



**STRATHMORE INSTITUTE
DIPLOMA IN ENTREPRENEURSHIP
END OF SEMESTER EXAMINATION
DE 1103: INNOVATION AND TECHNOLOGY IN ENTREPRENEURSHIP**

DATE: 8th April 2019

Time: 2 Hours

Instructions

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

QUESTION ONE – COMPULSORY QUESTION (30 marks)

Maboflo recently completed a course in entrepreneurship and has decided to join the family business, which has been in operation for the past 15 years, with the intention of applying his newly acquired knowledge to improve the business, reduce the time the parents spend working and over time expand it.

The business consists of 3 bakeries, WaKASrice Bakeries, TumboFill Caterers & MarkJane Enterprises, they make and sell an assorted range of breads, cakes and pastries.

Currently each location is operated as an independent entity with all activities done on location with the parents spending two days a week at each location mainly reconciling accounts and sorting out personnel and supplier issues.

A major personnel issue is the need to regularly recruit new baking staff and also the high turnover of cashiers mainly due to loss of money. This always results in major disruptions of the business, most times, forcing one of the parents to take over until a replacement is found and trained.

Initially the business did not sell any drinks but when a competitor opened next door and started selling sodas and juices together with their cakes, your parents decided to compete by offering the same and went one better by also selling tea & coffee which are currently served in ceramic mugs.

With Waboflo's decision to join the family business the parents have decided to let him run one of the locations on a full-time basis as they concentrate on the other two with the expectation that over time he will take over the running of all the 3 locations.

Before you jumping in he decided to first understand how the 3 locations operate by carrying out a survey and found out the following;

	WaKASrice Bakeries	TumboFill Caterers	MarkJane Enterprises
Baking ovens	1 (2 deck)	1 (1 deck)	1 (rotary convection)
Capacity (cup cakes per hour)	200	100	500
Mixing machines	1 (10 Kgs)	2 (6 Kgs)	1 (20 Kgs)
Baking trays	50	95	135
Soda fridge	1	1	1
Gas Cookers	2	1	1
Tea/coffee dispensing	Urn	Kettles	1
Sufurias & other cutlery cups, plates etc	Assorted	Assorted	Assorted
Receipting Systems	Cash Register	ETR Machine	Receipt books
Employees			
Baking	3	1	4
Cashiers	1	1	2
Customer Service	1	3	2
Cleaning	2	1	3
Suppliers (flour, eggs, sugar, margarine, milk)	12	9	1 (cashiers uncle)
Location rent	80,000/-	100,000/-	50,000/.
Size of business location	1,500	1,800	1,200

1. Give a list of 3 technologies or innovations that if implemented would streamline the accounting process, speed up payments by customers and reduce the time for reconciliation. (2 marks)
2. List which functions of the business activities could be easily centralised? (3 marks)
3. Explain how he would increase the quality and standardisation of the products produced? (3 marks)
4. Apart from efficiencies and standardisations list 3 other benefits that the business would enjoy from centralising those activities? (2 marks)
5. In which location would you initially centralise the particular activities and why? (3 marks)
6. After centralising the activities suggest how to handle the space that will become available at the various locations? (3 marks)
7. What 3 technologies would you introduce to stream line the tea/coffee activity? (3 marks)
8. Give 3 suggestions to reduce the impact of staff leaving to the operations of the business? (3 marks)
9. What would you do to make sure that the 3 locations and any others opened in future can be easily identified as being the same? (3 marks)
10. On behalf of Waboflo, prepare a memo of not less than 300 words to his parents' explaining the changes he intends to make and justifying the proposed actions. (5 marks)

QUESTION TWO – OPTIONAL QUESTION (15 marks)

There is a tendency to use the words innovation, technology and invention interchangeably based on your knowledge of the distinct differences between them;

1. Assign the following items into which of the 3 categories, innovation, invention and technology, that they most appropriately fit; (5 Marks)

SIM Card, Netflix, Light bulb, mPesa, Optical Lenses (spectacles), iPhone, Computers, Microchips

2. For each of the items listed in (1) above explain why each fall into the specific category (5 marks)
3. List 1 invention and 1 technology from the list in (1) above without which the internet wouldn't exist as we know it today? (5 Marks)

QUESTION THREE – OPTIONAL QUESTION (15 marks)

Attached is Figure 1 which is a representation of the journey taken by a potato from its planting to the serving for a consumer.

1. Discuss in not more than 300 words how this process could be made more efficient and reliable (10 marks)
2. It is usually argued that technology and innovation usually result in the loss of employment, discuss, in not more than 300 words, how your suggested actions in (1) above will not cause the loss of jobs but will actually increase the number and quality. (5 marks)

QUESTION FOUR – OPTIONAL QUESTION (15 marks)

The base for most coffee that is drunk at Starbucks and Rockbern such as cappuccino, latte or macchiato is based on espresso which is brewed by passing pressurised steam through ground and roasted coffee beans.

One of the original methods for producing espresso was by using the “new **steam machinery** for the economic and instantaneous confection of **coffee beverage**” invented by Angelo Moriondo of Turin, Italy in 1884.

A simpler method, the Moka pot, was invented by an Italian engineer named Alfonso Bialetti in 1933 with the intention of making it possible for coffee connoisseurs to make their own espresso at home. This resulted in an increased demand for roasted and ground coffee as many people were now able to brew their own espresso at home.

Starbucks did not start selling brewed coffee in their shops until 1982 which was before Howard Schultz, the man credited with its rapid growth, was ever hired. As of 2018 Starbucks had 28,218 locations spread across most of the western world and Asia.

The first coffee tree to be grown in Kenya was in 1889 by the Roman Catholic Fathers at St. Austin’s in Lavington area at what is today Saint Mary’s School. The Java Coffee House Chain was opened in 1999 by two Americans, Kevin Ashley and John Wagner and today has over 60 stores across Kenya, Uganda and Rwanda.



1. If the original espresso machine (on extreme left) is categorised as an invention as well as the Moka pot (extreme right) why isn't the newer espresso machine (middle, shown here at Java) not considered an invention? – 3 marks
2. If the modern espresso machine is not considered an invention, then what is it? – 2 marks
3. What would you call the process of moving from the original espresso machine to the newer machine? – 3 marks
4. As indicated above Arabica coffee has been growing in Kenya since 1889 yet we remain a predominantly Robusta instant coffee drinking nation, discuss how Java has been able to make coffee drinking an accepted beverage? – 4 marks
5. Why is it that Java and Starbucks have been able to open multiple locations across vast areas yet most of the Kenyan coffee and food outlets seem to be stuck with very few locations? – 3 marks

The Potato Supply and Value Chain

