



**CPA FOUNDATION LEVEL**

**CS FOUNDATION LEVEL**

**INFORMATION COMMUNICATION TECHNOLOGY**

**WEDNESDAY: 24 April 2024. Afternoon Paper.**

**Time Allowed: 3 hours.**

**This paper has seven (7) questions. Answer any FIVE questions. ALL questions carry equal marks. Do NOT write anything on this paper.**

**QUESTION ONE**

- (a) List **TWO** limitations of mobile computing. (2 marks)
- (b) Identify **SIX** factors to consider in the selection and acquisition of a computer operating system. (6 marks)
- (c) Every organisation, regardless of its size or industry needs to prioritise the implementation of robust data security controls.  
Explain **FOUR** types of data security controls. (8 marks)
- (d) Quick Response (QR) codes have gained significant popularity in recent years, becoming a widely adopted technology for various purposes.  
Outline **FOUR** reasons for the popularity of QR codes. (4 marks)

**(Total: 20 marks)**

**QUESTION TWO**

- (a) The emergence of mobile communication applications has revolutionised how people communicate and interact with each other.  
Explain **FOUR** essential features of a communication application. (8 marks)
- (b) Outline **SIX** moral dimensions associated with information systems. (6 marks)
- (c) A company uses cloud computing technology for data storage.  
Explain **THREE** ethical challenges the company might face while using this technology. (6 marks)

**(Total: 20 marks)**

**QUESTION THREE**

- (a) An increase in online data processing has led to increased rate of computer crimes.  
Describe **THREE** control measures that could be put in place to reduce computer crime rate in organisations. (6 marks)
- (b) Explain **THREE** circumstances that would necessitate the use of pilot approach during system change over. (6 marks)
- (c) Explain the following functions as used in spreadsheet application:
- (i) SUMIF. (2 marks)
- (ii) PMT. (2 marks)

- (d) An organisation installed an inhouse developed application software to support their operations.  
State **FOUR** advantages they would gain by using this software. (4 marks)  
**(Total: 20 marks)**

**QUESTION FOUR**

- (a) Describe **TWO** reasons that would necessitate the use of water mark on a word processing document. (4 marks)
- (b) Explain **FOUR** circumstances when batch operating system would be most appropriate. (4 marks)
- (c) Explain **THREE** types of feasibility studies that are conducted during the development of an information system. (6 marks)
- (d) Highlight **SIX** challenges of e-commerce in developing countries. (6 marks)  
**(Total: 20 marks)**

**QUESTION FIVE**

- (a) Outline **SIX** core processes for software development. (6 marks)
- (b) Explain **TWO** reasons why a major operating system must evolve over time. (4 marks)
- (c) Examine **THREE** methods that could be used to prevent social engineering related attacks. (6 marks)
- (d) Explain **TWO** advantages and **TWO** disadvantages of digital wallets as an ecommerce payment method. (4 marks)  
**(Total: 20 marks)**

**QUESTION SIX**

- (a) Explain **TWO** reasons for multi-booting. (2 marks)
- (b) Implementation is an importance phase in the development of an information system.  
Describe **THREE** activities carried out in this phase. (6 marks)
- (c) Business owners looking to manage financial data tend to embrace two primary options; spreadsheets and accounting software.  
Evaluate **THREE** reasons why businesses prefer using accounting softwares. (6 marks)
- (d) Explain **THREE** differences between “word processing software” and “desktop publishing software”. (6 marks)  
**(Total: 20 marks)**

**QUESTION SEVEN**

- (a) (i) Identify **FOUR** security threats in mobile applications. (4 marks)
- (ii) Propose an appropriate measure to mitigate each of the threats identified in (a) (i) above. (4 marks)
- (b) Social concerns in information systems are a crucial aspect of the development and implementation of information systems. These concerns are related to ethical, social, political and moral issues that arise from the use of information systems.  
Examine **FOUR** social issues in Information Systems. (8 marks)
- (c) Describe **FOUR** events that might spark an iterative process in software development. (4 marks)  
**(Total: 20 marks)**
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INFORMATION COMMUNICATION TECHNOLOGY

WEDNESDAY: 6 December 2023. Afternoon Paper.

Time Allowed: 3 hours.

This paper has seven (7) questions. Answer any FIVE questions. ALL questions carry equal marks. DO NOT write anything on this paper.

**QUESTION ONE**

- (a) Highlight **TWO** benefits of linking worksheets in a spreadsheet program. (2 marks)
  - (b) Outline **FOUR** qualities of a good system documentation. (4 marks)
  - (c) Explain **THREE** desirable features of e-commerce websites that could enable customers find products quickly. (6 marks)
  - (d) Examine **FOUR** challenges associated with cloud storage. (8 marks)
- (Total: 20 marks)**

**QUESTION TWO**

- (a) Citing **TWO** examples, explain the term “mobile operating system”. (4 marks)
  - (b) Using an example, explain the use of the “IF” function in a spreadsheet application. (4 marks)
  - (c) Explain **THREE** ways in which a transaction processing system helps in improving operations of an organisation. (6 marks)
  - (d) Analyse **THREE** factors that should be considered when creating a computer network. (6 marks)
- (Total: 20 marks)**

**QUESTION THREE**

- (a) Differentiate between pilot implementation methodology and parallel information systems implementation methodologies. (2 marks)
  - (b) Highlight **FOUR** benefits of a network operating system to an organisation. (4 marks)
  - (c) Outline **FOUR** roles of an Information Systems Analyst. (4 marks)
  - (d) Explain **TWO** technical trends that generate ethical concerns. (4 marks)
  - (e)
    - (i) Distinguish between systems analysis and systems design. (2 marks)
    - (ii) Citing **TWO** reasons, explain the purpose of the system development life cycle. (4 marks)
- (Total: 20 marks)**

**QUESTION FOUR**

- (a) Explain **TWO** circumstances that would necessitate the use of speaker notes during a presentation. (4 marks)
  - (b) Baraka Company limited networked their computers to enhance their operations.  
Outline **FOUR** methods they could use to maintain security for their information in the network. (4 marks)
  - (c) Explain **THREE** ethical issues related to e-commerce for a business organisation. (6 marks)
  - (d) Justify with **THREE** reasons why an organisation would install a tailor-made software. (6 marks)
- (Total: 20 marks)**

**QUESTION FIVE**

- (a) Examine **TWO** obstacles/challenges that could be faced by organisations when implementing a management information system. (4 marks)
  - (b) With respect to questionnaires, distinguish between open ended questions and closed ended questions as used in data collection. (4 marks)
  - (c) Enumerate **SIX** ways to secure e-commerce transactions from various threats. (6 marks)
  - (d) Highlight **SIX** benefits of post-implementation review of an information systems project. (6 marks)
- (Total: 20 marks)**

**QUESTION SIX**

- (a) Explain the term “proofreading” as used in a word processing program. (2 marks)
  - (b) State the unit of measuring a computer’s clock speed, RAM size, Hard disk size and monitor size. (4 marks)
  - (c) Discuss **THREE** challenges associated with the use of external hard drives. (6 marks)
  - (d) Examine **FOUR** legal issues associated with the use of information systems. (8 marks)
- (Total: 20 marks)**

**QUESTION SEVEN**

- (a) Highlight **TWO** bookkeeping capabilities of a computerised accounting software. (2 marks)
  - (b) Explain **FOUR** application areas of “What if” analysis feature in spreadsheet application. (4 marks)
  - (c) Outline **SIX** hindrances to the adoption and success of voice user interface technology. (6 marks)
  - (d) Discuss **FOUR** ways in which an organisation could optimise the use of information systems to ensure improved productivity in a functional perspective. (8 marks)
- (Total: 20 marks)**
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INFORMATION COMMUNICATION TECHNOLOGY

WEDNESDAY: 23 August 2023. Afternoon paper.

Time Allowed: 3 hours.

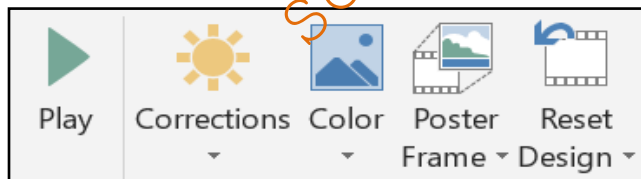
Answer any FIVE questions. ALL questions carry equal marks. DO NOT write anything on this paper.

**QUESTION ONE**

- (a) Explain how the following elements affect the processing power of a computer:
- (i) Cache memory. (2 marks)
  - (ii) Data bus. (2 marks)
  - (iii) Type of processor. (2 marks)
- (b) List **FOUR** limitations of star network topology. (4 marks)
- (c) Highlight **FOUR** salient features of a Computerised Accounting Software (CAS). (4 marks)
- (d) Outline **SIX** advantages of a pivot table report. (6 marks)
- (Total: 20 marks)**

**QUESTION TWO**

- (a) Highlight **THREE** principles used to measure the integrity of data in an information system. (3 marks)
- (b) Explain the significance of the following **FIVE** features of a presentation program. (5 marks)



- (c) Examine **THREE** ways in which an operating system provides data security in a computer system. (6 marks)
- (d) Explain the impact of **THREE** technological trends that pose ethical challenges to organisations. (6 marks)
- (Total: 20 marks)**

**QUESTION THREE**

- (a) Highlight **TWO** ethical issues that need to be considered by an information systems development team. (2 marks)
- (b) Explain **TWO** types of computer networks under each of the following criterion:
- (i) Functionality. (4 marks)
  - (ii) Ownership. (4 marks)
  - (iii) Transmission media. (4 marks)
- (c) Assess **THREE** information system vulnerabilities and their respective countermeasures. (6 marks)
- (Total: 20 marks)**

**QUESTION FOUR**

- (a) Distinguish between “Executive Support System (ESS)” and “Decision Support System (DSS)”. (2 marks)
  - (b) Highlight **SIX** advantages of Conditional Formatting in a spreadsheet program. (6 marks)
  - (c) Explain **THREE** components of a computer network. (6 marks)
  - (d) Analyse **SIX** benefits of developing a Disaster Recovery Plan (DRP). (6 marks)
- (Total: 20 marks)**

**QUESTION FIVE**

- (a) List **FIVE** limitations of computer networking. (5 marks)
  - (b) Highlight **FIVE** reasons why an organisation may choose an off-the-shelf software package. (5 marks)
  - (c) Highlight **FIVE** benefits of cloud storage. (5 marks)
  - (d) Examine **FIVE** major components of e-commerce infrastructure. (5 marks)
- (Total: 20 marks)**

**QUESTION SIX**

- (a) (i) State **TWO** examples of Network Operating System (NOS) from different software manufacturers. (2 marks)
  - (ii) List **TWO** advantages and **TWO** disadvantages of Network Operating Systems (NOS). (4 marks)
  - (b) Outline **FOUR** reasons why Read Only Memory (ROM) is preferred for storing firmware. (4 marks)
  - (c) Summarise **FOUR** ways in which a transaction processing system improves operations of an organisation. (4 marks)
  - (d) A library management system is an example of an information system.  
In relation to the above statement, state **TWO** relevant examples of the following items in a library system:
    - (i) Data. (2 marks)
    - (ii) Processing. (2 marks)
    - (iii) Information. (2 marks)
- (Total: 20 marks)**

**QUESTION SEVEN**

- (a) Explain **TWO** ways in which an operating system acts as a resource manager. (4 marks)
  - (b) Highlight **FOUR** benefits of Internet of Things (IoT) in smart home. (4 marks)
  - (c) Outline **SIX** instances when you would recommend prototypes during system development. (6 marks)
  - (d) Examine **SIX** benefits associated with business processes integration. (6 marks)
- (Total: 20 marks)**
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INFORMATION COMMUNICATION TECHNOLOGY

WEDNESDAY: 26 April 2023. Afternoon Paper.

Time Allowed: 3 hours.

Answer any FIVE questions. ALL questions carry equal marks. Do NOT write anything on this paper.

QUESTION ONE

- (a) Veronica and Simon have each bought a computer labelled Computer A and B respectively, with the following specifications:

Computer A	Computer B
128GB Flash Drive	512GB Hard Drive
16GB RAM	8GB RAM
150DPI Screen	225DPI Screen
15 inch screen	13 inch screen

Required:

Assuming that the cost of the two computers are the same, list **TWO** strengths of Computer A and **TWO** strengths of Computer B, describing the impact of each strength. (4 marks)

- (b) Explain **FIVE** ways of protecting yourself from identity theft. (5 marks)
- (c) Highlight **FIVE** activities that the operating system executes in relation to process management. (5 marks)
- (d) Highlight **THREE** ethical and **THREE** societal issues to the development and use of information technology. (6 marks)

(Total: 20 marks)

QUESTION TWO

- (a) (i) Explain **THREE** reasons why most threats to an organisation's information system are contributed by insiders. (3 marks)
- (ii) State **FOUR** ways of preparing against insider threats. (4 marks)
- (b) Explain **THREE** techniques for eliciting user requirements during information systems development. (6 marks)
- (c) David Omondi is the owner of a Home Appliances shop at the Douala Branch. Details of items sold by him during the month of March 2023 were given below:

	A	B	C
1	ITEMS	BRAND	SALES PRICE
2	COLOUR TV	SAMSUNG	28000
3	WASHING MACHINE	LG	23000
4	REFRIDGERATOR	WHIRLPOOL	24000
5	WASHING MACHINE	LG	22000
6	COLOUR TV	WHIRLPOOL	35000
7	REFRIDGERATOR	SAMSUNG	25000
8	WASHING MACHINE	SAMSUNG	22000
9	COLOUR TV	LG	20000

**Required:**

Explain the steps required to prepare a pivot table with the above information to show the sales for each brand using a spreadsheet application such as LibreOffice Calc. Use proper cell references in your explanation.

(7 marks)

**(Total: 20 marks)**

**QUESTION THREE**

- (a) Explain the rationale behind applying the systems development life cycle (SDLC) during the development of information systems. (2 marks)
- (b) Outline **FOUR** methods for controlling unethical behaviour in ICT. (4 marks)
- (c) Bidii Company has established that its information is being electronically eavesdropped through their servers. Outline **FOUR** measures that the company could put in place to minimise this crime. (4 marks)
- (d) Outline **FOUR** factors that could influence the choice of an information system. (4 marks)
- (e) Explain **THREE** ways in which decision support systems are applied in an organisation. (6 marks)
- (Total: 20 marks)**

**QUESTION FOUR**

- (a) Give **TWO** reasons why an operating system must evolve over time. (4 marks)
- (b) Explain **THREE** impacts of e-commerce on customers. (6 marks)
- (c) (i) Explain **TWO** basic control measures that organisations could take to improve security on personal devices that employees connect to an organisation's network. (4 marks)
- (ii) Describe **THREE** Bring Your Own Device (BYOD) security best practices in an organisation. (6 marks)
- (Total: 20 marks)**

**QUESTION FIVE**

- (a) Highlight **FIVE** objectives of an information system design. (5 marks)
- (b) Explain **FIVE** possible reasons why an organisation may decide to replace an information system. (5 marks)
- (c) Enumerate **FIVE** reasons why memory management is required in a computer system. (5 marks)
- (d) Tujenge Ltd. is in the process of developing a new information system. A few managers are reluctant to embrace the new information system.

**Required:**

- (i) Identify the most suitable method of system changeover to apply in the above scenario. (1 mark)
- (ii) Outline **FOUR** advantages associated with the method identified in (d) (i) above. (4 marks)
- (Total: 20 marks)**

**QUESTION SIX**

- (a) XYZ Ltd. invited an ICT consultant to set up a computer network. The consultant linked all the computers to every other in the network. The nodes were connected to every other via a dedicated link so that every node features a point-to-point connection to the opposite node.

**Required:**

- (i) State the type of network topology on the above scenario. (1 mark)
- (ii) Highlight **FIVE** benefits associated with the topology. (5 marks)
- (b) Outline **FOUR** benefits associated with the use of pivot tables. (4 marks)
- (c) Evaluate **FIVE** restoration procedures that could be used to recover lost data. (5 marks)
- (d) Describe **FIVE** features of time-sharing operating system. (5 marks)
- (Total: 20 marks)**



**QUESTION SEVEN**

(a) ABC Enterprises Limited has commenced the process of integrating its current business operations with an ERP.

**Required:**

- (i) Outline **TWO** ways the ABC Enterprises Limited could benefit from the integration. (2 marks)
  - (ii) Highlight **THREE** challenges that could arise with such integration. (3 marks)
- (b) Citing **FOUR** reasons, justify why it is necessary for an organisation to sign a contract for the maintenance of computer hardware and software. (4 marks)
- (c) Complete the table below with appropriate name of the feature used in respective iOS and Android mobile operating systems:

Feature	iOS	Android
Developer		
Default browser		

(4 marks)

(d) Explain **SEVEN** ethical issues associated with increased dependency on information systems. (7 marks)

**(Total: 20 marks)**

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**INFORMATION COMMUNICATION TECHNOLOGY**

**WEDNESDAY: 7 December 2022. Afternoon Paper.**

**Time Allowed: 3 hours.**

**Answer any FIVE questions. ALL questions carry equal marks. Do NOT write anything on this paper.**

**QUESTION ONE**

- (a) State **FOUR** disadvantages of implementing information systems in an organisation. (4 marks)
- (b) Explain **FIVE** computer hardware components that are required when establishing a multimedia platform for e-commerce. (5 marks)
- (c) Using an example, explain how one would use “Goal seek” function in a business. (5 marks)
- (d) Explain **THREE** problems that could be encountered when using a computerised accounting software. (6 marks)

**(Total: 20 marks)**

**QUESTION TWO**

- (a) Outline the output products that result from the following systems development lifecycle stages:
- (i) System initiation. (2 marks)
  - (ii) Requirement analysis. (2 marks)
  - (iii) Systems design. (2 marks)
  - (iv) System integration. (2 marks)
  - (v) Systems testing. (2 marks)
- (b) Explain **TWO** limitations of using “Internet of things” (IoT) technology. (4 marks)
- (c) Explain **THREE** ways in which e-commerce could be used to optimise business opportunities in a large hotel. (6 marks)

**(Total: 20 marks)**

**QUESTION THREE**

- (a) (i) Differentiate between “Intranet” and “Extranet” as used in computer networks. (2 marks)
- (ii) Outline **FOUR** limitations of using “extranet” as a computer network in an organisation. (4 marks)
- (b) Organisations use different types of information systems.

**Required:**

- (i) List **THREE** types of information systems used by management. (3 marks)
- (ii) State the input, processes and output of information systems used by management. (3 marks)
- (iii) Explain **FOUR** enterprise information system characteristics that support unstructured decision making in organisations. (4 marks)
- (c) Veronica stored word processing files in a flash disk when working from a home desktop computer. She has realised that the files could no longer open at her place of work.

**Required:**

- Suggest **FOUR** reasons why some files may not open despite being visible on the flash disk. (4 marks)

**(Total: 20 marks)**

#### QUESTION FOUR

- (a) Differentiate between an “accounting package” and a “spreadsheet” based on the following features:
- (i) Report generation. (2 marks)
  - (ii) Audit trail. (2 marks)
- (b) Giving an example, explain the purpose of a mobile browser. (3 marks)
- (c) Explain how cloud computing supports e-commerce operations. (4 marks)
- (d) Explain **FOUR** social issues that may arise from the use of information systems. (4 marks)
- (e) Assess **FIVE** ways in which general ICT controls ensure the reliability of data generated by information systems. (5 marks)
- (Total: 20 marks)**

#### QUESTION FIVE

- (a) List **FOUR** types of software used to enable e-commerce business. (4 marks)
- (b) Highlight **FOUR** types of skills that a system analyst is required to have in order to effectively carry out his/her tasks. (4 marks)
- (c) Assess **FOUR** methods of controlling unethical behaviour in ICT. (4 marks)
- (d) Kibao Masetu, a system analyst, used the prototyping method to develop an information system for Petoka Ltd. Explain **FOUR** advantages of using this method. (8 marks)
- (Total: 20 marks)**

#### QUESTION SIX

- (a) (i) Highlight **TWO** features of a presentation program that are not available in a word processing program. (2 marks)
- (ii) Explain **THREE** contexts in which one would need to use a presentation program instead of a word processing program. (3 marks)
- (b) Enumerate **FIVE** reasons why an organisation might opt to use subcontractors for its information system needs. (5 marks)
- (c) Outline **FOUR** benefits of conducting a feasibility study during systems development. (4 marks)
- (d) Explain **THREE** factors to consider when choosing an operating system for a computer. (6 marks)
- (Total: 20 marks)**

#### QUESTION SEVEN

- (a) Explain **TWO** characteristics of a “peer to peer” computer network. (2 marks)
- (b) Highlight **TWO** legal issues and two ethical issues that may arise by use of information systems in a large-scale chain-based supermarket. (4 marks)
- (c) Suggest **TWO** strategies that a country could adopt to minimise the digital divide. (4 marks)
- (d) Simon has established an accounting firm in a busy town and employed seven assistants. However, the office space is not enough to accommodate all the staff and he has approached you for assistance.

#### Required:

- (i) Explain **THREE** modern ICT technologies that Simon could adopt to maximise employees’ productivity despite space constraints. (6 marks)
- (ii) Explain **TWO** possible disadvantages that Simon could face in adopting any of the technologies in (d) (i) above. (4 marks)
- (Total: 20 marks)**
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**INFORMATION COMMUNICATION TECHNOLOGY**

**WEDNESDAY: 3 August 2022. Afternoon paper.**

**Time Allowed: 3 hours.**

**Answer any FIVE questions. ALL questions carry equal marks. Do NOT write anything on this paper.**

**QUESTION ONE**

- (a) Suggest the ethical issues resulting from each of the following technological trends:
- (i) Doubling of computing power every eighteen (18) months. (2 marks)
  - (ii) Rapidly declining data storage costs. (2 marks)
  - (iii) Advances in networking and the internet. (2 marks)
- (b) Outline four characteristics of an open system. (4 marks)
- (c) Describe five moral dimensions of information systems. (5 marks)
- (d) Outline three measurers that you could include in your business continuity plan. (3 marks)
- (e) Explain the purpose of HLOOKUP as used in spreadsheet applications. (2 marks)
- (Total: 20 marks)**

**QUESTION TWO**

- (a) Giving an example in each case, differentiate between technological convergence and digital convergence as used in information technology communication. (4 marks)
- (b) XYZ Company Ltd. intends to develop an information system for its operations.  
Outline three strategies that the board could put in place to ensure the success of this project. (3 marks)
- (c) A manager in an entertaining industry intends to use data driven decision support system to design a new product.  
Outline three characteristics that the system should possess. (3 marks)
- (d) Suggest how a business could overcome each of the following e-commerce challenges.
- (i) Payment fraud. (2 marks)
  - (ii) Lack of visitors to the business website. (2 marks)
  - (iii) Theft of customer information. (2 marks)
- (e) Using an illustration, explain a pivot table as used in spreadsheet applications. (4 marks)
- (Total: 20 marks)**

**QUESTION THREE**

- (a) Formulate four questions that would enable you to conduct stakeholder analysis in system development. (4 marks)
- (b) Explain the bookmark feature in the context of the internet browsing. (2 marks)
- (c) Identify the type of cell referencing used in the spreadsheet expressions below:
- (i) =RANK(\$C\$3 : \$A\$10,0) (1 mark)
  - (ii) =SUM(A\$3 : A12) (1 mark)

- (d) Differentiate between sorting and filtering as used in worksheet data management. (2 marks)
- (e) Differentiate between proofreading and formatting a document as used in word processing. (2 marks)
- (f) A comprehensive backup plan is an essential tool for information security for the entire organisation. Not only should the data on the corporate servers be backed up, but individual computers used throughout the organisation should also be backed up.
- With reference to the above statement, discuss three components of a good backup plan. (6 marks)
- (g) Explain each of the following terms as used in internet:
- (i) Cookies. (1 mark)
- (ii) Blog. (1 mark)
- (Total: 20 marks)**

#### QUESTION FOUR

- (a) Citing three reasons, explain the importance of requirements gathering in system development. (3 marks)
- (b) Justify why an information system is considered as an intellectual property. (4 marks)
- (c) Explain the following features of a presentation package:
- (i) Transition effects. (1 mark)
- (ii) Speaker notes. (1 mark)
- (iii) Templates. (1 mark)
- (d) The organisation where you work intends to set up a local area network.
- Advise your management team on three hardware components required to accomplish the above task. (6 marks)
- (e) Outline four factors that could be used when selecting the best software development methodology for a specific project. (4 marks)
- (Total: 20 marks)**

#### QUESTION FIVE

- (a) Explain six reasons that would cause an information system project to fail during the implementation stage. (6 marks)
- (b) In each of the following, explain how a spreadsheet program is used:
- (i) Accounting. (2 marks)
- (ii) Forecasting. (2 marks)
- (c) Describe each of the following ethical issues in regard to computer technology:
- (i) Trade marks. (2 marks)
- (ii) Patent rights. (2 marks)
- (d) Most organisations align their information systems functions to their business strategic plan.
- Explain three benefits of this alignment. (6 marks)
- (Total: 20 marks)**

#### QUESTION SIX

- (a) An insurance company has decided that it no longer requires a physical Head Office. Its strategic aim is to become a virtual organisation. The company's auditors have concerns that information held by the virtual company would lack security.

**Required:**

Describe three measures that could be adopted to ensure the information in the insurance company remain secure. (6 marks)

- (b) Highlight three challenges of prosecuting ICT cases in court. (3 marks)
  - (c) Explain four application areas of cloud computing technology in a governance/accounting services firm. (4 marks)
  - (d) Identify five major management challenges to building and implementing information systems within an organisation. (5 marks)
  - (e) Outline two limitations of a touch screen as an input device. (2 marks)
- (Total: 20 marks)**

**QUESTION SEVEN**

- (a) Explain three legal issues involved when a person who is a resident in Kenya or your country wants to purchase a car offered for sale in Japan via a server in Hungary. Assume he is doing online purchase through e-Commerce. (3 marks)
  - (b) John Mbululu intends to implement cloud computing in his organisation but he has several concerns about cloud computing.  
  
Suggest three possible concerns for John Mbululu. (3 marks)
  - (c) One technique for gathering requirements during system development is the use of workshops.  
  
Discuss two advantages and two disadvantages of using workshops for requirements gathering. (4 marks)
  - (d) (i) To minimise resistance during system changeover, it is always necessary to involve users.  
  
Identify four different ways of involving users in the system development process. (4 marks)
  - (ii) Explain four approaches used in system changeover. (4 marks)
  - (iii) Explain the significance of an information centre in an organisation. (2 marks)
- (Total: 20 marks)**

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**INFORMATION COMMUNICATION TECHNOLOGY**

**WEDNESDAY: 6 April 2022. Afternoon paper.**

**Time Allowed: 3 hours.**

**Answer any FIVE questions. ALL questions carry equal marks. Do NOT write anything on this paper.**

**QUESTION ONE**

- (a) Explain five factors to consider when selecting a spreadsheet software. (5 marks)
- (b) Explain the following terms as applied to data security in e-commerce.
- (i) Privacy. (2 marks)
  - (ii) Integrity. (2 marks)
  - (iii) Authentication. (2 marks)
  - (iv) Non-repudiation. (2 marks)
- (c) (i) Outline two advantages of a professional code of ethics. (2 marks)
- (ii) Highlight two drawbacks of a professional code of ethics. (2 marks)
- (d) Examine three impacts of the internet on the education sector. (3 marks)
- (Total: 20 marks)**

**QUESTION TWO**

- (a) ABC Ltd. has opted to adopt a decision support system in the restructure of its business processes.
- Required:**
- (i) State three moral dimensions the company would consider from this move. (3 marks)
  - (ii) Outline three legal issues the company is likely to consider from this move. (3 marks)
- (b) Outline four possible causes of ICT project failure during system implementation. (4 marks)
- (c) (i) Explain the term "requirement elicitation" in relation to software development. (2 marks)
- (ii) Explain two "requirements Elicitation" techniques. (4 marks)
- (d) Highlight four features of a word processing of application package. (4 marks)
- (Total: 20 marks)**

**QUESTION THREE**

- (a) Discuss six reasons why a computer operating system is considered as a resource manager. (6 marks)
- (b) It is possible to lose a laptop, a mobile phone or a flash disk.
- Discuss four ways you could protect the data in your device to minimise data breach. (8 marks)
- (c) The Tangaza County Government intends to establish information centres.
- Explain two services that are likely to be offered at the centres. (4 marks)
- (d) State two challenges of using computerised accounting software in an organisation. (2 marks)
- (Total: 20 marks)**

#### QUESTION FOUR

- (a) Discuss the importance of information security policies. (5 marks)
- (b) Explain four reasons why an organisation may prefer to install a peer to peer networking model. (8 marks)
- (c) Outline seven indicators of a successful information system. (7 marks)
- (Total: 20 marks)**

#### QUESTION FIVE

- (a) (i) Explain the term “smart home” as used in the world of technology. (1 mark)
- (ii) Describe the importance of the “Internet of Things” in the smart home. (4 marks)
- (b) Explain three reasons why organisations pursue business process integration. (6 marks)
- (c) E-commerce customers should be able to find the product they are looking for quickly.  
Identify three best practice features for e-commerce websites. (3 marks)
- (d) Examine the significance of carrying out stakeholder analysis before undertaking an information systems project. (6 marks)
- (Total: 20 marks)**

#### QUESTION SIX

- (a) Discuss three benefits that are provided by mobile devices and applications for health care professionals. (6 marks)
- (b) (i) Explain the term “Uniform Resource Locator (URL)”. (2 marks)
- (ii) Using an example, explain the functions of each of the three key parts of a URL. (6 marks)
- (c) Assess three benefits of data backup and recovery procedures in a business. (6 marks)
- (Total: 20 marks)**

#### QUESTION SEVEN

- (a) The Internet of Things (IoT) has grown very rapidly and emerged to be a large part of how human beings live, communicate and conduct business. While web-enabled devices are turning our global rights into a great switched-on operating area, the implementation of IoT has several challenges.  
Discuss four security challenges that accompany IoT. (8 marks)
- (b) Identify four benefits of requirements gathering process in an information system development. (4 marks)
- (c) (i) Identify three challenges that businesses could face in adopting e-commerce. (3 marks)
- (ii) For each of the identified challenges in (c) (i) above, suggest a suitable solution that businesses could use to deal with it. (3 marks)
- (d) Summarise two common challenges encountered while using the system development life cycle (SDLC) model. (2 marks)
- (Total: 20 marks)**
- .....





**CPA FOUNDATION LEVEL**

**CS FOUNDATION LEVEL**

**INFORMATION COMMUNICATION TECHNOLOGY**

**FRIDAY: 17 December 2021.**

**Time Allowed: 3 hours.**

**Answer any FIVE questions.**

**ALL questions carry equal marks.**

**QUESTION ONE**

- (a) (i) Distinguish between the “e-wallets” and “bank transfers” e-commerce payment methods. (4 marks)
- (ii) In an era of identity theft and impersonation, security is among the primary concerns that restrains consumers from engaging in e-commerce.
- With respect to the above statement, examine three critical functions that are performed by a secure electronic transaction (SET) system. (6 marks)
- (b) (i) Explain five benefits of a strategic information system to a business. (5 marks)
- (ii) Highlight five benefits of aligning an organisation’s information communication technology (ICT) with its business strategy. (5 marks)
- (Total: 20 marks)**

**QUESTION TWO**

- (a) Discuss “sales and marketing systems” from a functional perspective. (5 marks)
- (b) Explain five moral dimensions of the information age in the context of information systems. (5 marks)
- (c) Alpha Limited is in the process of automating its operations.
- State four types of office automation systems that the company should adopt. (4 marks)
- (d) ABC Company intends to undertake an information systems project.
- Outline three challenges that the company is likely to face. (3 marks)
- (e) Explain three goals of a transaction processing system to an organisation. (3 marks)
- (Total: 20 marks)**

**QUESTION THREE**

- (a) (i) Outline three models used in classifying e-commerce applications. (3 marks)
- (ii) Explain two security challenges encountered in digital marketing of e-commerce. (4 marks)
- (b) Most companies have embraced the use of cloud technology though they are facing challenges in its use.
- Explain three such challenges. (3 marks)
- (c) Define each of the following terms as used in systems theory.
- (i) Functional decomposition. (2 marks)
- (ii) Functional cohesion. (2 marks)
- (iii) Feed-forward. (2 marks)
- (d) Describe four features of systems approach to information systems. (4 marks)
- (Total: 20 marks)**

#### QUESTION FOUR

- (a) Highlight four characteristics of Internet of Things (IoT). (4 marks)
- (b) Propose four duties of an information centre in an organisation. (4 marks)
- (c) ABC Transport company has opted to train its users before a new system is implemented.  
Suggest four benefits of training users before implementing a new information system. (4 marks)
- (d) Outline four advantages of using joint application design (JAD) technique in the design of an information system. (4 marks)
- (e) (i) Define "cell referencing" in the context of spreadsheet applications. (2 marks)
- (ii) Using an example, explain one type of cell referencing. (2 marks)
- (Total: 20 marks)**

#### QUESTION FIVE

- (a) Describe five challenges associated with the use of internet. (5 marks)
- (b) (i) Define the term "system" in the context of information systems. (1 mark)
- (ii) Distinguish between "physical systems" and "abstract systems". (2 marks)
- (c) (i) Describe the job of a Systems Analyst. (1 mark)
- (ii) Outline five tasks performed by a Systems Analyst. (5 marks)
- (d) Study the worksheet given below and answer the questions that follow:

	A	B	C	D	E	F	G
1	2	8	10	10	15	15	
2							
3							

Formula bar: `=SUMIF(A1:F1, "<=10")`

#### Required:

- (i) Interpret the function displayed in cell G1. (2 marks)
- (ii) State the value to be displayed in cell G1 on execution of the function. (2 marks)
- (e) Veronica would like to display the progress of her project to a panel of examiners using a presentation application.  
Outline two ways in which she could display her presentation in slide show mode. (2 marks)
- (Total: 20 marks)**

#### QUESTION SIX

- (a) Evaluate the impact of the internet on the following competitive forces:
- (i) Threat of new entrants. (2 marks)
- (ii) Suppliers' bargaining power. (2 marks)
- (iii) Customers' bargaining power. (2 marks)
- (iv) Substitute products or services. (2 marks)
- (b) Outline eight activities carried out during systems analysis. (8 marks)
- (c) Using an example, demonstrate how you would use a formula to link data between two worksheets. (4 marks)
- (Total: 20 marks)**

**QUESTION SEVEN**

- (a) Describe each of the following types of information systems as used in organisations:
- (i) Transaction processing system. (2 marks)
  - (ii) Management reporting system. (2 marks)
  - (iii) Decision support system. (2 marks)
- (b) XYZ Company Ltd. intends to implement a new information system.  
Explain three organisational factors that should be considered to ensure success of the system. (6 marks)
- (c) Explain three types of applications of Internet of Things (IoT) in the government sector. (6 marks)
- (d) Outline two features of a word processing program. (2 marks)
- (Total: 20 marks)**
- .....



**CPA FOUNDATION LEVEL**

**CS FOUNDATION LEVEL**

**PILOT PAPER**

**INFORMATION COMMUNICATION TECHNOLOGY**

**December 2021.**

**Time Allowed: 3 hours.**

**Answer any FIVE questions.**

**ALL questions carry equal marks.**

**QUESTION ONE**

(a) Consider the following data that exists in a spreadsheet format:

	A	B	C	D	E	F
1	ITEM NO	TITLE	SUPPLIED	COVER PRICE	DISCOUNT	EXTENDED
2	1	Shaka	65	679.00	135.8	
3	2	Science II	550	110.00	22	
4	3	P Maths	800	160.00	32	
5	4	Our World	320	350.000	70	
6	5	Maths III	430	640.00	128	
7	6	History	755	395	79	
8	7	History II	200	1500	300	
9	8	P History	490	900.00	180	
10	9	War IT	540	1150.0	230	
11	10	Daily Star	79	420.00	84	
12	11	The People	60	750	150	

**Required:**

- (i) Explain how you would format the column “COVER PRICE” to display values on the right-hand side with two decimal places. (2 marks)
- (ii) The “DISCOUNT” column needs to be calculated to display 20% discount if the supplied item cost Sh. 650 or higher, and 15% discount if an item costs less than Sh. 650. Explain how to achieve this. (2 marks)
- (iii) The “EXTENDED” column needs to contain the cost of the item purchases after the discounts have been calculated. Explain how to achieve this (2 marks)
- (b) By stating an example in each case, explain the following cloud computing models:
- (i) IaaS. (2 marks)
- (ii) SaaS. (2 marks)
- (c) Discuss the process of handling an interrupt that occurs during the execution of a program. (4 marks)
- (d) Explain the following terms as used in operating systems:
- (i) Thread. (2 marks)
- (ii) Internal fragmentation. (2 marks)
- (iii) Shell. (2 marks)

**(Total: 20 marks)**

**CA16 & CS16 Page 1  
Out of 3**

## QUESTION TWO

Patrick Baraza is seeking to automate the operations of his restaurant. For this purpose, he wishes to acquire computer hardware and software. He has come to you for advise regarding several aspects of this acquisition.

### Required:

- (a) Explain why it would be advantageous for Patrick Baraza to build rather than buy the computer software. (3 marks)
- (b) Distinguish between the following sets of terms as they are applied to computer hardware:
  - (i) PATA (IDE) and SATA hard disk interfaces. (2 marks)
  - (ii) On-board devices and peripheral devices. (2 marks)
- (c) Describe the function of any three input/output ports. (3 marks)
- (d) Discuss the factors that Baraza should consider before purchasing software. (5 marks)
- (e) Discuss why Patrick Baraza will need to secure his computer network. (5 marks)

**(Total: 20 marks)**

## QUESTION THREE

- (a) Discuss any four differences between first and second generation of programming languages. (4 marks)
- (b) Discuss three basic types of information systems. (6 marks)
- (c) Describe the challenges that organisations can face when implementing information systems. (5 marks)
- (d) List two internet service providers in your country and discuss the criteria that would be used to decide the appropriate one. (5 marks)

**(Total: 20 marks)**

## QUESTION FOUR

- (a) Explain the five components of an information system. (5 marks)
- (b) Discuss the process of gathering requirements for the purpose of developing an information system. (5 marks)
- (c) As a result of the COVID-19 pandemic, most organizations have deployed a work-from-home structure where employees exchange company communication and data over the Internet. Discuss the positive and negative impacts of this mode of working on organizations and their employees. (10 marks)

**(Total: 20 marks)**

## QUESTION FIVE

- (a) Explain the required qualities of each of the following people in the development of computer systems:
  - (i) System analyst. (4 marks)
  - (ii) Systems designer. (4 marks)
- (b) Mobile applications have in the recent years become very common. With reference to this, explain the following:
  - (i) Bluetooth. (2 marks)
  - (ii) WIFI. (2 marks)
  - (iii) VOIP. (2 marks)
- (c) Identify any four common problems the developers of mobile applications face. (4 marks)
- (d) List two mobile operating systems. (2 marks)

**(Total: 20 marks)**

**QUESTION SIX**

(a) Jipambe Beauty and Cosmetics has been operating since year 2013 and have expanded their business operations to the major cities where they have a chain of stores along major streets. The business manager is considering extending the business to an e-commerce platform.

**Required:**

- (i) Explain the business opportunities that could arise as a result of implementing an e-commerce venture. (4 marks)
  - (ii) Discuss the factors that Jipambe Beauty and Cosmetics could consider when designing an e-payment system. (5 marks)
  - (iii) Describe any three e-governance models. (6 marks)
- (b) Discuss any five ethical principles for judging conduct that could be used in conjunction with an ethical analysis in the use of ICT. (5 marks)

**(Total: 20 marks)**

**QUESTION SEVEN**

- (a) Discuss **FOUR** purposes of maintaining a backup in an organisation. (4 marks)
- (b) Explain the following types of backups:
  - (i) Full backup (2 marks)
  - (ii) Incremental backup (2 marks)
  - (iii) Differential backup. (2 marks)
- (c) Discuss four roles of accounting information systems to organisations. (4 marks)
- (d) Explain the following computer data terms:
  - (i) Byte. (2 marks)
  - (ii) File. (2 marks)
  - (iii) Database. (2 marks)

**(Total: 20 marks)**

.....

## TOPIC 1

### INTRODUCTION TO INFORMATION COMMUNICATION TECHNOLOGY (ICT)

#### QUESTION 1

##### November 2019 Question six b

Many people feel that information communication technology (ICT) has led to massive loss of jobs and retrenchment. The truth of the matter is that ICT has also led to the creation of new jobs in business and industry.

Required:

Identify four such jobs that have been created by ICT.

#### QUESTION 2

##### May 2019 Question Two (a)

- (i) Describe four distinguishing features between "low-level" and "high-level" programming languages.
- (ii) Identify two examples of high-level programming languages.

#### QUESTION 3

##### November 2018 Question One C

A firm operates an order system that co-ordinates orders, raw materials and inventories across its three branches. Currently, the orders are processed manually at each branch and communicated to the others over the phone. The management intends to computerise the operations of the firm.

Required:

Suggest three initial Information Communication Technology (ICT) professionals who might be required and their roles.

#### QUESTION 4

##### November 2018 Question B and C

Differentiate between a "webmaster" and a "webcaster".

Explain the following concepts in reference to information communication technology (ICT):

- (i) Mouse arrest.
- (ii) Mouse elbow.

#### QUESTION 5

##### May 2018 Question Seven C

Examine three functions of an Information Communication Technology (ICT) centre towards end-user computing.

#### QUESTION 6

##### November 2017 Question Six D

When a user logs onto a website, the user will access the website through a web portal.

##### Required:

- (i) Explain the term "web portal".
- (ii) Highlight two main functions of a network server.
- (iii) Cookies are created when a user logs on to the Internet.

Describe one reason why an organisation would wish to leave a cookie on a customer's computer and one reason why a customer might not wish to have the cookies stored on their computers.



## QUESTION 7

### November 2016 Question One A

Explain two important ergonomic design features that should be considered for the following workstation items:

- (i) Keyboard.
- (ii) Video display unit (VDU).
- (iii) The desk

## QUESTION 8

### November 2016 Question Seven B

Discuss the following systems theory concepts:

- i. Planning.
- ii. Control.
- iii. Feedback.
- iv. Feedforward.

## QUESTION 9

### May 2016 Question Two A

Suggest three reasons why it could be difficult to measure the benefits of information communication technology infrastructure in an organisation.

## QUESTION 10

### November 2015 Question Three A

Describe five physical classifications of computer configuration.

**QUESTION 11**

**Pilot paper 2015 Question One A and B**

Highlight six advantages of adopting ICT in business.

Outline four principal duties of the following ICT personnel:

- (i) ICT Manager.
- (ii) Computer Technician.

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## TOPIC 2

### OVERVIEW OF OPERATING SYSTEMS

(Questions adapted from ICT for ATD)

#### QUESTION 1

##### November 2019 Question Six B

Explain the following types of operating systems:

- i. Time sharing operating system.
- ii. Real time operating system

#### QUESTION 2

##### May 2018 Question Three C

Discuss five types of operating systems.

#### QUESTION 3

##### November 2017 Question Seven B

Explain four main functions of an operating system.

#### QUESTION 4

##### May 2017 Question Four B

Highlight four ways in which an operating system could be used to sort computer files.

#### QUESTION 5

**May 2016 Question Three A**

Distinguish between "cold booting" and "warm booting" as used in computer systems.

**QUESTION 6**

**November 2015 Question Three C**

Giving an example in each case, state three criteria of classifying operating systems.

**QUESTION 7**

**Pilot paper 2015 Question Seven B**

Outline four factors to consider in the acquisition of an operating system.

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## **TOPIC 3**

### **OVERVIEW OF APPLICATION PACKAGES**

**(Questions adapted from ICT for ATD)**

#### **QUESTION 1**

##### **November 2019 Question Four C**

Describe the following word processing features:

- i. Print preview.
- ii. Watermark.
- iii. Indent.

#### **QUESTION 2**

##### **November 2018 Question Four C**

Describe three documents created during mail merging in word processing

#### **QUESTION 3**

##### **November 2018 Question Five C**

Suggest four business processes that could be supported by spreadsheet software.

#### **QUESTION 4**

##### **November 2018 Question Seven A and B**

State six basic types of desktop applications.

With the aid of diagrams, illustrate three types of charts that might be used to analyse business trends in spreadsheets

### QUESTION 5

#### May 2018 Question Three A

Explain the term "conditional formatting" as used in spreadsheets.

Highlight two benefits of electronic spreadsheets over manual worksheets.

### QUESTION 6

#### November 2017 Question Five B

Outline five main features of a spreadsheet program.

### QUESTION 7

#### November 2016 Question Two A

Explain the meaning of the following terms as used in word processing software:

- i. Mail merge.
- ii. Thesaurus.
- iii. Spell checker.
- iv. Zoom

### QUESTION 8

#### May 2016 Question Six B

- i. List four types of paragraph alignment used in a presentation program.
- ii. State three ways of fitting overflowing word processing content on a single page.
- iii. Highlight five advantages of using word processor.

### QUESTION 9

#### May 2016 Question Five C, D and E

- a) Highlight four benefits of using social networking sites as a means of communication.
- b) Describe the three buses in a computer system unit.
- c) List four advantages of a presentation software.

### **QUESTION 10**

#### **November 2015 Question Six D and E**

Describe three advantages of computerised accounting software.

Differentiate between "absolute referencing" and "relative referencing" as used in a spreadsheet.

### **QUESTION 11**

#### **Pilot paper Question Four B**

Outline five features of an accounting software.

### **QUESTION 12**

#### **Pilot paper 2015 Question Five A**

Describe two features of each of the following application softwares:

- i. Word processing.
- ii. Spreadsheets.
- iii. Database package.

## TOPIC 4

### COMPUTER NETWORKS

#### QUESTION 1

##### November 2019 Question Three A and B

Discuss three factors that need to be considered when selecting a network topology.

Mega Company Ltd. has setup a voicemail service to support clients country-wide.

##### Required:

- (i) Identify three ways in which the company would benefit from such a service.
- (ii) Highlight three disadvantages of such a service to the customers.

#### QUESTION 2

##### November 2019 Question Six A and D

Suggest four benefits that might accrue to an organisation as a result of adopting cloud computing.

Examine three ways through which intranets could add business value to an organisation.

#### QUESTION 3

##### May 2019 Question Six A (i)

In the context of computing, differentiate the following terms:

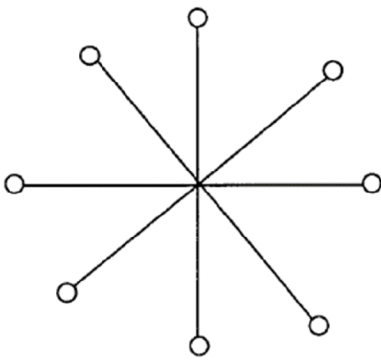
"Internet of everything" and "internet of things".

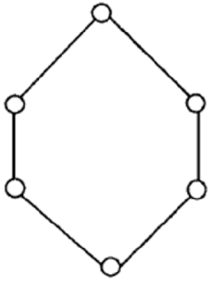
#### QUESTION 4

##### November 2018 Question Three A and E



Name the following network topologies:

(i)  (1 mark)

(ii)  (1 mark)

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Security in cloud computing is a major concern.

**Required:**

Analyse four attributes to be considered before deploying a particular resource to the cloud.

**QUESTION 5**

**November 2018 Question Six C**

Distinguish between the following terms as used in data transmission:

- (i) "Simplex" and "full duplex".
- (ii) "Synchronous" and "asynchronous".

**QUESTION 6**

**November 2018 Question Seven B and C**

Distinguish between "Wi-Fi" and "Wimax" technology as used in communications.

Explain three roles of Transmission Control Protocol/Internet Protocol (TCP/IP) in computer networks.

**QUESTION 7**

**May 2018 Question Two A (i)**

Differentiate between the following terminologies as used in management information systems:

Green computing" and "cloud computing

**QUESTION 8**

**May 2018 Question Three A**

Using examples, analyse three benefits of telecommunication networks in business

**QUESTION 9**

**May 2018 Question Four C**

Ufanisi Ltd. is a newly established organisation: The company is planning to network all the computers and has sought advice from the IT Consultant. The Consultant has • advised Ufanisi Ltd. to set up a peer-to-peer network and later on convert to client-server network.

Required:

Justify the advice given by the IT Consultant.

**QUESTION 10**

**May 2018 Question Seven A and B**

Distinguish between "a multiplexer" and "a front-end processor".

Analyse four major characteristics of a local area network.

### **QUESTION 11**

#### **May 2017 Question One A**

Describe the following concepts as used in information systems:

- (i) Software-as-a-service (SAGS).
- (ii) Open source software (OSS).
- (iii) Total cost of ownership (TCO).

### **QUESTION 12**

#### **May 2017 Question Five A**

The ability to exchange data and communicate efficiently is the main purpose of computer networking. However, we have to consider beyond these points to evaluate the feasibility of networking.

#### **Required:**

Analyse three advantages and three disadvantages of computer networking.

### **QUESTION 13**

#### **May 2017 Question Six C**

Distinguish between "transmission control protocol" and "internet protocol" as used in data communication networks.

### **QUESTION 14**

#### **November 2016 Question Two B (i)**

Distinguish between the following terms as used in management information systems:

"Internet of Things (IoT)" and "Internet of Everything (IoE)".

### **QUESTION 15**

#### **November 2016 Question Two C**

The management of Kwachu Ltd. intends to acquire equipment for a local area network.

#### **Required:**

- i. Suggest four types of equipment that the company might acquire for a local area network.
- ii. Analyse six reasons why the management might be compelled to use direct procurement method to acquire the local area network equipment.

### **QUESTION 16**

#### **November 2016 Question Six A and B**

Highlight four functions of a network operating system.

Suggest three benefits of using voice over internet protocol (VOIP).

### **QUESTION 17**

#### **November 2016 Question Seven A**

Highlight four risks associated with cloud computing.

### **QUESTION 18**

#### **May 2016 Question Four A (ii) and B (i)**

(a) (ii) In a computer network, noise in signal is the random disturbance or fluctuation in analogue or digital signals.

Explain four classifications of noise.

(b) (i) Demonstrate the key difference between "backward error correction" and "forward error correction" as used in computer networks.

### **QUESTION 19**

#### **November 2015 Question One B**

Describe five components of data communication.

Highlight four factors which affect the performance of a computer network

### **QUESTION 20**

#### **November 2015 Question Three B**

Evaluate six advantages and three disadvantages of a distributed computer system.

### **QUESTION 21**

#### **November 2015 Question Seven B**

Examine five types of data processing applications in the context of cloud computing.

### **QUESTION 22**

#### **Pilot paper 2015 Question Three A**

Highlight five business opportunities that can be harnessed using cloud computing by an organisation.

### **QUESTION 23**

#### **Pilot paper 2015 Question Four C**

Examine two vulnerabilities which an organisation may be exposed to after commissioning a computer network with an Internet connection.

**QUESTION 24**

**Pilot paper 2015 Question Seven B, C and D (ii)**

(b) Outline four common uses of an extranet in an organisation.

(c) Mobile computing devices are increasingly being used in businesses today because of their convenient portability.

Required:

State four ways of minimising theft of mobile computing devices when using them outdoor.

(d)

(ii) Outline three ways in which 'internet of things' is benefiting small and medium sized businesses

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**TOPIC 5**  
**THE INTERNET**  
**(Adapted from ICT for ATD)**

**QUESTION 1**

**November 2019 Question Five C**

Outline six disadvantages associated with the use of internet.

**QUESTION 2**

**May 2019 Question Five C**

Explain the functions supported by the following internet services:

- (i) Newsgroups.
- (ii) Telnet

**QUESTION 3**

**May 2019 Question Seven B**

The internet has offered both benefits and challenges to businesses and their customers.

**Required:**

- i. Describe two business activities which could be done on the internet.
- ii. Highlight three positive impacts of internet technology to the business sector in your country.

**QUESTION 4**

**November 2018 Question Three C**

Define the term "web browser".

State two commonly used web browsers.

### **QUESTION 5**

#### **May 2018 Question Six C**

Explain the following web-related terms:

- i. Web browser.
- ii. Hyperlink.
- iii. Hypertext document

### **QUESTION 6**

#### **November 2016 Question One B**

Highlight four disadvantages of using the internet as a research tool.

### **QUESTION 7**

#### **May 2016 Question One B**

Explain three benefits that might accrue to a business from using the internet.

### **QUESTION 8**

#### **November 2015 Question Six B**

Explain three roles of Internet service providers (ISPs).

### **QUESTION 9**

#### **Pilot Paper 2015 Question Five D**

Examine three ways in which the internet can be useful to a business.



**QUESTION 10**

**Pilot paper 2015 Question Six A**

Distinguish between the following terms:

- (i) Internet and intranet.
- (ii) Internet browser and protocol

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## TOPIC 6

### DATA SECURITY

#### QUESTION 1

##### November 2019 Question One B

Examine how the following security risks affect companies that have established e-commerce operations:

- i. Creation of counterfeit sites.
- ii. Malicious alterations to websites.
- iii. Unauthorised access to sensitive information.
- iv. Denial of service.

#### QUESTION 2

##### November 2019 Question Five A

Assess six logical controls which could be instituted by a business to secure it from losing money through electronic fraud.

#### QUESTION 3

##### May 2019 Question Four C

Cherry Wanja has been assigned the task of preparing a contingency and disaster recovery plan for technological and automated systems of the organisation she works for.

##### Required:

Outline two purposes of the plan during the following moments of a disaster:

- (i) Before.

- (ii) During.
- (iii) After.

#### **QUESTION 4**

##### **May 2019 Question Seven B**

When assessing risks facing an information system, one would need to consider the impact, likelihood and urgency.

With regard to the above statement, explain:

- i. Impact.
- ii. Likelihood.
- iii. Urgency.

#### **QUESTION 5**

##### **November 2018 Question Four B and C**

Suggest five reasons why voice input could be used as a reliable form of security in management information systems.

Outline three examples of computer crimes in each of the following categories:

- i. Crimes that target computer networks directly.
- ii. Crimes facilitated by computer networks.

#### **QUESTION 6**

##### **November 2018 Question Five A (ii) and (iii)**

Safeland Ltd. is a transport and logistics company operating in the East African region. The management of Safeland Ltd. has decided that the company no longer requires a head office and its strategic aim is to become a virtual organisation.

**Required:**

Describe three measures that could be adopted to ensure that the information held by the organisation remains secure.

Analyse five benefits of having a disaster recovery plan implemented for management information system in Safeland Ltd.

**QUESTION 7**

**May 2018 Question Two A (ii)**

Differentiate between the following terminologies as used in management information systems:

"Loss of infrastructure" and "denial of service".

**QUESTION 8**

**May 2018 Question Four A and B**

The ICT Manager of Usalama Ltd. is concerned about the security of the organisation's information. He has proposed that all the current passwords be changed into more secure passwords.

Required:

Highlight six guidelines that must be followed to ensure that the new passwords cannot be easily cracked.

You have been asked to prepare a document on disaster recovery.

**Required:**

In the context of Information Communication Technology (ICT) risk management, propose three items that you would include in the document.

## QUESTION 9

### May 2018 Question Five C

Suggest four reasons why it is necessary for an organisation to backup its data

## QUESTION 10

### May 2018 Question Six D

Debrix Company has installed a biometric system to control access to its offices.

Required:

Highlight examples of biometric data that could be used in such a system.

## QUESTION 11

### November 2017 Question One D

A fast growing organisation has information systems that have so far not failed. Before increasing its reliance on information communication technology (ICT), the organisation's insurer has advised the organisation to carry out a risk analysis and then plan what to do.

Required:

- (i) Explain what is meant by "risk analysis".
- (ii) Outline four criteria that could be used to select a disaster contingency plan.

## QUESTION 12

### November 2017 Question Three A

The security of information technology and the security of data are the two major aspects of information systems security.

Required:

Explain what each type of security above entails.

- (ii) Summarise six ways of guaranteeing information security in an organisation.

### **QUESTION 13**

#### **November 2017 Question Five B**

The top management of your company has decided that they no longer require a head office and their strategic aim is to become a virtual organisation.

However, the company's auditors have raised concerns that information held in the virtual company would lack security.

Required:

Examine five measures that the management could adopt to ensure that the information held in the virtual platform is secure.

### **QUESTION 14**

#### **November 2017 Question Seven A**

With the aid of an example, distinguish between "project risk" and "business risk".

Identify two factors used in evaluating risk exposure and how each of these factors might be assessed qualitatively.

### **QUESTION 15**

#### **May 2017 Question Three B**

There are many types of actors who pose risks to businesses via information communication technology (ICT) assets.

Required:

Examine five types of actors who could pose risks to an organisation through its ICT assets.

### QUESTION 16

#### May 2017 Question Six D

Explain the concept of "disaster recovery planning" as used in information communication technology risk management.

### QUESTION 17

#### May 2017 Question Seven C

Describe the main components that should be included in the organisation's framework report for improving systems security and control

### QUESTION 18

#### November 2016 Question One B

Every organisation needs controls that ensure protection of the organisation's assets, accuracy and reliability of its records and operational adherence to management standards.

Required!

Distinguish between the following types of controls used in a computerised information system:

- (i) "General controls" and "application controls".
- (ii) "Administrative controls" and "data security controls".
- (iii) "Input controls" and "output controls".

### QUESTION 19

#### November 2016 Question Three B

Information communication technology (ICT) risk actions are of two types, that is, "avoidance actions" and "mitigation actions".

**Required:**

Citing examples where each of the risk actions might be employed, evaluate the relationship between avoidance actions and mitigation actions.

## QUESTION 20

### November 2016 Question Six C and D

In securing an information system you seek to safeguard against loss of confidentiality, integrity and availability.

Required:

Explain the following terms:

- (1) Loss of confidentiality.
- (ii) Loss of integrity.
- (iii) Loss of availability

Businesses have come to rely on email as a means of communication.

Required:

Explain how email security packages protect against spam

## QUESTION 21

### May 2016 Question One B

Explain why the use of ICT risk management techniques is becoming increasingly important in managing information systems.

## QUESTION 22

### November 2015 Question Four A

Analyse two major aspects of information system security.



Explain three aspects of guaranteeing effective information system security

### QUESTION 23

#### November 2015 Question Six B

Enumerate six significant information systems security challenges to a business organisation.

Highlight three capabilities of authentication that could make it overcome information systems security threats.

### QUESTION 24

#### Pilot paper 2015 Question Three C

Explain sequentially the steps taken during the information systems risk assessment process.

### QUESTION 25

#### Pilot paper 2015 Question Six A

Corporate governance in information and communication technology (ICT) requires that management plan, control, evaluate and monitor current and future use of information systems.

In light of the above statement:

- i. Highlight four specific objectives that must be met in order to provide reasonable assurance of the security of information systems.
- ii. Explain four ways in which management policy and controls can be used to safeguard information systems in an organisation.

## TOPIC 7

### INFORMATION SYSTEMS IN AN ENTERPRISE

#### November 2019 Question Four A, B and C

##### QUESTION 1

(a) Highlight four factors that need to be considered when selecting a management information system.

(b) An organisation is intending to install an enterprise resource planning system (ERP).

Explaining the meaning of ERP, highlight four benefits to be derived by the organisation from the use of ERP.

(c) Nyasake Ltd. acquired an off-the-shelf package from "not-a-very-well-known" vendor. The package became problematic only after six months from the time of acquisition. The management of Nyasake Ltd. invited the vendor from whom they procured the package and demanded that the vendor quickly do the fixes for normal operations to resume. After the vendor reported to have completed the fixes, operations resumed without any tests being performed. Two weeks later, operations nearly came to a standstill because of the software issues.

Required:

Examine five measures that should have been put in place before acquisition of the above package.

##### QUESTION 2

#### May 2019 Question Four A

The following are decisions that are taken in a certain hierarchically managed company:

- i. The payment period is to be extended by five days to improve cash flows.
- ii. Specified details on invoices must be checked and stamped to show that the checks have been carried out fully and satisfactorily.
- iii. Suppliers who supply over Sh.500,000 worth of goods per annum join the company's electronic data interchange network.

Required:

In each case, explain the type of the decision made by the managers in the hierarchy.

### QUESTION 3

#### May 2019 Question Five C

Asha Nzale has a hardware shop and lately, she is finding the task of managing daily sales in the shop overwhelming.

Required:

- i. Propose a retail system that she should acquire.
- ii. Apart from enhancing the speed of operation, summarise five other benefits that Asha will gain from using such a system.

### QUESTION 4

#### November 2018 Question One A

Describe each of the following changes brought by implementing information systems in organisations:

- (i) Paradigm shift.
- (ii) Rationalisation

### QUESTION 5

#### November 2018 Question Two C

Highlight two characteristics of a good management information system

### QUESTION 6

#### November 2018 Question Five A

Safeland Ltd. is a transport and logistics company operating in the East African region. The management of Safeland Ltd. has decided that the company no longer requires a head office and its strategic aim is to become a virtual organisation.

Required:

Assess three ways in which an office information system (OIS) could aid in supporting management decision making in the virtual organisation.

### QUESTION 7

#### November 2018 Question Seven D and E

Outline five functions of a database administrator in an information system.

Describe the following terms in the context of information systems:

- (i) Office automation.
- (ii) Vertically integrated information system.

### QUESTION 8

#### May 2018 Question Three C and D

Discuss six essential accounting information systems used in business.

Explain three roles of enterprise collaboration systems in business.

### QUESTION 9

#### May 2018 Question Five A and D

(a) Explain three roles of management during the development of an information system in an organisation.

(d) (i) Explain the term "database mirroring" as used in information systems.

(ii) Evaluate three benefits an organisation might derive from database mirroring

## QUESTION 10

### May 2018 Question Six B and C

Describe the nature of each of the following reports generated by a Management Information System (MIS):

- (i) Push reports.
- (ii) Exception reports.

Lynnet Wanjiru has been presented with the following features of an information system:

- High security.
- Interactive.
- Network connections, email access, face book.
- Access to internal and external data.
- Modelling and analysis. capability.
- Drill up and down.
- What-if analysis.
- Ad hoc reports.

Required:

- I. Identify the information system described above.
- II. Suggest the level in management where the system identified in (c)(i) above is applied.
- III. (iii) Highlight five benefits of the system identified in (c)(i) above to an organisation.

## QUESTION 11

### November 2017 Question One B

The management information system (MIS) in an organisation uses external and internal sources of information.

Required:

Describe four sources of the external information used in a management information system (MIS).

## QUESTION 12

### November 2017 Question Two A and D

Outline three reasons that could prompt the creation of a new information system in an organisation.

The manager of Bidii Company complained that the company's information system continually failed to provide the correct level of information.

Required:

Suggest four possible reasons why the system continually failed.

## QUESTION 13

### November 2017 Question Three B and C

Outline four categories of information from the perspective of a computer application  
Itemise how information systems could help participants in supply chain management.

## QUESTION 14

### November 2017 Question Five A

Outline six broad categories of management information systems (MIS).

## QUESTION 15

### November 2017 Question Six A

Discuss six ways that could be used to classify decision support systems (DSS)(

## QUESTION 16

### May 2017 Question One B and C

Distinguish between the following types of information:

- (i) "Knowledge information" and "organisational information".
- (ii) "Planning information" and "control information".

Summarise three business benefits and three technical benefits that could accrue to a university from implementing an enterprise resource planning (ERP) system.

### QUESTION 17

#### May 2017 Question Four C

Discuss six reasons why many organisations have invested heavily in information systems.

### QUESTION 18

#### May 2017 Question Five C

Many organisations are today incorporating information systems plans into their business planning at all levels.

Required:

- i. Explain the term "information systems planning" as used in management information systems.
- ii. Outline four steps involved in information systems planning process.

### QUESTION 19

#### May 2017 Question Six B

Outline two reasons for outsourcing information systems by an organisation under each of the following categories:

- i. Financial reasons.
- ii. Technical reasons.
- iii. Political reasons.

## QUESTION 20

### November 2016 Question One C

Outline four examples of information systems based on each of the following criteria:

- (i) Functional perspective.
- (ii) Constituency perspective.

## QUESTION 21

### November 2016 Question Two A (ii)

Distinguish between the following terms as used in management information systems:

"Qualitative information" and "quantitative information"

## QUESTION 22

### November 2016 Question Three E

Describe four types of information systems that could be used for enterprise-wide knowledge management and their value to a business.

## QUESTION 23

### November 2016 Question Four B and C

To deliver genuine benefits, information systems must be built with a clear understanding of the nature of the organisation in which they will be used.

Required:

Identify six organisational factors to consider when planning a new information system.

Describe each of the following mechanisms as used in management information systems:

- (i) Early warning mechanism.
- (ii) Exception principle.



**QUESTION 24**

**November 2016 Question Six E**

Identify four questions that need to be asked when undertaking analysis of an information system.

**QUESTION 25**

**May 2016 Question Four B (iii)**

List three examples of enterprise systems used in business organisations

**QUESTION 26**

**November 2015 Question Two**

Distinguish between "information system" and "management information system"

Discuss six ways of classifying management information systems by application.

Outline four functionalities accomplished by a complete business information system.

**QUESTION 27**

**November 2015 Three C**

Outline six services provided by enterprise applications

**QUESTION 28**

**September 2015 Question 5**

- a) Enumerate six characteristics of a well-designed computerised management information system.
- b) Describe four types of decision support systems.
- c) In management information system (MIS), information is recognised as a major resource. If this resource is to be well managed, it calls upon the management to

plan for it and control it so that the information becomes a vital resource for the system.

Required:

Identify six challenges which could affect the effectiveness of implementation of a management information system

## QUESTION 29

### Pilot paper 2015 Question Two C

Highlight four types of reports produced by information systems in an organisation.

## QUESTION 30

### Pilot paper 2015 Question Three B (i)

Transaction Processing Systems (TPS) are the backbone of any organisation's information system.

Required:

- i. State four reasons why business managers must be conversant with transaction processing systems.
- ii. Outline the transaction processing cycle.

## QUESTION 31

### Pilot paper 2015 Question Six B

Distinguish between a "decision support system" and an "executive information system".

## QUESTION 32

### Pilot paper 2015 Question Seven D (i)

Identify five characteristics which might indicate that an information system has reached the end of its economic life.

## TOPIC 8

### E-COMMERCE

#### QUESTION 1

##### November 2017 Question Seven B

Explain the following terms as used in e-commerce:

- (i) Digital marketing.
- (ii) Digital goods.

#### QUESTION 2

##### May 2019 Question One A and B

- (a) Describe five major activities involved in conducting Business-to-Consumer (B2C) e-commerce.  
(5 marks)
- (b) Examine five roles of the government in the development of e-commerce in developing countries.

#### QUESTION 3

##### May 2019 Question Seven A

Highlight six reasons why online marketing is preferred over offline marketing..

Outline two limitations of online marketing

#### QUESTION 4

##### November 2018 Question Seven A

Discuss three types of Business to Consumer (B2C) e-commerce business models.

## QUESTION 5

### May 2018 Question One

- (a) Distinguish between the following types of e-commerce:
- (i) "Social e-commerce" and "local e-commerce".
  - (ii) "Mobile e-commerce" and "consumer-to-consumer e-commerce".
- (b) Citing four unique features of e-commerce, explain the significance of each feature to a business.
- (c) Describe the term "c-distributor" as used in e-commerce.
- (d) Distinguish between "digital cash" and "virtual currency" as used in digital payments.

## QUESTION 6

### December 2017 Question One A

In a "digital firm", any piece of information required to support key business decisions is available anytime and anywhere in the firm.

Required:

Identify four major systems that could define a digital firm.

## QUESTION 7

### December 2017 Question Two C

Distinguish between "pure" and "partial" types of c-commerce.

## QUESTION 8

### December 2017 Question Five D

Outline five customer-related factors that are important in the success of any e-commerce venture.

## QUESTION 9

### December 2017 Question Seven C and D

Karibu hotels is considering implementing m-commerce.

- (i) Explain the term 'm-commerce'.
- (ii) Indicate two reasons why Karibu Hotels would consider using m-commerce.

Online auction sites allow businesses to register as virtual shops and be incorporated in their sites.

Highlight four reasons why a business would like to register as a virtual shop.

## QUESTION 10

### May 2017 Question Three A

Differentiate between "e-commerce" and "traditional commerce".

## QUESTION 11

### May 2017 Question Seven B

Collaboration and communication systems enable employees to interact with each other, managers, vendors and customers.

Required:

Analyse six types of collaboration and communication systems that could be used by an e-business.

## QUESTION 12

### December 2016 Question Three C and D

- (c) (i) Identify two issues that could be addressed when building an e-commerce presence.
- (ii) Explain three ways in which e-commerce has affected business-to-business transactions.
- (d) Examine the role of mobile commerce in business activities.

## QUESTION 13

May 2016 Question One A (i)

Distinguish between the following e-commerce business models:

- i. "E-tailer" and "market creator".
- ii. "Content provider" and "-service provider".

## QUESTION 14

### May 2016 Question Seven B and C

Identify the unique features of the following:

- (i) Digital markets.
- (ii) Digital goods.

A firm's revenue model describes how the firm will earn revenue, generate profits, and produce a superior return on investment.

Required:

Discuss six e-commerce revenue models

## QUESTION 15

**November 2015 Question One A**

- (a) (i) Outline six basic types of e-commerce.
- (ii) Identify five disadvantages of e-commerce.

**QUESTION 16**

**November 2015 Question Seven A**

- (a) (i) Citing an example in each case, identify five e-commerce business models which involve transactions between the government and other entities.  
(10 marks)
- (ii) Outline five key players in the credit card payment process

**QUESTION 17**

**Pilot paper 2015 Question Four A (ii) and B**

Describe three techniques that can be used to profile online shoppers for purposes of business forecasting.

Enumerate four business opportunities in e-commerce.

## TOPIC 9

### MOBILE DEVICES AND APPLICATIONS

**(Not yet tested)**

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## TOPIC 10

### SYSTEMS ANALYSIS AND DESIGN

#### QUESTION 1

##### November 2019 Question One A

You are the information systems manager for a new accounting software system that will provide monthly income statements to twenty local computer dealers.

Required:

- (i) Explain three roles of a systems architect during the implementation of the above system.
- (ii) Identify three types of processing controls in the accounting software system
- (iii) Explain three ways the system could be used for gaining business competitive advantage.

Evaluate three challenges that are likely to be encountered during the implementation process.

#### QUESTION 2

##### November 2019 Question Three C

Describe four barriers against implementation of management information systems in organisations.

#### QUESTION 3

##### November 2019 Question Five B

Highlight two activities carried out at each of the following system development stages:

- (i) System analysis.
- (ii) System design.

(iii) System implementation

#### QUESTION 4

##### May 2019 Question One D

Identify six factors that might enhance successful system development.

#### QUESTION 5

##### May 2019 Question Three A

Explain two applications of object oriented programming languages in information systems development.

#### QUESTION 6

##### May 2019 Question Six A (iii) and B

In the context of computing, differentiate the following terms:

"Closed system" and "open system".

Describe four types of feasibility studies that could be conducted during systems development life cycle (SDLC).

#### QUESTION 7

##### November 2018 Question One B

Explain each of the following information system maintenance techniques:

- (i) Patching.
- (ii) Configuration management.

#### QUESTION 8

**November 2018 Question Two B**

Explain four reasons why models are used in software systems development.

**QUESTION 9**

**November 2018 Question Three D**

Distinguish between "supply chain planning systems" and "supply chain execution systems".

**QUESTION 10**

**November 2018 Question Four D**

Examine four reasons why system maintenance phase is necessary in system development life cycle (SDLC).

**QUESTION 11**

**November 2018 Question Six B**

Describe four suitable circumstances under which Rapid Application Development (RAD) approach might be used during system development.

**QUESTION 12**

**May 2018 Question Two B**

Describe three problems of the systems development lifecycle (SDLC) model of developing information systems.

**QUESTION 13**

**November 2017 Question Four A and C**

Outline six activities that could be undertaken in the development of a management information system for an organisation.

Furaha is a members only club in the suburbs of a city. It boasts of a bar and restaurant, golf course, a tennis court and a swimming pool among its facilities. Members can take golf or tennis lessons, enroll in weekly scheduled events, participate in tournaments and invite guests for certain activities. The club is managed by a board of directors that is responsible for hiring staff and monitoring the budget.

Required:

- (i) Identify two of the club's subsystems.
- (ii) Suggest two system interfaces in the club's operations.

#### QUESTION 14

##### May 2017 Question Two B

Application software can be developed and modified by an organisation's own non-programming staff. This approach to software development is known as end-user development.

Required:

Highlight six benefits of end-user development.

#### QUESTION 15

##### May 2017 Question Three C

Prototyping is the process of building an experimental system quickly and cheaply for demonstration and evaluation so that end users can better define information requirements.

Required:

Identify four steps of developing a prototype.

**QUESTION 16**

**May 2017 Question Five B**

Distinguish between "entropy" and "symbiosis" as used in general systems theory.

**QUESTION 17**

**May 2017 Question Six A**

Paul Ndege, an information systems developer, prefers to use web-based information systems project management tools over the conventional methods.

Required:

Explain six reasons for the above preference by Paul Ndege.

**QUESTION 18**

**May 2016 Question One D**

Differentiate between a "boundary" and a "constraint" as used in system theory

**QUESTION 19**

**May 2016 Question Five A**

Explain the meaning of the following concepts as used in system theory:

- (i) Sub-optimisation.
- (ii) Decoupling.
- (iii) Equifinality

**QUESTION 20**

**May 2016 Question Six A and C**

Public domain software is a software that is not protected by copyright and thus may be duplicated by anyone at will.

Explain three reasons behind developing and distributing public domain software.

One of the emerging trends in information technology which has strategic implications for business firms is the move towards open systems.

Required:

- i. Explain the meaning of the term "open system concept".
- ii. Suggest three implications of the move towards open systems for organisations that have already invested in proprietary information systems

### **QUESTION 21**

#### **May 2016 Question Seven A**

The introduction of information systems in organisations may lead to changes in work processes that may require re-training.

Suggest three areas of training that might be required by the following personnel:

- (i) Senior managers.
- (ii) Users of the new system

### **QUESTION 22**

#### **Pilot paper 2015 Question Two B**

Distinguish between an "evolutionary prototype" and an "exploratory prototype" as used in prototyping.

### **QUESTION 23**

#### **Pilot paper 2015 Question Five D**

Evaluate four key activities undertaken in the following phases of system development:

- (i) System design phase.
- (ii) System implementation phase.

**QUESTION 24**

**Pilot paper 2015 Question Six C**

Highlight four benefits of the waterfall methodology of system development.

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## TOPIC 11

### LEGAL, ETHICAL AND SOCIAL ISSUES IN INFORMATION SYSTEMS

#### QUESTION 1

##### November 2019 Question Two B

Describe five ethical principles of information management.

#### QUESTION 2

##### November 2019 Question Six C

Explain three challenges of implementing copyrights for digital products on the internet.

#### QUESTION 3

##### November 2019 Question Seven D

Explain the term "socio-technical systems" as used in management information systems.

Describe three characteristics of socio-technical systems.

#### QUESTION 4

##### May 2019 Question Four B

Highlight four characteristics of an information society.

Explain two challenges faced when implementing information society

#### QUESTION 5



**November 2018 Question One D**

Copyright laws grant management information systems developers the exclusive privilege to produce and distribute their creative works.

Highlight six challenges that are posed to these laws by information communication technology (ICT).

**QUESTION 6**

**November 2018 Question Two A**

New Generation Ltd. a telecommunication company, allows its customers to pay their bills online. James Okelo, one of their customers, discovered that he could gain access to a directory on the New Generation Ltd.'s server that contains personal details of a large number of customers.

James Okelo contacted New Generation Ltd. and suggested that they should address this problem and send letters to all New Generation Ltd.'s customers informing them that their credit card details might have been accessed via the website. New Generation Ltd. refused to send out the letters to the customers. James Okelo then contacted a national newspaper to make his discovery public.

Required:

Evaluate five legal, ethical and professional issues that might arise from the situation described above.

**QUESTION 7**

**May 2018 Question Seven E**

Suggest six measures that employers could put in place to deal with internet abuse at the workplace.

**QUESTION 8**

**November 2017 Question Seven B**

Analyse four key technology matters that could raise ethical issues.

### QUESTION 9

#### May 2016 Question One C

Describe the following ethical terms as used in an information society:

- i. Responsibility.
- ii. Accountability.
- iii. Liability

### QUESTION 10

#### May 2016 Question Three B

Evaluate ten internet abuses common in a modern workplace.

### QUESTION 11

#### May 2016 Question Six B

Distinguish between the following forms of computer crimes and abuses:

- i. Jamming and spamming.
- ii. Cyber bullying and flaming.
- iii. Sniffing and spoofing.

### QUESTION 12

#### Pilot paper 2015 Question One C

Explain the meaning of the following ethical concepts:

- i. Business ethics.
- ii. Technology ethics.

**QUESTION 13**

**Pilot paper 2015 Question Five A**

Explain four legal, social and ethical issues raised by information systems.

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