



CPA PART II SECTION 4

CS PART II SECTION 4

CCP PART II SECTION 4

MANAGEMENT INFORMATION SYSTEMS

MONDAY: 30 November 2020.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

QUESTION ONE

- (a) Computer Aided Software Engineering (CASE) tools provide automated assistance for software development.

Required:

- (i) With reference to the above statement, describe three software development activities which may be supported by CASE tools. (3 marks)
- (ii) Examine three benefits a team of software engineers may derive from the use of CASE tools. (6 marks)
- (b) (i) Explain the meaning of the term "Information Technology (IT) Governance". (2 marks)
- (ii) Summarise four key decisions that necessiate Information Technology (IT) governance in organisations. (4 marks)
- (iii) Highlight five areas of focus for IT governance in organisations. (5 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Internet of things refers to the rapidly growing network of connected objects that are able to collect and exchange data using embedded sensors.
In light of the above statement, discuss four applications of the internet of things. (8 marks)
- (b) Mobile computing constitutes a new paradigm of computing which is expected to revolutionise the way computers are used.
Evaluate four challenges of mobile computing. (8 marks)
- (c) Describe four benefits of real time processing. (4 marks)

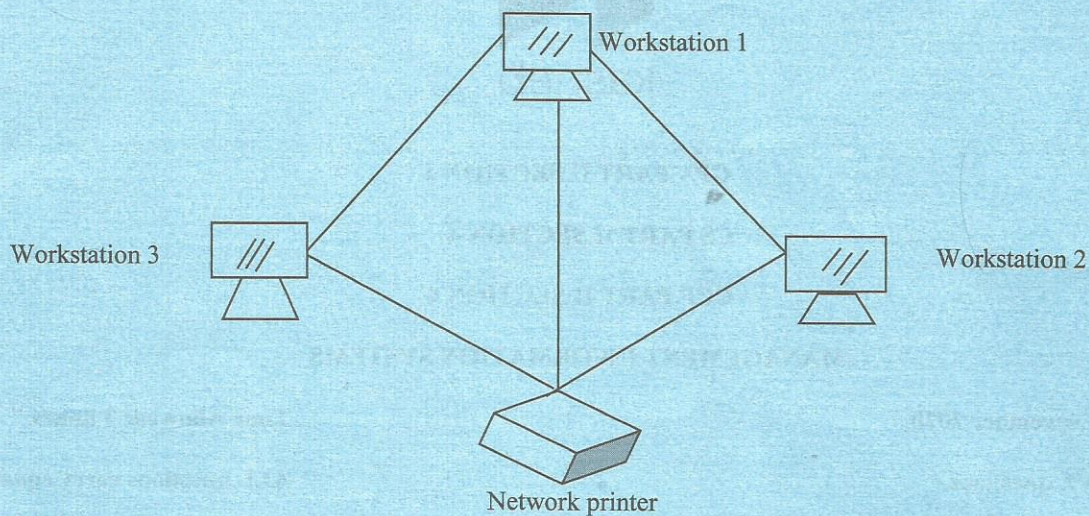
(Total: 20 marks)

QUESTION THREE

- (a) Describe each of the following information system risk management methods:

- (i) Reduction. (2 marks)
- (ii) Retention. (2 marks)
- (b) Using a suitable table, explain four differences between "business process re-engineering" and "business process improvement". (8 marks)

- (c) The figure below represents a type of logical computer network model.



Required:

- (i) Identify the network model. (2 marks)
- (ii) Highlight four advantages of the identified network model. (4 marks)
- (iii) Outline two disadvantages of the identified network model. (2 marks)

(Total: 20 marks)

QUESTION FOUR

- (a) The management of XYZ Ltd. is considering outsourcing all future Management Information Systems (MIS) application development.

Required:

In relation to the above statement, identify:

- (i) Four benefits of outsourcing the company's future Management Information Systems (MIS) application development. (4 marks)
- (ii) Four demerits of outsourcing the company's future Management Information Systems (MIS) application developments. (4 marks)

- (b) As e-commerce industry continues its rapid growth, that growth brings with it an array of new opportunities and challenges.

Required:

Examine six challenges that e-commerce companies face.

(12 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Tekh Ltd. an ICT enterprise based in East Africa installed an Enterprise Resources Planning (ERP) software one year ago. At the time of installation, the enterprise did not undertake the necessary business process changes. As a result of this, users still prefer the manual system to the new system. The enterprise is now planning to undertake the necessary changes.

Required:

Explain four obstacles that might have hampered the business process changes and suggest four possible strategies that may be used to overcome the obstacles. (8 marks)

- (b) Describe three techniques for evaluating profitability of a company. (6 marks)

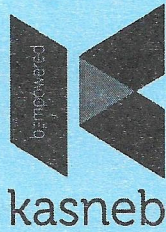
- (c) Differentiate between “differentiation strategies” and “focus strategies” as used in countering competition in an organisation. (4 marks)
- (d) Outline two characteristics of an information system. (2 marks)
- (Total: 20 marks)**

QUESTION SIX

- (a) Discuss three measures that a firm may put in place to retain its market share, using a management information system. (6 marks)
- (b) Explain the following terms as used in a management information system payroll file.
- (i) Volatility. (2 marks)
 - (ii) Activity. (2 marks)
 - (iii) Size. (2 marks)
- (c) Companies, industries and individuals have embarked on sending and receiving money through various mobile platforms.
- Required:**
Assess four reasons why mobile banking has gained popularity in modern economies. (4 marks)
- (d) Highlight four powerful worldwide changes that have altered the business environment. (4 marks)
- (Total: 20 marks)**

QUESTION SEVEN

- (a) Differentiate between the terminologies below as used in Management Information Systems (MIS):
- (i) “Front-office information system” and “back-office information systems”. (4 marks)
 - (ii) “Physical Files’ and “logical files”. (4 marks)
- (b) Mwanzo College provides a wide range of courses. The college has three options of distributing the information to potential students.
- Required:**
For each information disseminating method below, describe one advantage and one disadvantage to the college:
- (i) Issue a prospectus containing the details of all the courses. (2 marks)
 - (ii) Publish course information on the college website. (2 marks)
 - (iii) Publish a course information booklet that can be downloaded from the college website. (2 marks)
- (c) Discuss the fundamental characteristics of the following elements of data communication:
- (i) Jitter. (3 marks)
 - (ii) Timeliness. (3 marks)
- (Total: 20 marks)**
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CPA PART II SECTION 4

CS PART II SECTION 4

CCP PART II SECTION 4

MANAGEMENT INFORMATION SYSTEMS

THURSDAY: 28 November 2019.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

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. (3 marks)
- (ii) Identify three types of processing controls in the accounting software system. (3 marks)
- (iii) Explain three ways the system could be used for gaining business competitive advantage. (3 marks)
- (iv) Evaluate three challenges that are likely to be encountered during the implementation process. (3 marks)

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

- (i) Creation of counterfeit sites. (2 marks)
- (ii) Malicious alterations to websites. (2 marks)
- (iii) Unauthorised access to sensitive information. (2 marks)
- (iv) Denial of service. (2 marks)

(Total: 20 marks)

QUESTION TWO

(a) Highlight five environmental factors that might exert considerable influence on the behavior of an information system. (5 marks)

(b) Describe five ethical principles of information management. (5 marks)

(c) Citing an example in each case, evaluate the following types of information as used in business for decision making:

- (i) Strategic information. (2 marks)
- (ii) Tactical information. (2 marks)
- (iii) Operational information. (2 marks)

(d) Analyse two ways in which business intelligence systems help firms in making better decisions. (4 marks)

(Total: 20 marks)

QUESTION THREE

- (a) Discuss three factors that need to be considered when selecting a network topology. (6 marks)
- (b) 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. (3 marks)
- (ii) Highlight three disadvantages of such a service to the customers. (3 marks)
- (c) Describe four barriers against implementation of management information systems in organisations. (8 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) Highlight four factors that need to be considered when selecting a management information system. (4 marks)
- (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. (6 marks)

- (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. (10 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Assess six logical controls which could be instituted by a business to secure it from losing money through electronic fraud. (6 marks)

- (b) Highlight two activities carried out at each of the following system development stages:

- (i) System analysis. (2 marks)
- (ii) System design. (2 marks)
- (iii) System implementation. (2 marks)

- (c) Evaluate four ways in which information communication technology (ICT) governance could assist an organisation in its strategic implementation. (8 marks)
- (Total: 20 marks)**

QUESTION SIX

- (a) Suggest four benefits that might accrue to an organisation as a result of adopting cloud computing. (4 marks)

- (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. (4 marks)

- (c) Explain three challenges of implementing copyrights for digital products on the internet. (6 marks)

- (d) Examine three ways through which intranets could add business value to an organisation. (6 marks)

(Total: 20 marks)

QUESTION SEVEN

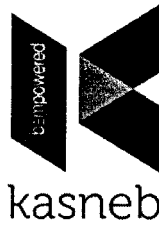
- (a) Distinguish between “business ethics” and “technology ethics” as used in management information systems. (4 marks)
- (b) Explain the following terms as used in e-commerce:
 - (i) Digital marketing. (2 marks)
 - (ii) Digital goods. (2 marks)
- (c) Bidi Company is planning to attain ISO certification by the end of the financial year 2020. The core business processes are repetitive and hence monotonous thus affecting the output.

Required:

Assuming that you are a senior information system officer in this company:

- (i) Suggest the most appropriate approach you would use through information communication technology (ICT) to change the business processes hence improve output. (2 marks)
 - (ii) Describe two disadvantages of the approach you have identified in (c) (i) above. (2 marks)
 - (d) (i) Explain the term “socio-technical systems” as used in management information systems. (2 marks)
 - (ii) Describe three characteristics of socio-technical systems. (6 marks)
- (Total: 20 marks)**

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CPA PART II SECTION 4

CS PART II SECTION 4

CCP PART II SECTION 4

MANAGEMENT INFORMATION SYSTEMS

FRIDAY: 24 May 2019.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

QUESTION ONE

- (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. (5 marks)
 - (c) In the context of information system, distinguish between “strategic data” and “operational data”. (4 marks)
 - (d) Identify six factors that might enhance successful system development. (6 marks)
- (Total: 20 marks)**

QUESTION TWO

- (a) (i) Describe four distinguishing features between “low-level” and “high-level” programming languages. (8 marks)
 - (ii) Identify two examples of high-level programming languages. (2 marks)
 - (b) Evaluate three benefits that might accrue to an organisation from good practice of information technology (IT) governance. (6 marks)
 - (c) Explain two general security issues associated with wireless networks. (4 marks)
- (Total: 20 marks)**

QUESTION THREE

- (a) Explain two applications of object oriented programming languages in information systems development. (4 marks)
 - (b) Describe the following concepts as used in databases:
 - (i) Data resource management. (2 marks)
 - (ii) Distributed databases. (2 marks)
 - (iii) Data modeling. (2 marks)
 - (c) Summarise five common functions of database management systems. (5 marks)
 - (d) Discuss how a data warehouse database could leverage on data mining to support the business decisions of an organisation. (5 marks)
- (Total: 20 marks)**

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. (6 marks)

- (b) (i) Highlight four characteristics of an information society. (4 marks)
- (ii) Explain two challenges faced when implementing information society. (4 marks)
- (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. (2 marks)
- (ii) During. (2 marks)
- (iii) After. (2 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) A manager at Babi Ltd. decided to hand out laptop computers to all sales people. After a while, the management of Babi Ltd. found out that most of the computers were not being used.

Required:

Suggest five possible explanations for the lack of use of the computers. (5 marks)

- (b) Magoti Ltd. which manufactures data networking materials is contemplating shutting down some of its production plants owing to decline in sales and production.

Required:

Examine four information communication technology (ICT) related reasons that might be causing the decline. (8 marks)

- (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. (2 marks)
- (ii) Apart from enhancing the speed of operation, summarise five other benefits that Asha will gain from using such a system. (5 marks)

(Total: 20 marks)

QUESTION SIX

- (a) In the context of computing, differentiate the following terms:

- (i) "Internet of everything" and "internet of things". (4 marks)
- (ii) "Deterministic system" and "stochastic system". (4 marks)
- (iii) "Closed system" and "open system". (4 marks)

- (b) Describe four types of feasibility studies that could be conducted during systems development life cycle (SDLC). (8 marks)

(Total: 20 marks)

QUESTION SEVEN

- (a) (i) Highlight six reasons why online marketing is preferred over offline marketing. (6 marks)
- (ii) Outline two limitations of online marketing. (2 marks)
- (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. (2 marks)
 - (ii) Likelihood. (2 marks)
 - (iii) Urgency. (2 marks)
 - (c) (i) Discuss four features of Business Process Reengineering. (4 marks)
 - (ii) Describe two benefits associated with the implementation of Business Process Reengineering. (2 marks)
- (Total: 20 marks)**

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CPA PART II SECTION 4

CS PART II SECTION 4

CCP PART II SECTION 4

MANAGEMENT INFORMATION SYSTEMS

FRIDAY: 30 November 2018.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

QUESTION ONE

- (a) Describe each of the following changes brought by implementing information systems in organisations:
- (i) Paradigm shift. (2 marks)
 - (ii) Rationalisation. (2 marks)
- (b) Explain each of the following information system maintenance techniques:
- (i) Patching. (2 marks)
 - (ii) Configuration management. (2 marks)
- (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. (6 marks)
- (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). (6 marks)
(Total: 20 marks)

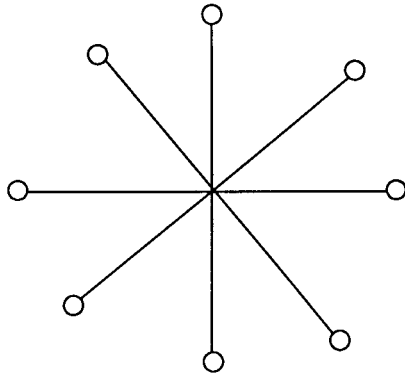
QUESTION TWO

- (a) NewGeneration 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 NewGeneration Ltd.'s server that contains personal details of a large number of customers.
- James Okelo contacted NewGeneration Ltd. and suggested that they should address this problem and send letters to all NewGeneration Ltd.'s customers informing them that their credit card details might have been accessed via the website.
- NewGeneration 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. (10 marks)
- (b) Explain four reasons why models are used in software systems development. (8 marks)
- (c) Highlight two characteristics of a good management information system. (2 marks)
(Total: 20 marks)

QUESTION THREE

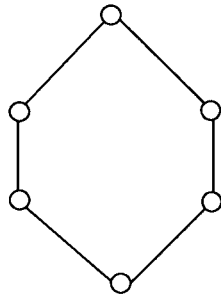
(a) Name the following network topologies:

(i)



(1 mark)

(ii)



(1 mark)

(b) Differentiate between a “webmaster” and a “webcaster”. (4 marks)

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

(i) Mouse arrest. (2 marks)

(ii) Mouse elbow. (2 marks)

(d) Distinguish between “supply chain planning systems” and “supply chain execution systems”. (4 marks)

(e) Security in cloud computing is a major concern.

Required:

Analyse four attributes to be considered before deploying a particular resource to the cloud. (4 marks)

(f) Using an example, explain the components that are found in an absolute filename in relation to the naming convention. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) An office secretary saved a document in her computer. After some time, she could not remember the name and the location of the file.

Required:

Outline five details that are assigned to a file by the operating system which could assist in tracing the file. (5 marks)

(b) Suggest five reasons why voice input could be used as a reliable form of security in management information systems. (5 marks)

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

(i) Crimes that target computer networks directly. (3 marks)

(ii) Crimes facilitated by computer networks. (3 marks)

(d) Examine four reasons why system maintenance phase is necessary in system development life cycle (SDLC). (4 marks)

(Total: 20 marks)

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:

- (i) Assess three ways in which an office information system (OIS) could aid in supporting management decision making in the virtual organisation. (3 marks)
- (ii) Describe three measures that could be adopted to ensure that the information held by the organisation remains secure. (3 marks)
- (iii) Analyse five benefits of having a disaster recovery plan implemented for management information system in Safeland Ltd. (5 marks)

(b) Summarise nine activities that should be included in the strategic planning process. (9 marks)
(Total: 20 marks)

QUESTION SIX

- (a) Examine four roles of an operating system with regard to computer program management. (4 marks)
- (b) Describe four suitable circumstances under which Rapid Application Development (RAD) approach might be used during system development. (8 marks)
- (c) Distinguish between the following terms as used in data transmission:
 - (i) "Simplex" and "full duplex". (4 marks)
 - (ii) "Synchronous" and "asynchronous". (4 marks)**(Total: 20 marks)**

QUESTION SEVEN

- (a) Discuss three types of Business to Consumer (B2C) e-commerce business models. (6 marks)
- (b) Distinguish between "Wi-Fi" and "Wimax" technology as used in communications. (2 marks)
- (c) Explain three roles of Transmission Control Protocol/Internet Protocol (TCP/IP) in computer networks. (3 marks)
- (d) Outline five functions of a database administrator in an information system. (5 marks)
- (e) Describe the following terms in the context of information systems:
 - (i) Office automation. (2 marks)
 - (ii) Vertically integrated information system. (2 marks)**(Total: 20 marks)**

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CPA PART II SECTION 4

CS PART II SECTION 4

CCP PART II SECTION 4

MANAGEMENT INFORMATION SYSTEMS

FRIDAY: 25 May 2018.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

QUESTION ONE

- (a) Distinguish between the following types of e-commerce:
- (i) "Social e-commerce" and "local e-commerce". (4 marks)
 - (ii) "Mobile e-commerce" and "consumer-to-consumer e-commerce". (4 marks)
- (b) Citing four unique features of e-commerce, explain the significance of each feature to a business. (8 marks)
- (c) Describe the term "e-distributor" as used in e-commerce. (2 marks)
- (d) Distinguish between "digital cash" and "virtual currency" as used in digital payments. (2 marks)
- (Total: 20 marks)**

QUESTION TWO

- (a) Differentiate between the following terminologies as used in management information systems:
- (i) "Green computing" and "cloud computing". (4 marks)
 - (ii) "Loss of infrastructure" and "denial of service". (4 marks)
- (b) Describe three problems of the systems development lifecycle (SDLC) model of developing information systems. (6 marks)
- (c) Connect Ventures Ltd. has recently embraced Information Communication Technology (ICT) governance as one of its key strategic policies.

Required:

Identify six benefits Connect Ventures Ltd. might enjoy from embracing ICT governance in the organisation. (6 marks)
(Total: 20 marks)

QUESTION THREE

- (a) Using examples, analyse three benefits of telecommunication networks in business. (6 marks)
- (b) Summarise five steps of the transaction processing cycle in a transaction processing system. (5 marks)
- (c) Discuss six essential accounting information systems used in business. (6 marks)
- (d) Explain three roles of enterprise collaboration systems in business. (3 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) 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. (6 marks)

- (b) 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. (6 marks)

- (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. (8 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Explain three roles of management during the development of an information system in an organisation. (6 marks)

- (b) Highlight three types of financial costs that an organisation might incur due to non compliance to Information Communication Technology (ICT) standards. (3 marks)

- (c) Suggest four reasons why it is necessary for an organisation to backup its data. (4 marks)

- (d) (i) Explain the term "database mirroring" as used in information systems. (1 mark)

- (ii) Evaluate three benefits an organisation might derive from database mirroring. (6 marks)

(Total: 20 marks)

QUESTION SIX

- (a) Organisations and Information Communication Technology (ICT) professionals are required to comply with legal framework when introducing and using information systems. In addition, there will normally be a code of practice.

Required:

- (i) Citing a suitable example, explain the term "code of practice". (3 marks)

- (ii) Examine two ways in which institutions and societies promote professionalism for individuals within the ICT industry. (4 marks)

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

- (i) Push reports. (2 marks)

- (ii) Exception reports. (2 marks)

- (c) 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:

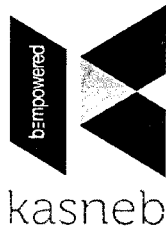
- (i) Identify the information system described above. (1 mark)
- (ii) Suggest the level in management where the system identified in (c)(i) above is applied. (1 mark)
- (iii) Highlight five benefits of the system identified in (c)(i) above to an organisation. (5 marks)
- (d) Debrix Company has installed a biometric system to control access to its offices.

Required:

Highlight two examples of biometric data that could be used in such a system. (2 marks)
(Total: 20 marks)

QUESTION SEVEN

- (a) Distinguish between “a multiplexer” and “a front-end processor”. (2 marks)
 - (b) Analyse four major characteristics of a local area network. (4 marks)
 - (c) Examine three functions of an Information Communication Technology (ICT) centre towards end-user computing. (3 marks)
 - (d) Explain five challenges that might hinder the successful alignment of information systems to the organisation’s corporate strategy. (5 marks)
 - (e) Suggest six measures that employers could put in place to deal with internet abuse at the workplace. (6 marks)
(Total: 20 marks)
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CPA PART II SECTION 4

CS PART II SECTION 4

CCP PART II SECTION 4

MANAGEMENT INFORMATION SYSTEMS

FRIDAY: 1 December 2017.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

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. (4 marks)

- (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). (4 marks)

- (c) ABC Business Ventures Ltd. intends to embrace information communication technology (ICT) governance in the organisation.

Required:

Outline three primary and three secondary stakeholders in information communication technology (ICT) governance. (6 marks)

- (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”. (2 marks)

(ii) Outline four criteria that could be used to select a disaster contingency plan. (4 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Outline three reasons that could prompt the creation of a new information system in an organisation. (3 marks)

- (b) Identify four reasons why a department in an organisation might continue to use manual records rather than a newly installed computerised system. (4 marks)

- (c) Distinguish between “pure” and “partial” types of e-commerce. (4 marks)

- (d) 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. (4 marks)

- (e) New employees joining a company and using its computer systems are each asked to sign an agreement to adhere to a code of practice.

Highlight five issues that such a code of practice should address.

(5 marks)

(Total: 20 marks)

QUESTION THREE

- (a) (i) 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.

(4 marks)

- (ii) Summarise six ways of guaranteeing information security in an organisation. (6 marks)

- (b) Outline four categories of information from the perspective of a computer application. (4 marks)

- (c) Itemise how information systems could help participants in supply chain management. (6 marks)

(Total: 20 marks)

QUESTION FOUR

- (a) Outline six activities that could be undertaken in the development of a management information system for an organisation. (6 marks)

- (b) A college maintains an extensive database of its full-time students. The database contains personal data, the courses the students attend and higher education or employment applications.

Required:

- (i) Suggest five ways in which the college could keep personal data of the students up to date. (5 marks)

- (ii) The college wishes to share the personal data of the students with a local sports retailer. An agreement is to be written between the college and the retailer.

Suggest five issues, relating to the data, that should be included in this agreement.

(5 marks)

- (c) 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. (2 marks)

- (ii) Suggest two system interfaces in the club's operations. (2 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Outline six broad categories of management information systems (MIS). (6 marks)

- (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. (5 marks)

- (c) Distinguish between "business process re-engineering" and "reverse engineering" as used in information systems development. (4 marks)

- (d) Outline five customer-related factors that are important in the success of any e-commerce venture. (5 marks)

(Total: 20 marks)

QUESTION SIX

- (a) Discuss six ways that could be used to classify decision support systems (DSS). (6 marks)
- (b) Outline four characteristics of a distributed database management system (DBMS). (4 marks)
- (c) Identify four ways in which a commercial bank could make use of data mining. (4 marks)
- (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”. (2 marks)
- (ii) Highlight two main functions of a network server. (2 marks)
- (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. (2 marks)

(Total: 20 marks)

QUESTION SEVEN

- (a) (i) With the aid of an example, distinguish between “project risk” and “business risk”. (4 marks)
- (ii) Identify two factors used in evaluating risk exposure and how each of these factors might be assessed qualitatively. (4 marks)
- (b) Analyse four key technology matters that could raise ethical issues. (4 marks)
- (c) Karibu Hotels is considering implementing m-commerce.
 - (i) Explain the term ‘m-commerce’. (2 marks)
 - (ii) Indicate two reasons why Karibu Hotels would consider using m-commerce. (2 marks)
- (d) 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. (4 marks)

(Total: 20 marks)

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KASNEB

CPA PART II SECTION 4

CS PART II SECTION 4

CCP PART II SECTION 4

MANAGEMENT INFORMATION SYSTEMS

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FRIDAY: 26 May 2017.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

QUESTION ONE

(a) Describe the following concepts as used in information systems:

- (i) Software-as-a-service (SAAS). (2 marks)
- (ii) Open source software (OSS). (2 marks)
- (iii) Total cost of ownership (TCO). (2 marks)

(b) Distinguish between the following types of information:

- (i) "Knowledge information" and "organisational information". (4 marks)
- (ii) "Planning information" and "control information". (4 marks)

(c) Summarise three business benefits and three technical benefits that could accrue to a university from implementing an enterprise resource planning (ERP) system. (6 marks)

(Total: 20 marks)

QUESTION TWO

(a) Evaluate five areas of information communication technology governance in an organisation. (10 marks)

(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. (6 marks)

(c) The management of DAX Supermarkets Ltd. intend to construct a data warehouse with the aim of using online analytical processing (OLAP) tools in decision making.

Required:

Identify four benefits that the supermarket could realise as a result of implementing the new system. (4 marks)

(Total: 20 marks)

QUESTION THREE

(a) Differentiate between "e-commerce" and "traditional commerce". (6 marks)

(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. (5 marks)

(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. (4 marks)

(d) Enumerate five benefits of computer database systems. (5 marks)

(Total: 20 marks)

CA42, CS42 & CP42 Page 1
Out of 2

QUESTION FOUR

- (a) Differentiate between information communication technology (ICT) “ethics” and “law”. (10 marks)
- (b) Highlight four types of intellectual property. (4 marks)
- (c) Discuss six reasons why many organisations have invested heavily in information systems. (6 marks)
- (Total: 20 marks)**

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. (6 marks)
- (b) Distinguish between “entropy” and “symbiosis” as used in general systems theory. (4 marks)
- (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. (2 marks)
- (ii) Outline four steps involved in information systems planning process. (4 marks)
- (d) Kritex Traders Ltd. intends to set up a juice processing company to compete with established brands in the market.
- Required:**
Suggest four ways in which they could use information systems to gain competitive advantage in the industry. (4 marks)
- (Total: 20 marks)**

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. (6 marks)
- (b) Outline two reasons for outsourcing information systems by an organisation under each of the following categories:
- (i) Financial reasons. (2 marks)
- (ii) Technical reasons. (2 marks)
- (iii) Political reasons. (2 marks)
- (c) Distinguish between “transmission control protocol” and “internet protocol” as used in data communication networks. (4 marks)
- (d) Explain the concept of “disaster recovery planning” as used in information communication technology risk management. (4 marks)
- (Total: 20 marks)**

QUESTION SEVEN

- (a) Evaluate how a customer relationship management system could be used to improve data and information of an e-business. (4 marks)
- (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. (6 marks)
- (c) Describe the main components that should be included in the organisation’s framework report for improving systems security and control. (10 marks)
- (Total: 20 marks)**

KASNEB

CPA PART II SECTION 4

CS PART II SECTION 4

CCP PART II SECTION 4

MANAGEMENT INFORMATION SYSTEMS

FRIDAY: 25 November 2016.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

QUESTION ONE

- (a) Explain two important ergonomic design features that should be considered for the following workstation items:
- (i) Keyboard. (2 marks)
 - (ii) Video display unit (VDU). (2 marks)
 - (iii) The desk. (2 marks)
- (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". (2 marks)
 - (ii) "Administrative controls" and "data security controls". (2 marks)
 - (iii) "Input controls" and "output controls". (2 marks)
- (c) Outline four examples of information systems based on each of the following criteria:
- (i) Functional perspective. (4 marks)
 - (ii) Constituency perspective. (4 marks)

Total: 20 marks)

QUESTION TWO

- (a) An organisation keen on developing an information systems strategy constituted an information systems steering committee.

Required:

Summarise six possible specific tasks of the above committee. (6 marks)

- (b) Distinguish between the following terms as used in management information systems:
- (i) "Internet of Things (IoT)" and "Internet of Everything (IoE)". (2 marks)
 - (ii) "Qualitative information" and "quantitative information". (2 marks)
- (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. (4 marks)
- (ii) Analyse six reasons why the management might be compelled to use direct procurement method to acquire the local area network equipment. (6 marks)

(Total: 20 marks)

CA42, CS42 & CP42 Page 1
Out of 3

QUESTION THREE

- (a) Discuss four reasons why an increasing number of organisations are today concerned with the development of quality practices in information systems governance. (4 marks)
- (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. (4 marks)

- (c) (i) Identify two issues that could be addressed when building an e-commerce presence. (2 marks)
- (ii) Explain three ways in which e-commerce has affected business-to-business transactions. (3 marks)
- (d) Examine the role of mobile commerce in business activities. (3 marks)
- (e) Describe four types of information systems that could be used for enterprise-wide knowledge management and their value to a business. (4 marks)

(Total: 20 marks)

QUESTION FOUR

- (a) Compliance with a professional code of conduct and ethics is paramount in an information communication department.

Required:

- (i) Outline five specific roles of a compliant team in an information communication technology department. (5 marks)
- (ii) Suggest five approaches of enforcing rules and regulations among staff in an ICT department. (5 marks)
- (b) 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. (6 marks)

- (c) Describe each of the following mechanisms as used in management information systems:
- (i) Early warning mechanism. (2 marks)
- (ii) Exception principle. (2 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) The first step in building a data warehouse involves conducting a thorough business analysis of the information requirements that could be satisfied by a data warehouse.

Required:

Suggest six questions that could be addressed to enable one identify the information requirements for a data warehouse. (6 marks)

- (b) (i) Explain four general features of a system. (4 marks)
- (ii) Describe four challenges associated with enterprise systems. (4 marks)
- (c) Describe the role of the following information communication technology personnel:
- (i) Hardware technician. (2 marks)
- (ii) Database administrator. (4 marks)

(Total: 20 marks)

QUESTION SIX

- (a) Highlight four functions of a network operating system. (4 marks)
- (b) Suggest three benefits of using voice over internet protocol (VOIP). (3 marks)
- (c) In securing an information system you seek to safeguard against loss of confidentiality, integrity and availability.

Required:

Explain the following terms:

- (i) Loss of confidentiality. (2 marks)
- (ii) Loss of integrity. (2 marks)
- (iii) Loss of availability (2 marks)
- (d) Businesses have come to rely on email as a means of communication.

Required:

Explain how email security packages protect against spam. (3 marks)

- (e) Identify four questions that need to be asked when undertaking analysis of an information system. (4 marks)
- (Total: 20 marks)**

QUESTION SEVEN

- (a) Highlight four risks associated with cloud computing. (4 marks)
- (b) Discuss the following systems theory concepts:
 - (i) Planning. (2 marks)
 - (ii) Control. (2 marks)
 - (iii) Feedback. (2 marks)
 - (iv) Feedforward. (2 marks)
- (c) For each of the following business analytic tools, describe its key features and how it can be used to aid knowledge discovery:
 - (i) Online analytical processing (OLAP). (4 marks)
 - (ii) Data mining. (4 marks)

(Total: 20 marks)

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KASNEB

CPA PART II SECTION 4

CS PART II SECTION 4

CCP PART II SECTION 4

MANAGEMENT INFORMATION SYSTEMS

FRIDAY: 27 May 2016.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

QUESTION ONE

(a) Distinguish between the following e-commerce business models:

(i) "E-tailer" and "market creator". (4 marks)

(ii) "Content provider" and "service provider". (4 marks)

(b) Explain why the use of ICT risk management techniques is becoming increasingly important in managing information systems. (4 marks)

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

(i) Responsibility. (2 marks)

(ii) Accountability. (2 marks)

(iii) Liability. (2 marks)

(d) Differentiate between a "boundary" and a "constraint" as used in system theory. (2 marks)

(Total: 20 marks)

QUESTION TWO

(a) Suggest three reasons why it could be difficult to measure the benefits of information communication technology infrastructure in an organisation. (6 marks)

(b) Propose six ways in which information communication technology (ICT) governance could act as a foundation for delivering the ICT strategy in an organisation. (6 marks)

(c) Highlight eight disadvantages of using a database system in an organisation. (8 marks)

(Total: 20 marks)

QUESTION THREE

(a) ABC Ltd. is a small software development company employing 50 information communication specialists.

Required:

(i) Advise the company on how it could develop an information systems strategy. (4 marks)

(ii) Describe three criteria which the company could use to ensure that the information systems strategy developed in (a) (i) above is sound. (6 marks)

(b) Evaluate ten internet abuses common in a modern workplace. (10 marks)

(Total: 20 marks)

QUESTION FOUR

- (a) (i) Distinguish between “business intelligence” and “advanced analytics” as used in organisations. (4 marks)
- (ii) In a computer network, noise in signal is the random disturbance or fluctuation in analogue or digital signals.
Explain four classifications of noise. (8 marks)
- (b) (i) Demonstrate the key difference between “backward error correction” and “forward error correction” as used in computer networks. (2 marks)
- (ii) Designing a database requires an understanding of both the business functions to model and the database concepts and features used to represent those business functions.
Highlight three factors to consider when designing a database for an organisation. (3 marks)
- (iii) List three examples of enterprise systems used in business organisations. (3 marks)
- (Total: 20 marks)**

QUESTION FIVE

- (a) Explain the meaning of the following concepts as used in system theory:
- (i) Sub-optimisation. (2 marks)
- (ii) Decoupling. (2 marks)
- (iii) Equifinality. (2 marks)
- (b) The systems approach to organisational problems emphasises the need to consider both hard and soft properties of a system.
Differentiate between “hard properties” and “soft properties”. (4 marks)
- (c) Explain the relationship between file hit rate, file organisation method and type of storage device as used in the context of information systems. (6 marks)
- (d) Identify four qualities of good management information. (4 marks)
- (Total: 20 marks)**

QUESTION SIX

- (a) 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. (6 marks)
- (b) Distinguish between the following forms of computer crimes and abuses:
- (i) Jamming and spamming. (2 marks)
- (ii) Cyber bullying and flaming. (2 marks)
- (iii) Sniffing and spoofing. (2 marks)
- (c) 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”. (2 marks)
- (ii) Suggest three implications of the move towards open systems for organisations that have already invested in proprietary information systems. (6 marks)
- (Total: 20 marks)**

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. (3 marks)
- (ii) Users of the new system. (3 marks)

- (b) Identify the unique features of the following:

- (i) Digital markets. (1 mark)
- (ii) Digital goods. (1 mark)

- (c) 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.

(12 marks)

(Total: 20 marks)

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KASNEB

CPA PART II SECTION 4

CS PART II SECTION 4

CCP PART II SECTION 4

MANAGEMENT INFORMATION SYSTEMS

FRIDAY: 27 November 2015.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

QUESTION ONE

- (a) (i) Outline six basic types of e-commerce. (6 marks)
- (ii) Identify five disadvantages of e-commerce. (5 marks)
- (b) (i) Describe five components of data communication. (5 marks)
- (ii) Highlight four factors which affect the performance of a computer network. (4 marks)
- (Total: 20 marks)

QUESTION TWO

- (a) Distinguish between "information system" and "management information system" (4 marks)
- (b) Discuss six ways of classifying management information systems by application. (12 marks)
- (c) Outline four functionalities accomplished by a complete business information system. (4 marks)
- (Total: 20 marks)

QUESTION THREE

- (a) Describe five physical classifications of computer configuration. (5 marks)
- (b) Evaluate six advantages and three disadvantages of a distributed computer system. (9 marks)
- (c) Outline six services provided by enterprise applications. (6 marks)
- (Total: 20 marks)

QUESTION FOUR

- (a) (i) Analyse two major aspects of information system security. (4 marks)
- (ii) Explain three aspects of guaranteeing effective information system security. (3 marks)
- (b) Information systems bring about immense social changes, threatening the existing distribution of power, money, rights and obligations. It also raises new types of crimes, like cyber crimes.

Required:

Suggest four codes of ethics and professional conduct that could be adopted by information systems professionals.

(4 marks)

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

Required:

Examine six factors to be considered when planning a new information system.

(6 marks)

- (d) Describe three basic competitive information system strategies which an organisation could apply. (3 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Enumerate six characteristics of a well designed computerised management information system. (6 marks)
- (b) Describe four types of decision support systems. (8 marks)
- (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. (6 marks)
(Total: 20 marks)

QUESTION SIX

- (a) (i) Outline seven strategic information systems applications. (7 marks)
 - (ii) Summarise four differences between strategic information systems and management information systems. (4 marks)
 - (b) (i) Enumerate six significant information systems security challenges to a business organisation. (6 marks)
 - (ii) Highlight three capabilities of authentication that could make it overcome information systems security threats. (3 marks)
- (Total: 20 marks)**

QUESTION SEVEN

- (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. (5 marks)
 - (b) Examine five types of data processing applications in the context of cloud computing. (5 marks)
- (Total: 20 marks)**
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KASNEB

CPA PART II SECTION 4

CS PART II SECTION 4

CCP PART II SECTION 4

MANAGEMENT INFORMATION SYSTEMS

PILOT PAPER

September 2015.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

QUESTION ONE

- (a) Highlight six advantages of adopting ICT in business. (6 marks)
- (b) Outline four principal duties of the following ICT personnel:
- (i) ICT Manager. (4 marks)
 - (ii) Computer Technician. (4 marks)
- (c) Explain the meaning of the following ethical concepts:
- (i) Business ethics. (3 marks)
 - (ii) Technology ethics. (3 marks)
- (Total: 20 marks)**

QUESTION TWO

- (a) Zack Ltd. has been performing poorly in the soft drinks industry. A consultant has advised the directors of the company to undertake business process re-engineering.
- Required:**
Explain four major pitfalls faced by information systems managers in attempting to re-engineer organisations. (8 marks)
- (b) Distinguish between an “evolutionary prototype” and an “exploratory prototype” as used in prototyping. (4 marks)
- (c) Highlight four types of reports produced by information systems in an organisation. (4 marks)
- (d) Enumerate four benefits of an information systems strategy to an organisation. (4 marks)
- (Total: 20 marks)**

QUESTION THREE

- (a) Highlight five business opportunities that can be harnessed using cloud computing by an organisation. (5 marks)
- (b) 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. (4 marks)
 - (ii) Outline the transaction processing cycle. (5 marks)
- (c) Explain sequentially the steps taken during the information systems risk assessment process. (6 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) (i) Examine three advantages of applying the database approach in information systems. (6 marks)
 - (ii) Describe three techniques that can be used to profile online shoppers for purposes of business forecasting. (6 marks)
 - (b) Enumerate four business opportunities in e-commerce. (4 marks)
 - (c) Examine two vulnerabilities which an organisation may be exposed to after commissioning a computer network with an internet connection. (4 marks)
- (Total: 20 marks)**

QUESTION FIVE

- (a) Explain four legal, social and ethical issues raised by information systems. (4 marks)
 - (b) Analyse four major file processing activities. (4 marks)
 - (c) Highlight four circumstances under which it might be deemed appropriate for an organisation to outsource information technology. (4 marks)
 - (d) Evaluate four key activities undertaken in the following phases of system development:
 - (i) System design phase. (4 marks)
 - (ii) System implementation phase. (4 marks)
- (Total: 20 marks)**

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. (4 marks)
 - (ii) Explain four ways in which management policy and controls can be used to safeguard information systems in an organisation. (8 marks)
 - (b) Distinguish between a “decision support system” and an “executive information system”. (4 marks)
 - (c) Highlight four benefits of the waterfall methodology of system development. (4 marks)
- (Total: 20 marks)**

QUESTION SEVEN

- (a) Identify four advantages of data warehousing. (4 marks)
 - (b) Outline four common uses of an extranet in an organisation. (4 marks)
 - (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. (4 marks)
 - (d) (i) Identify five characteristics which might indicate that an information system has reached the end of its economic life. (5 marks)
 - (ii) Outline three ways in which ‘internet of things’ is benefiting small and medium sized businesses. (3 marks)
- (Total: 20 marks)**