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CERTIFIED PUBLIC ACCOUNTANTS
OPERATIONAL LEVEL EXAMINATION
DF2.2 DIGITAL FINANCE
DATE: TUESDAY 25, AUGUST 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

A public health agency in Rwanda is leveraging an integrated data system to streamline epidemic reporting to stakeholders in the health sector.

What is the most critical feature required to ensure timely and accurate data aggregation in this context?

A A comprehensive historical data repository
B Automated on the fly reporting mechanisms
C Strict role-based access controls
D Routine manual data validation

(2 Marks)

QUESTION TWO

A meteorological agency deploying data collection systems must balance speed, data integrity, and error prevention.

Which of the following combination of factors that best ensures balance in the above scenario?

i) Minimising manual interaction during data validation
ii) Ensuring multiple Extract, Transform and Load pipeline backups
iii) Restricting real-time validation to predefined categories
iv) Employing dynamic workflows for error resolution

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

(2 Marks)

QUESTION THREE

During a digital transformation project at a listed manufacturing firm, the project team maps its stakeholders. A group of shareholders is found to hold considerable power over the company's strategic direction through their voting rights, yet they show little day-to-day interest in the technical details of the IT rollout itself.

Using the Power/Interest Grid, **which engagement strategy is most appropriate for this shareholder group?**

A Engage closely and keep satisfied
B Keep informed and communicate regularly
C Monitor with minimal communication
D Keep satisfied, but not overly engaged

(2 Marks)

QUESTION FOUR

A government ministry wants to adopt an enterprise architecture methodology that classifies every architectural artefact against six communication questions (What, How, Where, Who, When, Why) and cross-references them with six stakeholder perspectives ranging from Planner and Owner through to the Functioning Enterprise itself.

Which enterprise architecture framework is being described?

A Zachman Framework
B TOGAF
C COBIT
D ITIL **(2 Marks)**

QUESTION FIVE

A financial institution adopting a core banking system must ensure seamless customer experience post-deployment.

What is the combination of practices most critical for achieving this objective?

i) Comprehensive employee training on system functionalities
ii) Extensive testing with real-world scenarios
iii) Transparent communication with customers during transition
iv) Regular system monitoring and immediate error resolution

A (i) and (ii)
B (ii) and (iv)
C (i) and (iii)
D (iii) and (iv) **(2 Marks)**

QUESTION SIX

A fintech start-up's engineering team wants to write and deploy application code as quickly as possible. They prefer that the provider handle the underlying servers, operating systems, databases and middleware entirely, so that developers only ever have to think about their application logic.

Which cloud service delivery model best fits this need?

A Infrastructure as a Service (IaaS)
B Software as a Service (SaaS)
C Platform as a Service (PaaS)
D On-site service delivery **(2 Marks)**

QUESTION SEVEN

A government IFMIS has a Maximum Tolerable Downtime of 24 hours. Management has set a specific target that, following any disruption, the system must be functionally restored within 12 hours in order to avoid breaching that 24-hour limit.

Which Business Impact Assessment parameter is represented by the 12-hour system restoration target described in the scenario?

A Maximum Tolerable Downtime (MTD)
B Recovery Point Objective (RPO)
C Recovery Time Objective (RTO)
D Service Delivery Objective (SDO) **(2 Marks)**

QUESTION EIGHT

A multiagency development board is adopting a new e-procurement system to enhance transparency and efficiency.

Which combination of actions would best support achieving these goals during the first year of use?

i) Training procurement officers on system usage and reporting
ii) Mandating external audits of procurement data
iii) Ensuring supplier registration compliance
iv) Establishing key performance metrics and dashboards

A (i) and (iii)
B (ii) and (iv)
C (iii) and (iv)
D (i) and (iv) **(2 Marks)**

QUESTION NINE

A regional bank wants a disaster recovery facility that already holds configured servers and a copy of its critical data, but which needs a short period of additional set-up work before becoming fully operational. It is willing to accept this delay in exchange for a lower cost than a facility offering instant failover.

Which type of Disaster Recovery Planning backup site best matches these requirements?

A Mirrored/Replicated site
B Hot site
C Cold site
D Warm site **(2 Marks)**

QUESTION 10

An IT department wants a daily backup routine for its email system that captures only the data changed since the immediately preceding backup, whichever type that was, in order to minimise daily backup time and storage use even though this means that restoring the system requires replaying every backup in the sequence in order.

Which backup approach is being described?

A Incremental backup

B Full backup
C Differential backup
D Mirrored backup **(2 Marks)**

QUESTION 11

A power distribution company deploying a smart grid system is prioritising scalability and data accuracy for purposes of achieving a stable network.

Which combination of actions would best address these priorities during rollout?

i) Conducting real-time data validation during system integration
ii) Implementing predictive maintenance using smart meter data
iii) Ensuring hardware compatibility across legacy and new systems
iv) Developing scalable cloud-based infrastructure

A (i) and (ii)
B (ii) and (iv)
C (iii) and (iv)
D (i) and (iii) **(2 Marks)**

QUESTION 12

A software vendor is building a core banking system whose requirements are fixed in advance by regulation. The client insists that each phase requirements, design, build and testing be fully completed, documented and formally signed off before the next phase may begin.

Which systems development approach is most consistent with this scenario?

A Agile
B Scrum
C Waterfall
D Hybrid rapid prototyping **(2 Marks)**

QUESTION 13

Employees at a company understand why a new finance system was introduced and have completed the training needed to operate it competently. However, several weeks after go-live, many staff have quietly reverted to their old manual spreadsheets because no mechanism was ever put in place to sustain the new way of working.

Which stage of the ADKAR change management model is missing from this scenario?

A Reinforcement
B Awareness
C Knowledge
D Ability **(2 Marks)**

QUESTION 14

A rapidly growing e-commerce company needs a new accounting solution immediately. It wants to avoid any upfront investment in infrastructure, is comfortable with standard, non-customised functionality, and expects its usage levels to scale up and down each month depending on order volumes.

Which system acquisition approach best matches these needs?

A Off-the-shelf package
B Software as a Service solution
C Hybrid solution
D Custom-built system **(2 Marks)**

QUESTION 15

An epidemic tracking system is launched in response to disease outbreaks, emphasising predictive analytics and data visualisation.

Which combination of features would be most critical for this system's success?

i) Real-time disease incidence mapping
ii) Predictive modelling for outbreak hotspots
iii) Integration with international health databases
iv) Automated alerts for public health responses

A (i) and (iii)
B (ii) and (iv)
C (i) and (ii)
D (iii) and (iv) **(2 Marks)**

QUESTION 16

A telecom operator generates enormous volumes of call detail records every second from millions of subscribers. These records arrive in a continuous, rapid stream that exceeds the speed at which the operator's traditional database systems can process incoming records.

Which of the '3 Vs' of Big Data does this rapid, continuous inflow of data best represent?

A Volume
B Velocity
C Variety
D Veracity **(2 Marks)**

QUESTION 17

A credit card company deploys a fraud-detection system that continuously updates its own underlying model as new transaction data arrives, gradually and automatically improving the accuracy of its predictions over time without a programmer rewriting its rules.

This self-improving predictive capability is most specifically characteristic of:

A Robotic Process Automation

B Blockchain

C Structured Threat Analysis

D Machine Learning

(2 Marks)

QUESTION 18

A water distribution management system is introduced in an urban utility company to enhance efficiency and customer satisfaction.

Which combination of risks is most likely to affect the system's adoption?

i) Resistance from staff unfamiliar with automated workflows

ii) Limited compatibility with existing infrastructure

iii) High costs of hardware upgrades

iv) Unclear communication on system usage policies

A (i) and (iii)

B (ii) and (iv)

C (i) and (ii)

D (iii) and (iv)

(2 Marks)

QUESTION 19

Several unrelated suppliers, manufacturers and financiers participating in a supply chain finance arrangement want a shared record of every transaction that no single party can alter after the fact, so that all participants can trust the same unbroken history of shipments and payments.

Which technology is best suited to this requirement?

A Blockchain

B Robotic Process Automation

C Business Intelligence

D Security Information and Event Management

(2 Marks)

QUESTION 20

A procurement management authority has integrated their Management Information System across all divisions in order to improve public tendering processes and ensure compliance with regulations.

Which factor poses the greatest challenge in achieving the desired transparency?

A Complexity in verifying bidder credentials

B Inconsistent data formats from legacy systems

C Insufficient training for procurement officers

D Lack of public access to real-time bidding status

(2 Marks)

QUESTION 21

A newly developed Management Information System for a national aviation authority focuses on streamlining aircraft landing scheduling and fees.

Which combination of features best ensures operational efficiency?

i) Real-time runway availability tracking
ii) Automated invoicing for landing fees
iii) Integration with weather monitoring systems
iv) Standardised communication templates for air traffic controllers

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

(2 Marks)

QUESTION 22

A multinational bank stores its customers' personal data with a cloud provider whose servers are physically located in a different country from where the bank itself operates, raising the question of which country's data protection law actually governs that data.

Which data governance issue does this concern most directly relate to?

A Data classification
B Data residency
C Data enrichment
D Data warehousing

(2 Marks)

QUESTION 23

A conglomerate decides that its Human Resource, procurement and finance departments will each use the specific specialized software that best suits their own unique needs, accepting the added complexity of integrating several separate systems in exchange for deeper functionality in each department.

Which systems approach is the conglomerate adopting?

A Enterprise Resource Planning
B Integrated Financial Management Information System
C Robotic Process Automation
D Best of Breed approach **(2 Marks)**

QUESTION 24

Following challenges in general enrolment reporting, a university has implemented a new Management Information System to streamline student enrolment and performance tracking.

Which combination of challenges is most likely to hinder system acceptance among users?

i) Complex user interface that is difficult for non-technical staff to navigate
ii) Lack of integration with legacy course management systems
iii) Delays in system updates during peak enrolment periods when there are high access requirements
iv) Inadequate training for faculty members on how to use the new system's features

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

(2 Marks)

QUESTION 25

A veterinary tracking system has been deployed by an animal health agency to monitor cattle disease outbreaks and resource allocation.

What strategies can ensure the system's scalability in responding to future pandemics?

A Cloud-based data storage solutions
B Regular stress testing for high user loads
C Open-source development for community contributions
D On-premise server-based infrastructure for data stability and access

(2 Marks)

QUESTION 26

A bank's security team has just finished cataloguing all of its critical servers, databases and applications and is now compiling a list of possible threats and vulnerabilities that could affect these assets. No protective controls have yet been deployed.

Within the information and cyber security management lifecycle, **which stage does this activity belong to?**

A Protect
B Identify
C Detect
D Respond

(2 Marks)

QUESTION 27

A national lands records system aims to digitise land ownership documents for secure access and efficient processing.

Which combinations of factors contribute most to ensuring data integrity in the system?

i) Implementing blockchain technology for secure transaction records
ii) Regularly updating records based on real-time transactions
iii) Restricting user access to approved personnel
iv) Conducting periodic third-party data audits

A (i) and (iv)

B (ii) and (iii)
C (i) and (ii)
D (iii) and (iv) **(2 Marks)**

QUESTION 28

Service Level Agreement guarantees 99.9% monthly system uptime. Under the agreement, for every 0.1% shortfall below that target, the client receives a service credit equal to 5% of the monthly service fee. In a particular month, the vendor's cloud service actually achieved only 99.6% uptime.

What percentage service credit is the client entitled to for that month?

A 5%
B 0.3%
C 15%
D 0.1% **(2 Marks)**

QUESTION 29

A company cannot practically send its own auditors to inspect a critical cloud vendor's data center. Instead, it asks the vendor for a standardized, independently produced assurance report evaluating the vendor's controls over security, availability and confidentiality.

Which of the following would the company most likely request from the vendor?

A Business Impact Assessment
B SOC 2 report
C MoSCoW analysis
D RACI matrix **(2 Marks)**

QUESTION 30

A power distribution company plans to automate prepaid metering for operational efficiency and enhanced customer satisfaction.

Which combinations of challenges might hinder successful implementation?

i) High resistance from consumers due to upfront installation costs
ii) Intermittent network connectivity in remote areas
iii) Limited capacity of utility staff to manage new meters
iv) Data breaches during meter readings

A (i) and (iii)
B (ii) and (iv)
C (i) and (iv)
D (ii) and (iii) **(2 Marks)**

SECTION B

QUESTION 31

The Rwanda Revenue Authority (RRA) processes millions of taxpayer transactions each year across VAT, income tax, and customs declarations, generating large volumes of structured and unstructured data from multiple systems. Management has observed inconsistent filing patterns among certain categories of taxpayers and suspects that some businesses may be under-declaring income. At the same time, the Commissioner General wants senior management to move away from relying on year-end summary reports and instead use the data collected to inform ongoing strategic decisions, such as where to deploy audit staff and how to forecast revenue collection targets for the coming year.

Required:

a) Explain how RRA could apply descriptive and predictive analytics to achieve these two objectives. (5 Marks)

b) State THREE benefits RRA would gain from adopting a data-driven approach to decision-making. (3 Marks)

(Total: 8 Marks)

QUESTION 32

A referral hospital is implementing a new supply chain management system to track pharmaceutical stock as it moves from external suppliers into the central pharmacy store and out to individual wards. In the past year, the hospital has experienced several stock-outs of essential medicines, partly because supplier delivery records were captured manually on paper and often contained errors, and partly because two of its longest-serving suppliers were selected several years ago without a formal evaluation process. The Procurement Manager has been tasked with ensuring that data captured from suppliers going forward is accurate and reliable, and that any new or continuing suppliers are properly vetted before being engaged under the new system.

Required:

a) Explain TWO data collection methods the hospital could use to ensure accurate and reliable data capture from its suppliers. (4 Marks)

b) Describe TWO due diligence steps the hospital should undertake when selecting pharmaceutical suppliers for this system. (4 Marks)

(Total: 8 Marks)

QUESTION 33

A local government authority currently bills property owners for land rates using a manual, paper-based process that relies on physical registers kept at the district office. This has resulted in delayed billing, lost records, and difficulty reconciling payments with property ownership data. The authority's council has approved funding to replace the manual process with an automated billing system and has formed a project team to oversee the transition. The team is currently at the planning stage and must decide whether to purchase a ready-made billing solution from a software vendor or commission its in-house IT department to build a custom

system, while also preparing staff and property owners for the change ahead of the planned go-live date in six months.

Required:

a) Explain FOUR factors the authority should consider when deciding whether to buy an off-the-shelf system or develop the system in-house. (4 Marks)

b) Describe FOUR change management activities the authority should undertake to support successful adoption of the new system. (4 Marks)

(Total: 8 Marks)

QUESTION 34

A commercial bank's loan portfolio has grown rapidly over the past two years, and management has identified a need to improve how portfolio performance information is communicated internally. Branch managers currently receive raw transaction extracts by e-mail and must manually compile their own reports, which is time-consuming and prone to error, while the Board of Directors receives lengthy printed reports that are difficult to digest in the limited time available during quarterly meetings. The bank also holds sensitive customer financial data, including income details and collateral records, which is used in preparing these reports, and the Head of IT has raised concerns that this data is not adequately protected as it is extracted and shared across departments.

Required:

a) Recommend and justify an appropriate data presentation approach for branch managers and for the Board. (4 Marks)

b) Explain TWO measures the bank should implement to protect the sensitive customer data used in producing these reports. (4 Marks)

(Total: 8 Marks)

QUESTION 35

An insurance company recently rolled out a mobile application that allows customers to file motor and property claims directly from their smartphones, upload supporting photos, and track claim status in real time. The application was introduced to reduce claim processing times and improve customer satisfaction, and uptake among customers has been high in its first three months of use. However, the Head of Risk has raised concerns that the application was rolled out without a full assessment of the risks it could introduce, particularly given that it handles personal customer data and processes payment-related information, and has asked that this be addressed urgently before the application is extended to cover life insurance claims.

Required:

a) Explain the steps in the risk assessment process the company should follow to evaluate the risks introduced by the new mobile application. (5 Marks)

b) Recommend THREE risk control measures the company could adopt to mitigate the identified risks. (3 Marks)

(Total: 8 Marks)

End of question paper