



ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF LAW, BUSINESS INTELLIGENCE AND ECONOMICS

DEPARTMENT OF ECONOMICS, MARKETING, AND ENTREPRENEURSHIP

EXAMINATION PAPER

COURSE CODE : CBM 405/414  
COURSE TITLE : PRODUCTION AND OPERATIONS  
MANAGEMENT  
DURATION : 3 Hours  
LEVEL : 4.1  
SPECIAL REQUIREMENTS : NONE  
DATE :

11 OCT 2023

**INSTRUCTIONS TO CANDIDATES:**

1. No cell phones are allowed in the examination venue.
2. Use of silent, non-programmable calculators is allowed
3. Answer question number **one (1)** in Section A (Compulsory) and any other **three (3)** questions in Section B.
4. Begin each question on a new page.
5. The number of marks for each question or part question is shown in brackets [ ]
6. Show all workings, where applicable.

## SECTION A (Compulsory)

### CASE STUDY: 'STOCK IS EVIL, ASK AMAZON PERSONEL'"

Predicting the unpredictable is the impossible task that Amazon sellers, and frankly, retailers since the beginning of time, have had to do to maximize their potential profits.

However, if you are an Amazon seller and find yourself with a dreaded Out of Stock note on your product detail page, the consequences are costly and painful: a plummeting Best Seller Rank, evaporating organic sales, and most importantly, lost profits.

The solution to this challenge lies in inventory management. And there is no better person to learn the topic from than Jeremy Biron, Founder of Forecastly, and an Amazon seller for the better part of a decade. In this session, Jeremy takes us deep into the topic of inventory management, to learn how to forecast demand, management inventory, and maintain a healthy cash flow.

The crux of good inventory management is that it helps you manage cash flow effectively. With an Amazon business, a lot of capital can be tied up in the beginning, as you invest in purchasing inventory to sell. Proper inventory management allows you to find that balance of stocking the right amount of inventory without tying up an excessive amount of capital in inventory that sits in an Amazon warehouse. Ultimately, if you are able to pair a profitable product with good inventory management, then you can create a well-oiled cash machine primed for growth. Now that sounds quite appealing!

Jeremy lays out the formula for effective demand forecasting and inventory management by figuring out a few key figures. Let's go through this one at a time, using Jungle Snugs as an example, to figure out when these should be reordered, and how many should be ordered.

## QUESTION ONE

- a i) From the case study, **identify one** cost associated with stock that is tormenting Amazon sellers and retailers. **[2 Marks]**
- ii) Identify from the case study, the **consequences** of the cost associated with the stock you have mentioned. **[3 Marks]**
- iii) State other **two types** of costs associated with stock **other than** the one you mentioned in (a). **[3 Marks]**
- b) Explain two costs associated with **holding too much** stock and proffer a solution to this. **[7 Marks]**
- c) With the aid of a **Stock Control Chart**, advise Amazon on how it can make use of it, to manage its stock levels. **[10 Marks]**

## SECTION B

### Essay Questions (Choose any three questions)

#### QUESTION 2

A production manager of a manufacturing enterprise has been worried by a sharp decline in both labour and machine productivity over the past five years. Citing possible causes of decline in both labour and machine productivity, recommend solutions to this problem.

**[25 Marks]**

#### QUESTION 3

a) The following information was provided by a vehicle repair department;

Design Capacity	50 trucks per day
Effective Capacity	40 trucks per day
Actual Capacity	36 trucks per day

From the information above, calculate;

- i) Capacity Utilisation of the vehicle department per day. **[5 Marks]**
- ii) Capacity Efficiency of the vehicle department per day. **[5 Marks]**

b) Analyse three reasons why it is important for organizations to strategically plan for production capacity. **[15 Marks]**

**QUESTION 4**

Production and Operations Management Systems have been there since time immemorial and have undergone purification stages over the years. In light of this notion, critique the traditional craft production against modern-day mass production, citing examples. **[25 Marks]**

**QUESTION 5**

a) The following information relates to a shoe manufacturing business:

The selling price per pair	\$ 40
Variable cost per pair	\$ 20
Total Workshop Rent per month	\$1 200
Expected number of pairs to be produced per month	100 pairs

From the information provided, calculate:

- i) Contribution being made by each pair of shoes to the manufacturer. **[3 Marks]**
  - ii) Number of shoes a manufacturer needs to make in order to be able to cover all business expenses. **[4 Marks]**
  - iii) The number of pairs the manufacturer must produce in order to achieve a target profit of \$1 800. **[4 Marks]**
  - iv) By how many pairs can sales fall before the manufacturer starts to make some losses? **[4 Marks]**
- b) Discuss how a production manager benefits from the knowledge of breakeven analysis in business decision-making. **[10 Marks]**

**[END OF PAPER]**

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