taxpayer data.
- B Periodically retraining the algorithm with updated data sets.
- C Limiting the algorithm to analyzing structured data formats only.
- D Incorporating feedback from audit reports into the model.

(2 Marks)

QUESTION EIGHT

A road asset management system requires integration with geographic information systems (GIS).

What is the main advantage of GIS integration in a road asset management system?

- A Enhanced visualization of road conditions across regions.
- B Automated scheduling of road maintenance activities.
- C Improved financial accountability for road construction projects.
- D Increased speed in issuing road construction permits.

(2 Marks)

QUESTION NINE

A water distribution authority is adopting an enterprise resource planning (ERP) system to streamline operations.

What is a key benefit of implementing an ERP system in water distribution management?

- A Decentralized data management to improve autonomy at local levels.
- B Real-time monitoring of water usage and distribution efficiency.
- C Enhanced public engagement through consumer feedback platforms.
- D Reduced dependency on external water supply contracts.

(2 Marks)

QUESTION 10

A university is exploring a best-of-breed approach for its management information system (MIS).

Which advantages are most relevant for a best-of-breed MIS approach?

- i) Specialized features tailored to specific departmental needs
- ii) Simplified integration with existing ERP systems
- iii) Flexibility to adopt innovative tools
- iv) Lower total cost of ownership

- A (i) and (ii)
- B (ii) and (iii)
- C (i) and (iii)
- D (ii) and (iv)

(2 Marks)

QUESTION 11

A public procurement authority is planning to integrate AI into its e-procurement platform.

Which approaches enhance the effectiveness of AI integration? Select all that apply.

- A Automating bid evaluation based on predefined criteria.
- B Real-time fraud detection through anomaly analysis.

- C Limiting AI to non-critical operations to reduce risk.
- D Enhancing the AI model using procurement performance data.

(2 Marks)

QUESTION 12

An energy provider is assessing risks before deploying a power vending system.

What is the most critical risk to address in the implementation phase of a power vending system?

- A Insufficient public awareness campaigns about the new system.
- B Vulnerabilities in payment gateway integration.
- C Resistance from internal stakeholders.
- D Delayed procurement of system hardware.

(2 Marks)

QUESTION 13

A health ministry is adopting an epidemic tracking system to enhance public health responses.

Which functionalities are essential for such a system?

- i) Real-time data visualization of disease hotspots
- ii) Integration with global health databases
- iii) Predictive analytics for outbreak trends
- iv) Public reporting portals for suspected cases

- A (i) and (ii)
- B (ii) and (iii)
- C (i) and (iii)
- D (ii) and (iv)

(2 Marks)

QUESTION 14

A tax authority is planning to enhance its revenue collection system through blockchain technology.

Which potential benefits justify this implementation? Select all that apply.

- A Improved transparency in tracking transactions.
- B Elimination of all manual audits.
- C Reduction in tax fraud through immutable records.
- D Faster processing of international tax compliance documentation.

(2 Marks)

QUESTION 15

A road asset management system is being deployed to manage infrastructure projects effectively.

What is the main challenge associated with implementing such a system?

- A Inconsistent data inputs from field teams.
- B Difficulty in integrating with external contractors' platforms.
- C High costs associated with real-time data analytics tools.
- D Resistance from stakeholders in non-technical departments.

(2 Marks)

QUESTION 16

A public utility is evaluating a best-of-breed ERP solution for its water distribution system.

Which factors are key to consider for successful implementation?

- i) Scalability to accommodate future growth
- ii) Compatibility with legacy systems
- iii) Robust training for end users
- iv) Lower implementation costs

A (i) and (ii)

B (ii) and (iii)

C (i) and (iii)

D (ii) and (iv)

(2 Marks)

QUESTION 17

A government ministry is integrating its procurement process with an electronic platform.

What steps are critical to ensure successful integration? Select all that apply.

- A Establish clear data migration protocols.
- B Conduct pilot testing with selected suppliers.
- C Implement a strict "no paper" policy immediately.
- D Train procurement officers extensively on the new platform.

(2 Marks)

QUESTION 18

An educational institution has implemented an education management information system (EMIS).

What can be the primary reason for potential data inaccuracies in EMIS reports?

- A Inadequate system scalability.
- B Inconsistent data entry practices across schools.

- C Outdated reporting modules in the system.
- D Lack of regular software updates.

(2 Marks)

QUESTION 19

A public procurement authority is deploying an e-procurement system. It aims to enhance transparency and streamline vendor interactions.

Which elements are critical for ensuring successful implementation?

- i) Comprehensive vendor onboarding process
- ii) Ensuring data security and confidentiality
- iii) Allowing manual overrides for vendor selection
- iv) Conducting system usability testing

A: (i) and (ii)

B: (ii) and (iii)

C: (i) and (iii)

D: (ii) and (iv)

(2 Marks)

QUESTION 20

A ministry is conducting a review of its epidemic tracking system's first year of operation.

What factors should be evaluated to assess the system's effectiveness? Select all that apply.

- A Timeliness of data reporting during outbreaks.
- B Compliance with international data-sharing protocols.
- C Accuracy of predictions for future outbreaks.
- D Cost-effectiveness compared to previous manual methods.

(2 Marks)

QUESTION 21

A university is evaluating its newly implemented university management information system (UMIS).

Which issue is most likely to affect adoption rates among staff?

- A Poor integration with legacy systems.
- B Insufficient training for staff.
- C Limited customization options for specific departmental needs.
- D High licensing costs.

(2 Marks)

QUESTION 22

A city is deploying a water distribution system MIS to improve resource allocation and customer satisfaction.

What are key considerations during deployment?

- i) Real-time integration with existing billing systems
- ii) Training field staff on data collection protocols
- iii) Reducing operational costs through automation
- iv) Ensuring customer data protection

A: (i) and (ii)

B: (ii) and (iii)

C: (i) and (iii)

D: (ii) and (iv)

(2 Marks)

QUESTION 23

A procurement department is reviewing its vendor evaluation metrics in an ERP system.

Which metrics are most critical to monitor vendor performance? Select all that apply.

- A Delivery timeliness.
- B Vendor's financial stability.
- C User satisfaction with vendor products.
- D Total vendor revenue.

(2 Marks)

QUESTION 24

A tax revenue authority is considering transitioning its tax system from in-house developed software to an off-the-shelf solution.

What is the primary advantage of using an off-the-shelf tax system?

- A Full control over customization options.
- B Faster implementation compared to in-house systems.
- C Lower initial licensing costs.
- D Higher data security guaranteed by the vendor.

(2 Marks)

QUESTION 25

A ministry is assessing key risks during the implementation of an ERP system for managing its national procurement processes.

Which risks are most critical to address during the ERP deployment?

- i) Inadequate stakeholder involvement.
- ii) Failure to integrate with legacy systems.
- iii) Lack of robust project management.
- iv) Excessive reliance on vendor-provided training.

- A (i) and (ii)
- B (ii) and (iii)
- C (i) and (iii)
- D (ii) and (iv)

(2 Marks)

QUESTION 26

A large public university is implementing a new University Management Information System (UMIS).

What considerations should be included to ensure smooth implementation? Select all that apply.

- A Defining clear workflows for student registration.
- B Providing robust user training for staff and students.
- C Ensuring compatibility with national education reporting standards.
- D Prioritizing system cost over usability.

(2 Marks)

QUESTION 27

A public transportation authority is considering deploying a Road Asset Management System (RAMS).

What is the primary purpose of a RAMS in public transportation?

- A To increase ticket revenue through better passenger tracking.
- B To manage and monitor the condition of road infrastructure.
- C To optimize fleet operations for public buses.
- D To track real-time traffic flow on highways.

(2Marks)

QUESTION 28

A ministry is upgrading its epidemic tracking MIS to enhance disease outbreak prediction capabilities.

What factors must be prioritized during the system upgrade?

- i) Incorporating machine learning algorithms for predictive analysis.
- ii) Ensuring real-time data access from field locations.
- iii) Developing user-friendly dashboards for decision-makers.
- iv) Aligning system design with global health standards.

- A (i) and (ii)
B (ii) and (iii)
C (i) and (iii)
D (ii) and (iv)

(2Marks)

QUESTION 29

A water utility company is implementing a Water Distribution System (WDS) to improve operational efficiency.

What actions should the utility prioritize to ensure effective WDS implementation? Select all that apply.

- A Installing IoT sensors to monitor water flow and pressure in real-time.
B Training staff on system maintenance and troubleshooting.
C Establishing data-sharing agreements with external stakeholders.
D Reducing costs by limiting the system's initial functionality.

(2Marks)

QUESTION 30

A procurement authority is utilizing a centralized procurement MIS to monitor and streamline national procurements.

What is a significant challenge in adopting a centralized procurement MIS?

- A Lack of interest from senior management.
B High cost of procurement across regions.
C Resistance from stakeholders due to perceived transparency.
D Difficulty in identifying suitable vendors.

(2 Marks)

SECTION B

QUESTION 31

The Ministry of Finance in a developing country has recently rolled out an Integrated Financial Management Information System (IFMIS) across all central and local government entities. The government expects the system to improve budget execution, enhance transparency and accountability, and strengthen control over public resources. However, some public institutions are still struggling to understand how IFMIS contributes to effective financial service delivery and sound public financial management practices.

Required:

Explain the roles of an Integrated Financial Management Information System (IFMIS) in supporting effective financial service delivery and the development of sound public financial management practices. (8 Marks)

QUESTION 32

GlobalTech Ltd., a medium-sized technology company, is experiencing rapid growth and expanding its product lines. Management has noticed that business processes are often duplicated across departments, IT systems are fragmented, and decision-making is slow due to lack of integrated data. The company is considering implementing Enterprise Architecture (EA) to improve alignment between its business goals and IT systems.

Required:

Based on the scenario above, describe FOUR key components of Enterprise Architecture (EA) and explain how EA can help support the delivery of GlobalTech Ltd.'s business goals and objectives. (8 Marks)

QUESTION 33

Kigali Secondary School has recently implemented an Education Management Information System (EMIS) to improve student outcomes. Before the system, teachers manually recorded grades and attendance, making it difficult to identify struggling students or monitor overall performance trends. With EMIS, the school can now generate reports on student attendance, academic progress, and behavioral patterns. The school management is keen to leverage these capabilities to enhance teaching strategies and improve student performance outcomes.

Required:

Based on the scenario above, explain any FOUR key capabilities of an Education Management Information System (EMIS) that are essential for effectively tracking and enhancing student performance outcomes. Illustrate your answer with specific examples of how these capabilities can be applied in the school context. (8 Marks)

QUESTION 34

Kigali Water Supply Company (KWSC) has been experiencing revenue losses due to unbilled water consumption and delayed payments from customers. To address this, the company decides to implement an integrated billing system that automatically records water usage, generates accurate bills, and allows customers to pay conveniently via mobile money or online platforms. The system also flags anomalies such as unusually high consumption or missed payments for quick action.

Required:

Explain how the implementation of such a system can help KWSC reduce revenue leakage while simultaneously enhancing user convenience. (8 Marks)

QUESTION 35

The Rwanda Revenue Authority (RRA) is planning to upgrade its digital tax filing system. In previous years, the system experienced slowdowns and occasional crashes during peak filing periods, especially in the days leading to the filing deadline. The authority aims to ensure that the system can handle high traffic, maintain reliability, and provide uninterrupted service to taxpayers across the country.

Required:

As an IT consultant, advise the Rwanda Revenue Authority at least FOUR primary technological considerations they should focus on to ensure system scalability and reliability during peak filing seasons. (8 Marks)

End of question paper