



**STRATHMORE BUSINESS SCHOOL  
BACHELOR OF FINANCIAL SERVICES  
END OF SEMESTER EXAMINATION  
BFS 1101: INFORMATION SYSTEMS IN FINANCIAL SERVICES**

**DATE:** Mon, 29<sup>th</sup> July 2024

**TIME:** 13:00 – 15:00

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**Instructions**

1. This examination consists of **FIVE** questions.
2. Answer **Question ONE (COMPULSORY)** and any other **TWO** questions.

**SECTION A:**

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**QUESTION ONE** **(TOTAL 30 MARKS)**

(a) **Multiple Choice Questions:** *Indicate the correct option (e.g., A/B/C/D/E/F) or the correct response (for Vii & ix) on the answer booklet.* **(20 marks)**

- |   |   |
|---|---|
| i) Data transmission speed is usually measured in:<br>A. Bytes per cycle<br>B. Bits per second<br>C. Millions of instructions per seconds<br>D. Pulses per click<br>E. Messages per day | A. Forecasting weather<br>B. Playing games<br>C. Writing books<br>D. Browsing webpages<br>E. Watching television  |
| ii) A computer that stores and distributes Web pages is called a<br>A. File server<br>B. Home page<br>C. Web server<br>D. Hyperlink<br>E. Backbone                                      | v) Which of the following is the process of loading the operating system to memory?<br>A. Installing<br>B. Configuration<br>C. Authentication<br>D. Swapping<br>E. Booting                              |
| iii) It is believed that the Internet evolved from an experimental network called ____<br>A. ARPANET<br>B. SAVNET<br>C. PERNET<br>D. NET<br>E. Internetwork                             | vi) Which of the following network devices has the capability to determine the best path to transmit data and determine alternative pathways?<br>A. Router<br>B. Switch<br>C. Pathfinder<br>D. Director |
| iv) Supercomputers are used for   | vii) The acronym USB stands for _____   |

- viii) 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:
- System software
  - Utility software
  - Application software
  - Internal software
- ix) The central processing unit is located within the system's case. The system case is also known as the system \_\_\_\_\_
- x) The fourth generation computer used:
- Transistors
  - Integrated circuit
  - Vacuum tube
  - Chip
  - Very Large Scale Integrated (VLSI) circuits technology
- xi) In a denial-of-service attack, the commandeered computers form a botnet, and the individual computers are called:
- Attackers
  - Zombies
  - Slaves
  - Worms
- xii) Which of the following refers to the execution of two or more programs by one user almost at the same time on the same computer with one central processor?
- Multitasking
  - Coprocessing
  - Time-sharing
  - Multiprogramming
  - Multiprocessing
- xiii) What does putting data into a framework or structure provide?
- More Information
  - Rules
  - Context
  - Structure
- xiv) The general transformation cycle for information is:
- Information to data to knowledge.
  - Knowledge to data to information
  - Data to knowledge to information
  - Data to information to knowledge
  - None of the above
- xv) Software that enables communication between a peripheral device and the operating system is called a(n):
- IO communicator
  - Device driver
  - Spooler
  - liaison interface
  - Add-on
- xvi) An email address typically consists of a user name, followed by the @ symbol, followed by the \_\_\_\_\_
- Compiler's address
  - Concordia address
  - Interpreter's address
  - Web server address
  - Domain name for the computer that will be handling that person's email
- xvii) The smallest unit of data a computer can recognize is a(n):
- Exabyte
  - Bit
  - Nit
  - Nanomip
  - Byte
- xviii) Management information systems (MIS)
- Create and share documents that support day-to-day office activities.
  - Process business transactions (e.g., timecards, payments, orders, etc.)
  - Capture and reproduce the knowledge of an expert problem solver.
  - Use the transaction data to produce information needed by managers to run the business.
  - None of the above
- xix) 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)

CAD applications in drawing or making selections by tapping is referred to as a:

- A. RAM
- B. Mouse
- C. Stylus
- D. Light pen
- E. Joystick
- F. Data pen

xx) In computing, the input pointing device that looks similar to a semi-blunt pen and is frequently used in

(b) Organizations use various information systems including, Executive support System (ESS), Management Information System (MIS), Decision Support System (DSS) and Transaction Processing Systems (TPS) to help in achieving business objectives.

Explain, using examples, **four** ways organizations would use each of these systems.

**(4 marks)**

(c) The Operating system is a key software without which a computer system cannot be operational.

i) Describe an operating system, giving **two** examples of operating systems used for servers. **(2 marks)**

ii) One of the functions of the operating system is to start and shut down a computer. An operating system includes various options such as booting, warm boot, cold boot, and sleep mode.

Describe these terms.

**(4 marks)**

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

#### QUESTION TWO

**(TOTAL 15 MARKS)**

Jaden is an entrepreneur running a cybercafé in the outskirts of Nairobi. When he began three years ago, he acquired 6 computers, 1 switch, and 1 desk jet printer and used a Router for internet access. Business has been good so far and Jaden wishes to diversify his operations to include a small training school where he will be training in the use of business application software including spreadsheets such as MS Excel, presentations such as MS PowerPoint, word processors such as MS Word and database management systems such as Access. He also wants to automate many of his operations, reduce costs and improve service delivery. Jaden has partnered with a friend to raise capital for this business venture. Together they have acquired a loan and managed to secure new office space and are in the process of acquiring equipment for network connections i.e., more computers, 2 servers, 1 network printer, 1 switch etc.

(a) In acquiring computer systems, explain **three** factors Jaden should consider regarding the quality of the computers' display screens. **(3 marks)**

(b) Explain **three** factors that Jaden should consider when evaluating network printers for purchase for his business. **(3 marks)**

(c) Security is bound to be a concern for Jaden's business. Advise Jaden on **three** ways in which he can secure each of the following aspects of his network:

i) Content

**(3 marks)**

ii) Infrastructure

**(3 marks)**

- (d) Jaden will acquire a database server, outline **three** advantages of a database management approach to managing the data resources of his business, compared to a file processing approach. **(3 marks)**

**QUESTION THREE (TOTAL 15 MARKS)**

- (a) Technology has improved education and learning processes.
- i) Explain **three** ways in which technology can be used to assist lecturers. **(3 marks)**
  - ii) Describe **three** examples of how you use technology to assist you with your studies. **(3 marks)**
- (b) The storage unit contains RAM and ROM. Describe these **two** types of memory giving at least **two** differences. **(4 marks)**
- (c) Cloud storage is a concept that is being adopted by many businesses today.
- i) Define the term ‘cloud storage’? **(1 marks)**
  - ii) Explain any **two** benefits of cloud storage. **(2 marks)**
- (d) Describe system software and give **two** examples. **(2 marks)**

**QUESTION FOUR (TOTAL 15 MARKS)**

- (a) Microsoft Excel is a spreadsheet program that uses tables to record and analyse numerical and statistical data with formulas and functions.
- i) Explain the purpose of the following functions used in Microsoft Excel. **(3 marks)**
    - SUM
    - MAX
    - MIN
  - ii) Using the spreadsheet below, provide the syntax in cells B7, B8, B9, that would illustrate how the functions stated in b (i) would be used to return results for the Maths column. **(3 marks)**
  - iii) In cell E2 provide the syntax that would return the average marks for Justine. **(1 mark)**

	A	B	C	D	E	F
1	Names	Maths	English	French	AVERAGE	PASS/FAIL
2	Justine	70	56	65		
3	Jude	34	12	45		
4	Janet	67	50	52		
5	Grace	89	90	85		
6	David	30	45	35		
7	<b>SUM</b>					
8	<b>MAX</b>					
9	<b>MIN</b>					

- (b) Supposing the pass mark for this class is an average of 50 marks for the 3 units, what function would you use in cell F2 to evaluate if Justine passed or failed? **(1 mark)**
- (c) On calculating Justine’s result-(PASS/FAIL) in cell F2, by use of a function in excel, what feature would you use to copy the function along the range of cell F3:F6 to determine whether the other students passed or failed? **(1 mark)**
- (d) In using excel functions and formulas, the type of cell that does not change when copied and remains in a fixed position during operations is called? **(1 mark)**

- (e) When using formulas in MS Excel, why do we use cell references instead of values in cells? **(1 mark)**
- (f) Your sibling has approached you for help in creating a graduation invitation letter which she intends to print and send to fifty recipients. She has already designed a template invitation letter.
- i) What feature in Ms. Word would you use for this task? **(1 mark)**
  - ii) Explain to her the procedure that she would follow to create a document that she would send to the fifty guests. **(3 marks)**

**QUESTION FIVE**

**(TOTAL 15 MARKS)**

- (a) Define the term network topology. **(1 marks)**
- (b) Describe the star network topology, and clearly illustrate with the aid of a well labelled diagram. **(3 marks)**
- (c) Define an intranet, giving **three** ways you would use the Strathmore University intranet **(3 marks)**

The two main strategies for connecting computers are client/server and (b) peer-to-peer.

- i) Briefly describe the client/server strategy. **(3 marks)**
  - ii) Draw a well labelled diagram to represent the client/server strategy. **(2 marks)**
- (d) In the design of a computer working environment, organizations must be concerned about health issues surrounding the use of facilities in the organization. Explain **three** major health hazards likely to affect computer users. **(3 marks)**