



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF MANAGEMENT SCIENCES
DEPARTMENT OF MARKETING AND LOGISTICS**

QUALIFICATION: BACHELOR OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT	
QUALIFICATION CODE: 07BLSC	LEVEL: 6
COURSE CODE: FDA621S	COURSE NAME: FORECASTING AND DATA ANALYSIS
SESSION: JANUARY 2020	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	Ms. Emilia Salomo (FT & DI) Mr. Daniel Kandjimi (PT)
MODERATOR:	Ms. Gloria Tshoopara

INSTRUCTIONS
<ol style="list-style-type: none">1. Answer ALL 4 questions in all sections2. Read each question carefully3. Write as legible and precise as possible4. Indicate your class lecturer's name on your answer sheet

THIS EXAMINATION QUESTION PAPER CONSISTS OF 4 PAGES (Including this front page)

QUESTION 1:

[20 MARKS]

1.1 With the use of practical examples explain the below forecasting concepts in your own words? [20 marks]

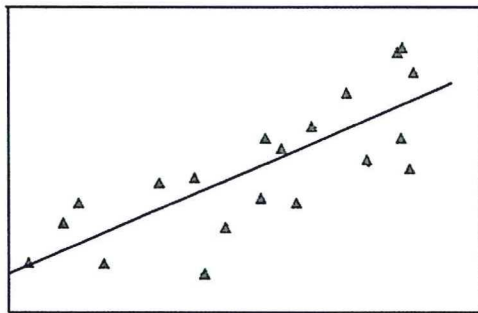
- a) Naïve forecast
- b) Weighted moving average
- c) Delphi method
- d) Demand management
- e) Panel consensus

QUESTION 2

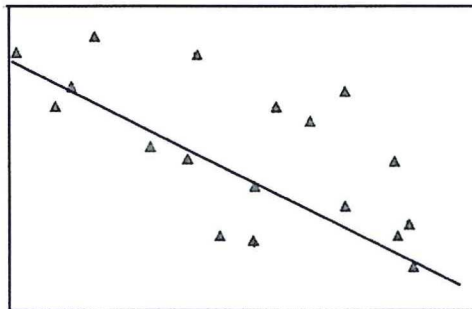
[10 MARKS]

The below graph represent data analysis conducted to determine any correlation between the selling price of the house and the house sales in respective geographic location.

Graph one shows result for correlation between the house sales for houses located in Klein Windhoek and the selling price. While graph 2 shows result for correlation between the house sales for houses located in Katutura and the selling price



Graph 1



Graph 2

- (a) What forecasting method was used in the above scenario? [1 mark]
- (b) Interpret the results of each graph [6 marks]
- (c) What is your sales forecast for houses sales in Klein Windhoek when price is on average N\$3 million, using below data? [3 marks]

The Estate Agent provided you with below information;

Windhoek Price (X, in millions of dollars) is related to Sales (Y, in hundreds of thousands of Namibian dollars) by the regression equation $Y = 8.21 + 0.76 X$.

QUESTION 3**[40 MARKS]**

Sales of Volkswagen's popular Beetle have grown steady at Zimmerman's garage during the past 5 years (see table below). The sales manager had predicted in 2014 that 2015 sales would be 410 VWs.

NB: please round of your answers to two decimal places.

Year	Sales	Forecast
2015	450	410
2016	495	
2017	518	
2018	563	
2019	584	
2020	?	

2.1 Forecast above data using;

- a) Exponential Smoothing with $\alpha=0.30$. [8 marks]
- b) 3 months moving average [6 marks]

2.2 Compute and interpret below, for both, **exponential smoothing and 3 month moving average**:

- a) MAD [6 marks]
- b) MSE [6 marks]
- c) MAPE [6 marks]
- d) Tracking Signal [6 marks]
- e) Which forecasting method will you recommend and why? [2 marks]

QUESTION 4**[30 MARKS]**

Mr. Shilongo has been running a small retail outlet in the northern town of Tsumeb selling Fast Moving Consumers Goods (FMCGs), his business has experienced a rapid growth over the years and inventory management has been a growing concern. He has since decided to offer students internships as demand planners, you are one of the lucky student. You have suggested demand forecasting as a solution to managing the inventory, however Mr. Shilongo have no clue where to start however is keen on the idea.

- (a) Explain to Mr. Shilongo the importance of Demand forecasting to his business? [6 marks]
- (b) With the practical examples help Mr Shilongo in drafting a detailed systematic forecasting approach explaining the various steps involved in the forecasting processes. [20 marks]
- (c) What type of forecasting method/s is/are appropriate for Mr. Shilongo's business? Justify your answers [4 marks]

GRAND TOTAL: 100 MARKS