Strathmore
UNIVERSITY

STRATHMORE INSTITUTE
DIPLOMA IN BUSINESS MANAGEMENT/ DIPLOMA IN INTERNATIONAL RELATIONS
END OF SEMESTER EXAMINATION FULL TIME PROGRAMME

DBM 1105/DIR 1104
FUNDAMENTALS OF INFORMATION TECHNOLOGY

DATE 6ᵗʰ September   2021   **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: Select the correct answer (A/B/C/D) and write it in your answer booklet.

i) Which of the following is not a basic computer operation?
A. Input
B. Throughput
C. Processing
D. Storage

ii) The computer function in which raw data is converted into meaningful information is known as:
A. Input.
B. Processing.
C. Output.
D. Storage.

iii) The type of software that sits on top of the operating system and utilizes the computer's capabilities to perform a user task is called:
A. System software.
B. Utility software.
C. Application software.
D. Internal software.

iv) Which of the following is NOT an example of an input device?
A. Microphones
B. Speakers
C. Scanners
D. Digital cameras

v) The central processing unit is located within the system's case. The system case is also known as the system ____

vi) The ability to convey a message without disclosing your name or identity is known as:
A. Privacy
B. Confidentiality
C. Anonymity
D. Cyberblocking

vii) Which of the following is the best definition of a cookie?
A. It is a virus appended to an online shopping transaction
B. It is a plain-text file written to your hard disk by a Web site you visit
C. It is a file containing consumer information sold by an online store to a marketing company
D. It is an unsolicited advertisement that pops up on your computer

viii) Which of the following is not a technique you can effectively use to reduce the amount of unauthorized e-mail on your computer?
A. Use a "throwaway" e-mail address when visiting a chat room
B. Avoid giving your name and e-mail address on marketing questionnaires
C. Disable cookies on your Web browser
D. Reply to spam and ask to be removed from the mailing list

ix) This type of software collects your personal information, monitors your Web surfing habits, and distributes this information to a third party.
A. Advertisement software
B. Pop-upware
C. Spyware
D. Malware

x) In a denial-of-service attack, the commandeered computers form a botnet, and the individual computers are called:
A. Attackers
B. Zombies
C. Slaves
D. Worms

xi) Using a technique known as _____, a message is sent to a computer system using an IP address disguised as one from a trusted source.
A. Electronic data collection
B. IP spoofing
C. Hacking
D. Illegal access

xii) Which of the following is NOT a network communications device?
A. Switch
B. Router
C. NIC
D. LAN

xiii) Which of the following network devices has the capability to determine the best path to transmit data and determine alternative pathways?
A. Router
B. Switch
C. Pathfinder
D. Director

xiv) Which of the following is not a disadvantage of networks?
A. Lack of privacy
B. Loss of autonomy
C. Sharing important information
D. Security issues

xv) A local area network (LAN) in which all the computers are equals is called a(n) _____ network.
A. Equal resource
B. Peer-to-peer
C. Client/server
D. Equal sharing

xvi) The term network topology refers to the:
A. Type of network operating system used on the file server.
B. Type of Internet connections available to users of the network.
C. Physical layout of a local area network.
D. Contention-management strategy used to resolve collisions.

xvii) In order to access resources on the Internet, the location or address of the resources must be specified. These addresses are called:
A. Uniform Resource Locators (URLs)
B. E-mail forms
C. Packets
D. Microsoft Network (MSN)

xviii) The process of loading the OS to memory is which of the following?
A. Configuration
B. Booting
C. Authentication
D. Installing

xix) Starting a computer that is not already turned on is called a:
A. Warm boot.
B. Fast load.
C. Cold boot.
D. Cold load.

xx) The _____ is the central part of the Operating System (OS) that consists of actions the OS uses most frequently, such as starting applications.
A. Kernel
B. Core module
C. Critical data set
D. BIOS

(b) Giving specific examples, discuss how information technology/information systems are used in the following fields: government, insurance, retail business and healthcare.
(4 marks)

(c) Explain any **three** requirements for computer systems to be connected to the internet
(3 marks)

(d) Interest in commercial uses for the internet has grown rapidly over the past years. Using relevant examples, describe **three** business applications to which the internet can be applied.
(3 marks)

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

QUESTION TWO

(a) Using a relevant diagram, describe a computer based on the Von Neumann model.
(3 marks)

(b) Explain the function of each of the **four** subsystems of a computer defined in the von Neumann model.
(6 marks)

(c) Giving **two** examples of each, describe the **two** major components of a computer system.
(4 marks)

(d) The memory of a computer system contains both RAM and ROM. State **two** differences between RAM and ROM in a typical computer system.
(2 marks)

QUESTION THREE

(a) Discuss **three** benefits of using a computer network?
(3 marks)

(b) Describe a LAN and a WAN; give an example of each.
(4 marks)

(c) Explain **three** differences between system software and application software.
(3 marks)

(d) Describe the following aspects of computer security.
(5 marks)
  i. Confidentiality
  ii. Integrity
  iii. Identity theft.
  iv. Malware
  v. Firewall

QUESTION FOUR

(a)   Describe an Information System, giving at least **two** reasons why organizations use information systems.   **(4 marks)**

(b)   Draw a representation of the three levels of management/workers in any given organization type. (e.g., Hospital, University, Manufacturing Company, Bank etc.).
       Clearly illustrate the major kind of information system(s) used at each level of management, the groups of staff served at each level and the major business functions.
                                                                                (6 marks)

(c)   Describe the activities performed by staff at each level of management.   **(3 marks)**

(d)   Describe **two** essential qualities of good information.   **(2 marks)**

QUESTION FIVE

As part of the Information Technology lectures, we had lab lessons where you learnt how to use various application packages such as MS-Word and MS-Excel.
Answer the following questions, drawing from your knowledge of these two programs:

(a)   Eric is studying pottery at college. He must create a manual detailing step-by-step how to make a pot. State two advantages of using MS-Word, rather than handwriting when creating this manual.   **(2 marks)**

(b)   Eric's hands are often covered in clay. He creates this manual while working on a pot. State a method he could use to enter text without using the keyboard.   **(1 mark)**

(c)   Part of his manual is shown below.

┌───┐
│ **How to Make a Pot**   │
│   │
│   Making a clay pot takes patience, talent, time, and │
│   persistence. The value of practice cannot be │
│   underestimated. The quality of the clay used is also │
│   of vital importance, and the best clay in Kenya is │
│   available from Turkana by the lake. Your pots will │
│   be prettier and last longer if you follow these steps │
│ carefully.   │
│ Requirements: │
│ • Good quality clay.   │
│ • A potter's wheel.   │
│ • A kiln.   │
│ On the following pages I will explain the steps and show some photographs │
│ demonstrating how to make a pot.   │
└───┘

   i)   State the feature in MS Word used to make the list of requirements stand out. **(1 mark)**

   ii)   Eric inserted the photograph into his manual and made the text flow around the photograph. Name this feature.   **(1 mark)**

iii) Eric has set the manual up so that his name and the page number appear at the bottom of every page automatically. What feature of MS Word has Eric used to do this?

(1 mark)

iv) Eric has approached you for help in creating a Table of contents for his manual. Explain to him the procedure that he would follow to create Table of contents for his manual. **(3 marks)**

v) The finished manual is too large to e-mail to his lecturer. Without changing the manual, what can he do to reduce the file size? **(1 mark)**

(d) Perpetua uses a Spreadsheet package to set up bills for her customers.

	A	B	C	D
1			Perpetua's Dogs' Bills for Service	
2				
3	**Dog Name:**	Simba		
4		**No.**	**Cost of Service**	**Total**
5	Daily Walk	5	500.00	2500.00
6	Shampoo	1	2200.00	2200.00
7	Groom	1	1300.00	1300.00
8	Nail Clipping	0	545.00	0.00
9	Training	0	2424.00	0.00
10	Vet Trip	0	950.00	B10*C10
11			**TOTAL**	
12				

(i) What feature in MS. Excel has Perpetua used to combine and center the contents of the range of cells, A1:AD **(1 mark)**

(ii) The formula in cell D10 has not shown the answer as Perpetua expected. What symbol must she add to the formula to make the spreadsheet calculate the answer? **(1 mark)**

(iii) The data values in columns C and D should be displayed as money amounts. State the formatting operation that Perpetua will use to do this. **(1 mark)**

(iv) In cell D11 Perpetua would calculate the total. State a function and formula that she should use to calculate the total. **(2 marks)**