



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

**Date:** Friday 18<sup>th</sup> December 2020

**Time:** 2 Hours

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**Instructions:**

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

**QUESTION ONE**

**[30 Marks]**

- a. Use the following excerpt to answer questions **(i, ii, iii)** below.

The new Best Western Premier Waterfront Hotel has been open for several months, ushering in a new era for downtown Oshkosh, WI. Renovating the 131,000 square foot, eight story facility took a little more than a year, the result of an effort to not only revitalize a languishing hotel property but also to attract new business to the adjoining convention centre. The hotel's current owner, Oshkosh Investors, LLC, completed the purchase of the existing facility in February 2012, but the wheels had been set in motion several years earlier when Richard Batley, president of RB Hospitality of Neenah, WI, explains that his company had considered purchasing the hotel. "We almost bought it five years ago, and it didn't work out, but we had stayed in touch with the city since then," he says. Batley's company is one of three entities that make up Oshkosh Investors—the other partners being Pfefferle Companies, Inc. and the University of Wisconsin Oshkosh Foundation. Leading up to this partnership, the university had been considering building a hotel on its campus to accommodate visitors. Eventually, it was decided that the university would partner with RB Hospitality and Pfefferle Companies to purchase and renovate the City Centre Hotel—now the Best Western Premier Waterfront.

- i. Identify **six** items that can be considered data. **[3 Marks]**
- ii. Identify **six** pieces of information based on the data above. **[3 Marks]**
- iii. Explain the difference between tacit and explicit knowledge giving examples based on the excerpt. **[4 Marks]**

- b. Define the following terms
- i. Computer [2 Marks]
  - ii. Computer System [2 Marks]
  - iii. Cryptography [2 Marks]
  - iv. IP Address [2 Marks]
- c. Consider a banking institution setting. How does the principles of information security relate to the day to day activities of such an organization? [6 Marks]
- d. Enterprise data is data that is shared by the users of an organization, generally across departments and/or geographic regions. In which way does this data benefit an organization? (When answering this question, restrict to the case of an e-commerce type of business organization). [6 Marks]

**QUESTION TWO [15 Marks]**

- a. What is data mining and how is it different from a data warehouse? [3 Marks]
- b. Propose a series of steps that a financial institution such as a SACCO society can follow in order to achieve data mining. [12 Marks]

**QUESTION THREE [15 Marks]**

- a. Despite the fact that information systems have brought many benefits to organizations, they have also their shortcomings. Support this statement with relevant examples. [5 Marks]
- b. Discuss the major types of Information Systems [10 Marks]

**QUESTION FOUR [15 Marks]**

- A. What is a primary key? [2 Marks]
- B. Strathmore University has an Academic Management System (AMS) that manages all student information. To manage all that data, they need an elaborate database. You have been given the task to create this database using Microsoft Access. Answer the following questions
  - a. Name **four** tables that you will create. [2 Marks]
  - b. For each of the tables above, specify the fields required and the field type for each of them. [ 8 Marks]
- C. Based on the tables mention in the question b above, explain **two** relationships that can be created naming the primary keys and foreign keys in each table. [2 Marks]

D. What does the term referential integrity mean? Give an example using the case above.

[1 Mark]

### QUESTION FIVE

a. Define the following terms as used in spreadsheet applications.

i. Spreadsheet [ 2 Marks]

ii. Cell [ 1 Mark ]

iii. Cell Referencing [ 2 Marks]

b. The figure below shows an excerpt of an excel worksheet containing clients' data. Use this table to answer the questions that follow.

	A	B	C	D	E	F	G
1	CLIENT NAME	CLIENT ID (KSH)	TOTAL DEBT(KSH)	DEBT PAID(KSH)	BALANCE(KSH)	LOAN AMOUNT APPLIED(KSH)	STATUS
2	MARY FRED	23446578	54000	34000		10000	
3	MARTIN JOHNSON	54667887	15600	14000		5000	
4	BRIAN FINLEY	34567893	240000	120000		12000	
5	JOY PRUDENCE	26453628	66700	10000		30000	
6	MICHAEL HARVEY	23564589	58000	17800		25000	
7	JAMES WESLEY	23789564	120000	85000		23000	
8	PIECE MONICAH	34092385	100000	68900		14500	
9	JEFF GREGORY	32789642	115000	24000		80000	
10	FT WILLIAMS	67894536	28000	13500		45000	

Write an excel formula to perform the following functions:

- i. To calculate the total number of clients [ 2 Marks]
- ii. To calculate the values for the BALANCE column [ 2 Marks]
- iii. To calculate the average amount of loan applied [ 2 Marks]
- iv. To display the highest amount of loan applied [ 2 Marks]
- v. To evaluate the status as either Approved or Not Approved. (The criteria are, if the loan amount is less than the balance, Approve the loan otherwise the Loan will not be Approved). [2 Marks]