



NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY
FACULTY OF COMMERCE, HUMAN SCIENCE AND EDUCATION
Department of Management

QUALIFICATION: Bachelor in Business Management	
QUALIFICATION CODE: 07BBMA	LEVEL: 7
COURSE: Operations Management	COURSE CODE: OPM611S
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DURATION: 2 hours	MARKS: 100

2nd OPPORTUNITY EXAMINATION QUESTION PAPER	
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THIS QUESTION PAPER CONSISTS OF 6 PAGES
(Including this front page)

INSTRUCTIONS

1. Answer ALL the questions, **EXCEPT** for Question 5 where you should **only answer one**: choose either a) or b).
2. Show all formulae and calculations as marks will be awarded for them.
3. Write clearly and neatly.
4. Number the answers clearly.

PERMISSIBLE MATERIALS

1. Calculator.

Section A:

[16 Marks]

Multiple Choice Questions – Choose the correct Answer

1. Which of the following is the final step in the design process?
 - a. System design
 - b. Detailed design
 - c. Production initialisation
 - d. Testing and improvement
 - e. Planning

2. Defining characteristics of services does not include:
 - a. Superior value retention
 - b. Uniqueness
 - c. Labour intensive
 - d. All of the above
 - e. None of the above

3. According to the Theory of Constraints (TOC), bottlenecks can be caused by:
 - a. Equipment and how it is used
 - b. Policies
 - c. Employee capability
 - d. A&C
 - e. All of the above

4. Order winners are goods or services that customers
 - a. Consider buying
 - b. Can afford to buy
 - c. Actually buy
 - d. Lay-bye
 - e. Don't like

5. How long will it take to produce a pen if the backlog is 20 pens with a capacity to produce 30 pens an hour.
 - a. 1.5 hours
 - b. 40 minutes
 - c. 66.7%
 - d. 90 minutes
 - e. None of the above

6. Exponential smoothing is characterised by all but one of the following:
 - a. Smoothing constant
 - b. Actual demand
 - c. Future forecast
 - d. Regression
 - e. None of the above

7. Productivity increases when
 - a. inputs increase while outputs remain the same
 - b. inputs decrease while outputs remain the same
 - c. outputs decrease while inputs remain the same
 - d. inputs and outputs increase proportionately

8. Areas that commonly feature industrial engineers include all but one of the following:
 - a. Setting parameters for bonus schemes
 - b. Ergonomics
 - c. Setting labour standards
 - d. Guidelines for profit sharing.
 - e. Total quality management

9. Which is the correct order for process types starting with low volume/high variety and moving to high volume/low variety?
 - a. Batch processes, job processes, mass processes, continuous processes
 - b. Job processes, batch processes, mass processes, continuous processes
 - c. Batch processes, mass processes, job processes, continuous processes
 - d. Job processes, batch processes, mass processes, continuous processes

10. In the formula for efficiency, what does AO stand for?
 - a. Aggregate output
 - b. Actual output
 - c. Average output
 - d. Alternative output
 - e. None of the above

11. The _____ the turnover of inventory, the _____ the performance of inventory policies.
 - a. Higher/lower
 - b. Lower/higher
 - c. Lower/lower
 - d. Higher/higher
 - e. C & D are correct.

12. Which of the following are the three core goals of sustainability?
 - a. Social, Ethics and Globalisation
 - b. Environment, Geographical distribution and Marketing
 - c. Planning, Organising and Control
 - d. Social, Economic and Environment

13. _____ use equations that are descriptive of the variables that will be used in the forecast.
 - a. Associative methods
 - b. Quantitative techniques
 - c. Judgemental forecasts
 - d. Time series forecasts

14. The boundaries of a process include all but one of the following:
- a. Definition of the good
 - b. Continuous feedback
 - c. Definition of the service
 - d. Identification of possible suppliers
 - e. Customer needs
15. _____ utilises statistical modelling to predict future sales figures, often taking into account current and historical trends.
- a. Aggregate planning
 - b. Qualitative forecasting
 - c. Sales forecasting
 - d. Quantitative forecasting
16. The factors influencing effective capacity include all except:
- a. Supplier issues
 - b. Facility issues
 - c. Employee issues
 - d. Operational issues
 - e. Process issues

Section B

[56 Marks]

Question 1: Operations Management

(10)

Distinguish between order qualifiers and order winners. Use a relevant example.

Question 2: Forecasting

(12)

Summarize the six steps that should be followed when doing a forecast.

Question 3: Design of goods and services

(12)

Namibian companies are not affected by the international/ global markets when it comes to the design of their products.

- i. Do you think this statement is true? Your answer should include how globalization impacts Namibian designs. (6)
- ii. Briefly list and discuss three core competency characteristics of design as the basis of competitiveness. (6)

Question 4: Process management

(12)

Identify and explain in your own words the process structures for services, with one appropriate example.

Question 5: Aggregate Planning

(10)

Answer only one question, **either a) or b)**

- a) Summarise the service demand management strategies an operations manager can choose from, to satisfy the requirements of the aggregate plan. (10)

OR

- b) Summarise the service supply strategies an operations manager can choose from, to satisfy the requirements of the aggregate plan. (10)

Section C

[28 Marks]

Question 7: Inventory Management – EOQ

(20)

Khomas Trading Co sells 25 000 bags of cement per year. The holding costs are estimated to be N\$50 per bag per year. The ordering costs are N\$120 per order. The business works for 280 days per year.

Determine:

- i) the optimal economic order quantity (EOQ) (4)
- ii) the number of orders per year (2)
- iii) the length of the ordering cycle (3)
- iv) the total annual inventory costs (4)
- v) if the holding costs increase to N\$65 per bag, what will the total annual inventory costs amount to? (7)

Question 8: Capacity Planning

(8)

Coolies Elementary School opened its doors in January 2019. Being a private school, it wanted to have the best teacher – learner ratio. The facilities were designed to accommodate 250 learners. Due to some challenges, they found that their effective capacity is 220 learners. As a result of the current economic conditions, their enrolment was 195 learners.

1. Determine the i) efficiency and ii) the utilisation of the school facilities. (6)
2. How would you assess the utilisation of capacity? (2)

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