



STRATHMORE INSTITUTE
DIPLOMA IN BUSINESS MANAGEMENT/ DIPLOMA IN ENTREPRENEURSHIP
DIPLOMA IN INTERNATIONAL RELATIONS
DIPLOMA IN JOURNALISM & NEW MEDIA
END OF SEMESTER EXAMINATION
DBM & DIR 1105/ DE 1106/ DJNM 1104
FUNDAMENTALS OF INFORMATION TECHNOLOGY

DATE: MONDAY, 17th April, 2023

TIME: 2 Hours

Instructions

1. This examination consists of **FIVE** questions.
2. Answer **Question ONE (COMPULSORY)** and any other **TWO** questions.
3. Do not write on the question paper.

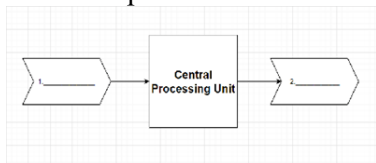
SECTION A: (30 MARKS)

QUESTION ONE

(a) **Multiple Choice Questions:** *Indicate the correct option (e.g., A/B/C/D/E) or correct response on the answer booklet.* **(24 Marks)**

- | | |
|--|---|
| <p>i) Which of the following is the correct definition of Computer?</p> <p>A. A Computer is a machine or device that can be programmed to perform arithmetical or logic operation sequences automatically.</p> <p>B. A Computer understands only binary language which is written in the form of 0s & 1s.</p> <p>C. A Computer is a programmable electronic device that stores, retrieves, and processes the data.</p> | <p>D. All the mentioned</p> <p>ii) Which of the following is not a characteristic of a computer?</p> <p>A. Versatility</p> <p>B. Accuracy</p> <p>C. Diligence</p> <p>D. I.Q</p> <p>iii) Which of the following is used to hold running program instructions?</p> <p>A. Primary Storage</p> <p>B. Virtual Storage</p> <p>C. Internal Storage</p> |
|--|---|

- D. Minor Devices
- iv) Describe an operating system.
- Interface between the hardware and application programs
 - Collection of programs that manages hardware resources
 - System service provider to the application programs
 - All of the mentioned.
- v) Which list contains **only** input peripheral devices?
- Speakers, scanners, mouse, modem
 - Keyboard, projector, mouse, flash drive
 - Microphones, track-ball mouse, scanner, touch screen
 - Laser printer, graphic tablet, barcode reader, hard disk
- vi) Label the parts 1 and 2:



- 1.ALU 2. MU
 - 1.Output unit 2.Input Unit
 - 1.MU 2. ALU
- vii) 1.Input Unit 2.Output Unit
- Which of the following network devices has the capability to determine the best path to transmit data and determine alternative pathways?
- Router
 - Switch
 - Pathfinder
 - Director
- viii) Which of the following is TRUE about RAM?
- It is located on the motherboard.
 - It holds all programs in use.
 - It holds documents in progress.
 - All the above
- ix) Network operating system runs on
- Every system in the network
 - Server
 - Both server and every system in

the network

- None of the mentioned
- x) In a spreadsheet, letters are used to represent _____
- Cells
 - Rows
 - Columns
 - Blocks
- xi) A numeric data analysis tool that allows us to create a computerized ledger.
- Word processing package
 - Spreadsheet package
 - Graphics package
 - Mathematical Package
- xii) In a denial-of-service attack, the commandeered computers form a botnet, and the individual computers are called:
- Attackers
 - Zombies
 - Slaves
 - Worms
- xiii) 'The petrol gauge was showing almost empty. I decided to look out for the next petrol station'. What is the statement 'I decided to look out for the next petrol station' an example of?
- Data
 - Information
 - Knowledge
 - Decision
- xiv) The smallest unit of data in computer is _____
- Byte
 - Nibble
 - Bit
 - KB
- xv) Which of the following is designed to control the operations of a computer?
- Application Software
 - System Software
 - Utility Software
 - User
- xvi) Which of the following is known as the language made up of binary-coded instructions?
- High level

- B. BASIC
C. C
D. Machine
- xvii) A web cookie is a small piece of data that is _____
A. Sent from a website and stored in user's web browser while a user is browsing a website.
B. Sent from user and stored in the server while a user is browsing a website.
C. Sent from root server to all servers.
D. Sent from the root server to other root servers.
- xviii) Decision makers who are concerned with tactical (short-term) operational problems and decision making are
A. Middle managers
B. Executive managers
C. Supervisors
D. Mobile managers
E. None of the above
- xix) Management information systems (MIS)
A. Create and share documents that support day-today office activities.
B. Process business transactions (e.g., timecards, payments, orders, etc.)
C. Capture and reproduce the knowledge of an expert problem solver.
D. Use the transaction data to produce information needed by managers to run the business.
- E. None of the above
- xx) Define a web browser.
A. A program that can display a web page.
B. A program used to view html documents.
C. It enables user to access the resources of internet.
D. All the mentioned
- xxi) Which of the following computers are lower than mainframe computers in terms of speed and storage capacity?
A. Mainframes
B. Hybrid computer
C. Minicomputer
D. Supercomputer
- xxii) An application used to produce illustrations for reports or for generation of slides.
A. Animation Graphics
B. Spreadsheet graphics
C. Graphics package
D. Presentation graphics
- xxiii) CAD stands for?
A. Computer Aided Design
B. Calculation Aided Design
C. Computer Aided Draft
D. Calculation Aided Draft
- xxiv) _____, by acronym is a system used by Strathmore university staff and students to grade students, update students' attendance, print exam card, check fee balance among other tasks.

(b) During a class discussion you are presenting on the topic, "The functions of an operating system".

- i) Explain any **two** characteristics of an operating system. **(2 marks)**
- ii) Discuss at least **two** functions of an operating system **(4 marks)**

SECTION B: (15 marks per question. Choose any Two)

QUESTION TWO

- (a) Giving an example of each, discuss any **three** components of computer networks. **(6 marks)**
- (b) Supporting your responses with relevant examples, explain **three** benefits of computer networking to business organizations. **(3 marks)**
- (c) The Internet is far easier and less expensive to use for much of telecommunications than more traditional technologies. In addition, the cost of installation and training for using the Net is very low.

Discuss at least **three** internet communication tools that would be used by employees at Strathmore University. Use the sample matrix below to discuss the tools, clearly describing the categories of employees that would use the tools and business functions that would benefit from using each type of tool. **(6 marks)**

A SAMPLE MATRIX:

Tool	Business Functions	Benefit
E-mail		
Chat groups		
Web		
Video conferencing		

QUESTION THREE

Storm is a second-year student at Strathmore University and an entrepreneur. Storm received four desktop computers with liquid crystal display (LCD) screens from his father's company and would like to start a cybercafé. He has managed to secure space at the neighboring Siwaka Plaza, and a friend to assist him to network the computers and connect to the internet. In addition, Storm has allowed his classmate, Betsy to lease space in his cyber for printing and photocopying services.

- (a) Explain **three** benefits of LCD screens over the cathode ray tube (CRT) screens **(3 marks)**
- (b) Discuss any **three** factors that Betsy should consider when choosing a printer. **(3 marks)**
- (c) Storm may also need to consider the ergonomics of his cybercafé.
- i. Define the term 'ergonomics' **(1 mark)**

- ii. Recommend **three** considerations that Storm could make to ensure that his cyber is ergonomically designed. **(3 marks)**
- (d) Giving reasons, recommend **three** utility programs that may be important for Storm's cybercafé. **(3 marks)**
- (e) From the scenario above, what application software would you recommend for Storm's cybercafé and why? **(2 marks)**

QUESTION FOUR

- (a) Malware is any program or file that is harmful to a computer user. Thus, malware includes computer viruses, worms, trojan horses, and spyware programming.
Describe any **three** of these malwares. **(6 marks)**
- (b) Describe the volatile and non-volatile memory, giving an example of each. **(4 marks)**
- (c) As cloud computing is increasingly becoming successful, there are many cloud storage services available and many offer a free plan for a limited amount of space. Depending on your needs, a free plan might be ideal for you.
- i) Define the term 'cloud storage', giving two examples. **(2 marks)**
- ii) Explain any **three** disadvantages of cloud storage. **(3 marks)**

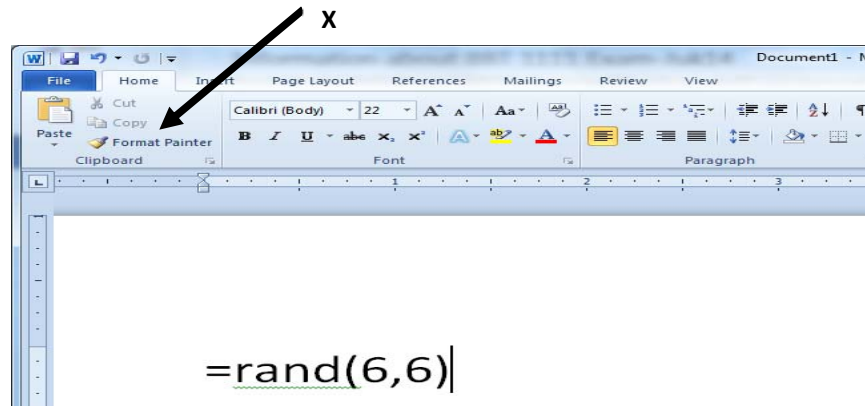
QUESTION FIVE

- (a) The soft drinks sales data below have been entered into an excel worksheet. Use the information given to answer the questions that follow.

	A	B	C	D
1	Region	Coke sales (Sh.)	Minute maid sales (Sh.)	Total
2	Nairobi	40,000	10,000	50,000
3	Kampala	50,000	40,000	
4	Kigali	56,000	30,000	
5	Dodoma	60,000	37,000	
6	Total			
7	Highest value			

- i). Write **three** different formulae which if placed in C6 will show the total sales figure for the Minute maid column. **(3 marks)**
- ii). Write a function which if placed in B7 will show the highest sales figure for the coke column. **(1 mark)**
- iii). What formatting option would you apply on the values to indicate the money amounts? **(1 mark)**
- iv). What cell alignment has been applied on the values and text in the above spreadsheet? **(1 mark)**
- v). If the formula placed in cell D2 is copied down the column to cell D5, what will be the formula or function in D5? **(2 marks)**
- vi). What feature in MS Excel would be used to copy the formula used in cell D2 along the range of cells D3:D5. **(1 mark)**

(b) Use the image below to answer the questions that follow:



- i). What is the purpose of the tool labeled X? **(1 mark)**
 - ii). What does the formula on the image displayed above do? **(1 mark)**
- (c) Your auntie has approached you for help in creating a table of contents. She has an MS word document with fifty pages of text. The pages have no page numbers inserted but the document has various headings and sub-headings. Explain to her the procedure that you would follow to create a table of contents from the presented document. **(4 marks)**