



ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF LAW, BUSINESS INTELLIGENCE AND ECONOMICS

DEPARTMENT OF ECONOMICS, MARKETING AND ENTREPRENEURSHIP

EXAMINATION PAPER

MODULE CODE : CBM 414  
MODULE TITLE : PRODUCTION AND OPERATIONS  
MANAGEMENT  
DURATION : 3 Hours  
LEVEL : 4.1  
DATE

24 NOV 2025

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

### CASE STUDY: HIVE PACKS (HP)

HP is a public limited company. It is a retailer of pet products such as food and accessories. HP operates 30 large stores situated on the outskirts of towns and cities in Australasia. Most stores are located in retail parks that have parking facilities for customers. Each HP store also has a pet hospital and pet care facility. Evana, HP's CEO, tells the other directors how important HP's mission statement is when making decisions – 'the first choice one-stop shop for pet products'. HP sells a wide range of pet care products for dogs, cats, and other small animals. Most products are popular brands, but HP is starting to build a portfolio of its own-brand products. HP also offers a click and collect service, where customers order products on HP's website and pick them up from collection points.

Evana and the other directors have started to develop HP's portfolio of own-brand products. HP has taken over Organic Pet Foods, a medium-sized business that manufactures organic pet food products. The factory uses labour-intensive batch production methods. These methods have contributed to high inventory levels. The products have been rebranded as 'HP Organic'. Evana thinks that this vertical integration will give HP the ability to control the quality of its own-brand products, which supports its coordinated marketing strategy.

Evana and the Operations Director have decided to modernise the factory and replace all the batch production equipment with automated machinery costing \$15 million. The trade union representative in the factory is threatening to resist any changes that lead to job losses. Evana forecasts that modernisation will increase the production capacity by 20% in 2024. HP's marketing department has undertaken market research into the demand for organic petfood. HP's capacity and output data are shown in Table 1.1.

**Table 1.1 HP's capacity and output data**

	Actual 2023	Forecast 2024
Maximum capacity (units)	15 million	
Output (units)	14 million	16 million

**QUESTION ONE**

- a) Define the following terms as they are used in the case study:
- i) Automated machinery [2 marks]
  - ii) Labour intensive bath production [3 marks]
- b) Calculate the forecast capacity utilisation in 2024. [5 marks]
- c) Explain one benefit of product re-design to HV. [5 marks]
- d) Evaluate whether the factory modernisation will be sufficient to improve efficiency. [10 marks]

**SECTION B**

**Essay Questions**

**QUESTION 2**

Citing possible examples, assess how the Zimbabwean industries can attain circular economy standards. [25 marks]

**QUESTION 3**

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

Design Capacity	60 trucks per day
Effective Capacity	50 trucks per day

Actual Capacity

46 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 has undergone purification stages over 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 Rhoda's cafe business:

**Current menu option:**

Revenue per week (600 customers @ average of \$20) \$12,000

Average variable cost per meal \$5

Overhead costs per week (including salaries of kitchen staff) \$7,000

**Proposed new menu:**

Average meal price \$14

Average variable cost per meal \$4

Overheads per week (including salaries of kitchen staff) \$6,000

- a) Define the term 'margin of safety'. [1 marks]
- b) Calculate the forecast average monthly profit figures for the two menu options. [4 marks]
- c) Calculate the:
  - i) a break-even level of output of both options (show your workings). [4 marks]
  - ii) margin of safety of both options (show working) [4 marks]
- d) On the basis of your results to question (b) and question (c) and any other information, would you advise Rhoda to adopt the new menu? Justify your answer. [12 marks]

[END OF PAPER]

14/9 