CERTIFIED PUBLIC ACCOUNTANTS

OPERATIONAL LEVEL EXAMINATION

DF2.2 DIGITAL FINANCE

DATE: TUESDAY 26, MAY 2026

MARKING GUIDE AND MODEL ANSWERS

SECTION A

Marking guide

Question	Answer
1	B
2	D
3	A, B and D
4	A
5	B
6	C
7	A, B and D
8	A
9	B
10	C
11	A, B and D
12	B
13	C
14	A, C and D
15	A
16	A
17	A, B and D
18	B
19	A
20	A, B, C and D
21	B
22	A
23	A, B and C
24	B
25	C
26	A, B and C
27	B
28	C
29	A, B and C
30	C

QUESTION ONE

The correct Answer is B
Employing robust data cleaning algorithms to remove errors before storage.

Explanation:
Data cleaning algorithms are critical because they remove inconsistencies, duplicates, and errors before storage. This ensures high-quality datasets that can be relied upon for analysis.

- Option A identifies issues but does not fix them permanently.
- Option C limits useful data.
- Option D stores raw data but does not ensure quality.

QUESTION TWO

The correct Answer is D (i) and (iv)

Explanation:

- **(i) Data Collection:** This is the first stage where raw data is gathered and is essential because all subsequent processes depend on accurate data capture.
- **(ii) Data Destruction:** This occurs only at the end of the lifecycle and is not a core operational stage.
- **(iii) Data Enrichment:** This enhances data but is not mandatory in all systems.
- **(iv) Data Sharing:** This is critical because data must be distributed for analysis and decision-making across systems or users.

QUESTION THREE

The correct Answers are: A, B and D

Explanation:

- **A. Access controls:** Prevent unauthorized changes and maintain data integrity by restricting access to authorized users only.
- **B. Backups:** Ensure that data can be recovered if lost or corrupted, preserving integrity over time.
- **C. Reprocessing archived data:** Not necessary for integrity and may distort original data.
- **D. Immutable logs:** Provide tamper-proof records of data changes, ensuring traceability and accountability.

QUESTION FOUR

The correct Answer is A
Variation in update cycles across sources.

Explanation:
Data sources update at different intervals, creating inconsistencies for real-time analytics. This makes synchronization difficult, as some systems may provide outdated data while others provide current information, affecting accuracy and decision-making.

QUESTION FIVE

The correct Answer is B
Real-time tracking and display of procurement stages.

Explanation:
Transparency is achieved when stakeholders can see each stage of procurement clearly. Real-time tracking ensures accountability, reduces fraud, and builds trust. Other options improve operations but do not directly ensure transparency.

QUESTION SIX

The correct Answer is C (i) and (iii)

Explanation:

- **(i) Centralized tracking:** Ensures consistent collection and management of student data across institutions.
- **(ii) Workforce integration:** Useful but not a primary EMIS function.
- **(iii) Predictive analytics:** Helps forecast enrolment and planning needs.
- **(iv) Communication portals:** Helpful but not a core strategic objective.

QUESTION SEVEN

The correct Answers are: A, B and D

Explanation:

- **A. Anonymized data:** Protects privacy while enabling learning.
- **B. Retraining models:** Keeps algorithms updated and relevant.
- **C. Limiting to structured data:** Reduces effectiveness.
- **D. Audit feedback:** Improves model accuracy through real-world corrections.

QUESTION EIGHT

The correct Answer is A
Enhanced visualization of road conditions across regions.

Explanation:
GIS integration allows mapping of physical infrastructure such as roads, bridges, and regions. This enables decision-makers to visually analyze road conditions geographically, detect patterns, and prioritize maintenance efficiently. Other options relate to operational processes, but GIS primarily enhances spatial visibility and analysis.

QUESTION NINE

The correct Answer is B
Real-time monitoring of water usage and distribution efficiency.

Explanation:
ERP systems integrate multiple processes and provide real-time insights. In water distribution, this allows tracking of supply, usage patterns, and leak detection, improving efficiency. Other options do not directly relate to ERP's core strength, which is integration and data visibility across operations.

QUESTION 10

The correct Answer is C (i) and (iii)

Explanation:

- **(i) Specialized features:** Best-of-breed systems provide highly tailored solutions for each department, improving functionality and efficiency.
- **(ii) Simplified integration:** Incorrect because integrating multiple systems is often complex and costly.
- **(iii) Flexibility:** Organizations can adopt innovative solutions without being tied to one vendor.
- **(iv) Lower cost:** Not always true since multiple systems may increase overall expenses.

QUESTION 11

The correct Answers are: A, B and D

Explanation:

- **A. Automating bid evaluation:** Improves consistency and reduces human bias in procurement decisions.
- **B. Fraud detection:** AI identifies unusual patterns that may suggest corruption or irregularities.
- **C. Limiting AI use:** Reduces effectiveness and benefits of AI systems.
- **D. Using performance data:** Improves AI model accuracy by learning from historical procurement data.

QUESTION 12

The correct Answer is B
Vulnerabilities in payment gateway integration.

Explanation:
Payment systems handle financial transactions and sensitive data, making them prime targets for fraud and cyberattacks. Weak integration can lead to data breaches or transaction failures, making this the most critical risk compared to operational or awareness-related concerns.

QUESTION 13

The correct Answer is C (i) and (iii)

Explanation:

- **(i) Real-time visualization:** Helps identify disease outbreaks quickly across regions, enabling timely intervention.
- **(ii) Global integration:** Useful but not essential for core system operation.
- **(iii) Predictive analytics:** Helps forecast future outbreaks and supports proactive planning.
- **(iv) Public reporting portals:** Helpful but not a primary system function.

QUESTION 14

The correct Answers are: A, C and D

Explanation:

- **A. Transparency:** Blockchain allows all stakeholders to track transactions, improving accountability.
- **B. Elimination of audits:** Incorrect because audits remain necessary for oversight and compliance.
- **C. Fraud reduction:** Immutable records prevent tampering and manipulation.
- **D. Faster processing:** Blockchain speeds up cross-border and documentation processes.

QUESTION 15

The correct Answer is A
Inconsistent data inputs from field teams.

Explanation:
The effectiveness of systems like RAMS depends heavily on data quality. When field teams collect data inconsistently, it results in unreliable outputs and poor decision-making. This issue is more critical than cost or stakeholder challenges because it directly affects system accuracy.

QUESTION 16

The correct Answer is A (i) and (ii)

Explanation:

- **(i) Scalability:** Ensures the system can handle future growth and increased usage.
- **(ii) Compatibility:** Essential for integration with existing legacy systems.
- **(iii) Training:** Important but secondary to technical feasibility.
- **(iv) Cost:** Should not override system effectiveness and performance.

QUESTION 17

The correct Answers are: A, B and D

Explanation:

- **A. Data migration protocols:** Ensure accurate transfer of data from old systems.
- **B. Pilot testing:** Helps identify issues before full deployment.
- **C. Immediate "no paper" policy:** Risky because users need time to transition.
- **D. Training:** Critical for successful user adoption and system use.

QUESTION 18

The correct Answer is B
Inconsistent data entry practices across schools.

Explanation:
The quality of outputs from EMIS depends on data input. If schools enter data differently or incorrectly, it creates inconsistencies and errors in reports, reducing reliability and usefulness of the system for decision-making.

QUESTION 19

The correct Answer is A (i) and (ii)

Explanation:

- **(i) Vendor onboarding:** Ensures suppliers understand system processes and requirements.
- **(ii) Data security:** Protects sensitive procurement information from unauthorized access.
- **(iii) Manual override:** Reduces transparency and increases fraud risk.
- **(iv) Testing:** Important but secondary to security and onboarding for system success.

QUESTION 20

The correct Answers are: A, B, C, D

Explanation:

- **A. Timeliness:** Ensures quick response during outbreaks.
- **B. Compliance:** Aligns system with international standards.
- **C. Prediction accuracy:** Measures effectiveness of forecasting.
- **D. Cost-effectiveness:** Determines whether the system delivers value compared to manual processes.

QUESTION 21

The correct Answer is B
Insufficient training for staff.

Explanation:
User adoption mainly depends on training. Without proper understanding, staff may resist or misuse the system, reducing its effectiveness regardless of how advanced or well-designed the system is.

QUESTION 22

The correct Answer is A (i) and (ii)

Explanation:

- **(i) Integration with billing:** Ensures accurate linking of usage data and billing processes.
- **(ii) Staff training:** Ensures correct data collection and system use.
- **(iii) Cost reduction:** A benefit, not a deployment consideration.
- **(iv) Data protection:** Important but secondary to operational setup.

QUESTION 23

The correct Answers are: A, B and C

Explanation:

- **A. Delivery timeliness:** Measures reliability of vendors.
- **B. Financial stability:** Indicates vendor's ability to sustain operations.
- **C. User satisfaction:** Reflects quality of goods and services.
- **D. Revenue:** Not directly linked to performance quality.

QUESTION 24

The correct Answer is B
Faster implementation compared to in-house systems.

Explanation:
Off-the-shelf systems are pre-built and ready for deployment, significantly reducing development time. In contrast, in-house systems require design, development, and testing, which delays implementation.

QUESTION 25

The correct Answer is C (i) and (iii)

Explanation:

- **(i) Stakeholder involvement:** Ensures buy-in and reduces resistance.
- **(ii) Integration failure:** Important but less critical than governance.
- **(iii) Project management:** Ensures proper planning, coordination, and implementation.
- **(iv) Training reliance:** Less critical than leadership and planning.

QUESTION 26

The correct Answers are: A, B and C

Explanation:

- **A. Clear workflows:** Ensure smooth system processes.
- **B. Training:** Improves user adoption.
- **C. Standards compatibility:** Ensures compliance with national systems.
- **D. Cost priority:** Should not outweigh usability and effectiveness.

QUESTION 27

The correct Answer is B
To manage and monitor the condition of road infrastructure.

Explanation:
The primary purpose of RAMS is to track and maintain road conditions. This supports planning, budgeting, and maintenance scheduling to ensure infrastructure sustainability.

QUESTION 28

The correct Answer is C (i) and (iii)

Explanation:

- **(i) Machine learning:** Improves predictive capability.
- **(ii) Real-time data:** Important but secondary to predictive capability focus.
- **(iii) User-friendly dashboards:** Help decision-makers interpret data effectively.
- **(iv) Global alignment:** Useful but not the primary upgrade focus.

QUESTION 29

The correct Answers are: A, B and C

Explanation:

- **A. IoT sensors:** Provide real-time monitoring.
- **B. Training:** Ensures proper system use.
- **C. Data sharing:** Improves coordination across stakeholders.
- **D. Limiting functionality:** Reduces system effectiveness.

QUESTION 30

The correct Answer is C
Resistance from stakeholders due to perceived transparency.

Explanation:
Centralized systems increase transparency, which may expose inefficiencies or unethical practices. This often leads to resistance from stakeholders who feel threatened, making it a key implementation challenge.

SECTION B

QUESTION 31

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.

1. Enhances Financial Transparency

An Integrated Financial Management Information System (IFMIS) improves transparency by recording financial transactions in real time and making them accessible to authorized stakeholders. This reduces opportunities for fraud and corruption while promoting openness and trust in public financial management.

2. Strengthens Budgetary Control

IFMIS ensures that government spending is aligned with approved budgets by enforcing budget limits during transaction processing. This prevents overspending and ensures funds are used for intended purposes, promoting fiscal discipline and efficient resource allocation.

3. Improves Accountability

The system maintains an audit trail for every transaction, identifying who initiated, approved, and executed financial activities. This ensures public officers are held responsible for their actions and promotes proper governance and control over public funds.

4. Improves Service Delivery

By streamlining financial processes such as payments and procurement, IFMIS ensures timely disbursement of funds to public service sectors like health and education. This enhances the delivery of services and improves outcomes for citizens.

5. Enhances Financial Reporting

IFMIS enables the generation of accurate, real-time financial reports that support management decision-making. These reports provide insights into revenues, expenditures, and budget performance, facilitating better planning and monitoring of government programs.

6. Reduces Fraud and Leakages

IFMIS minimizes fraud by automating financial processes and enforcing internal controls such as authorization workflows. This reduces opportunities for manipulation, improves detection of irregularities, and safeguards public resources from misuse.

7. Supports Data Integration Across Institutions

IFMIS integrates financial information across departments and levels of government, ensuring consistency and accuracy of data. This unified system eliminates duplication, improves coordination, and enhances overall efficiency in managing public finances.

QUESTION 32

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.

1. Business Architecture

Business architecture defines organizational structure, processes, and strategic objectives. It ensures that all activities and processes are aligned with the organization's goals, enabling efficient operations and improving overall performance.

2. Application Architecture

Application architecture focuses on the software systems used within the organization and how they interact. It ensures integration, reduces system duplication, and improves communication between systems for efficient operations.

3. Data Architecture

Data architecture governs how data is stored, managed, and shared across the organization. It ensures data consistency, quality, and accessibility, supporting analytics and informed decision-making.

4. Technology Architecture

Technology architecture defines the IT infrastructure, including hardware, networks, and platforms. It ensures reliability, scalability, and security of systems required to support business operations.

5. Improves System Integration

EA ensures that different systems work together seamlessly by aligning applications and data structures. This integration eliminates silos, improves communication between departments, and enhances efficiency across the organization.

6. Enhances Strategic Alignment

Enterprise Architecture aligns IT systems with business strategy, ensuring that technology investments support organizational goals. This reduces inefficiencies and helps achieve long-term objectives more effectively.

7. Supports Decision-Making

With integrated systems and consistent data, EA provides management with accurate and timely information. This improves decision-making capabilities by providing a clear view of operations and performance across the organization.

QUESTION 33

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.

1. Student Performance Monitoring

EMIS tracks student grades and academic performance over time, enabling schools to identify trends and struggling students. This allows teachers to provide targeted support and interventions to improve learning outcomes.

2. Attendance Tracking

The system records and analyzes attendance data, helping schools identify absenteeism patterns. This allows early intervention to address attendance issues and improve student participation.

3. Data Analytics for Decision-Making

EMIS provides analytical tools to identify trends in academic performance and behavior. This helps administrators develop data-driven strategies to improve teaching methods and allocate resources effectively.

4. Reporting Capabilities

The system generates reports for teachers, administrators, and policymakers. These reports provide insights into individual and overall student performance, supporting planning and evaluation.

5. Early Warning Systems

EMIS can identify students at risk of poor performance or dropping out by analyzing data trends. Early warnings allow schools to intervene proactively, improving retention and academic success.

6. Resource Planning Support

By analyzing enrolment and performance data, EMIS helps schools and governments allocate resources such as teachers and learning materials effectively, ensuring optimal utilization of available resources.

7. Improved Communication and Coordination

EMIS facilitates communication between stakeholders by sharing data across departments and institutions. This improves coordination among teachers, administrators, and policymakers in enhancing education outcomes.

QUESTION 34

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

1. Reduces Revenue Leakage

Automated billing ensures all water consumption is accurately recorded and billed. This minimizes errors associated with manual systems and ensures that all usage is accounted for, improving revenue collection.

2. Detects Irregularities Early

The system identifies abnormal usage patterns or missed payments, enabling quick investigation. This helps detect leaks, fraud, or billing errors and allows the company to take corrective actions promptly.

3. Improves Customer Convenience

Customers can pay bills using mobile money or online platforms, eliminating the need for physical visits. This convenience encourages timely payments and improves customer satisfaction.

4. Enhances Cash Flow Management

Faster and more reliable billing and payment processes ensure quicker revenue collection. This improves liquidity, enabling the company to invest in infrastructure and service improvements.

5. Improves Billing Accuracy

Automated systems reduce human errors in meter reading and billing calculations. This ensures customers are billed correctly, improving trust and reducing disputes between customers and the company.

6. Strengthens Financial Control

The system provides detailed records of transactions and payments, enabling better monitoring and control of revenue. This supports auditing and improves accountability within the organization.

7. Enhances Customer Data Management

The system stores customer information securely and centrally, allowing easy access and efficient management. This improves service delivery and supports better customer relationship management.

QUESTION 35

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.

1. Cloud-Based Infrastructure

Cloud computing enables the system to scale automatically during peak periods. This ensures sufficient resources are available to handle increased traffic, preventing system crashes and ensuring continuous availability.

2. Load Balancing

Load balancing distributes system traffic across multiple servers, preventing overload on any single server. This improves system performance, reliability, and user experience during high-demand periods.

3. System Redundancy

Redundant systems ensure backup servers are available in case of failure. This minimizes downtime and ensures continuous service availability, which is critical during peak filing periods.

4. Database Optimization

Efficient database design improves data retrieval and processing speed. This ensures the system remains responsive even under heavy usage, enhancing user experience during peak times.

5. Stress Testing and Capacity Planning

Conducting stress tests helps identify system weaknesses under heavy loads. This allows the organization to prepare adequately and ensure the system can handle peak demand without failure.

6. Cybersecurity Measures

Strong security measures protect the system from cyber threats such as hacking and data breaches. This ensures data integrity, confidentiality, and system reliability, especially during high-risk peak periods.

7. Monitoring and Real-Time Performance Tracking

Continuous monitoring of system performance allows immediate detection of issues such as slowdowns or failures. This enables quick intervention, ensuring uninterrupted service and improved reliability for users.