NAMIBIA UNIVERSITY OF SCIENCE AND TECHNOLOGY

HP-GSB HAROLD PUPKEWITZ Graduate School of Business

FACULTY OF COMMERCE; HUMAN SCIENCES AND EDUCATION

HAROLD PUPKEWITZ GRADUATE SCHOOL OF BUSINESS

QUALIFICATION: DIPLOMA IN BUSINESS PROCESS MANAGEMENT	
QUALIFICATION CODE: 06DBPM	**LEVEL: 5**
COURSE CODE: ISM521C	**COURSE NAME:** INTRODUCTION TO SUPPLY CHAIN MANAGEMENT
SESSION: JUNE 2025	**PAPER:** PAPER 1
DURATION: 3 HOURS	**MARKS:** 100

FIRST OPPORTUNITY EXAMINATION – QUESTION PAPER

EXAMINER(S)	**Ms. Hilma Nuuyandja**
MODERATOR:	**Ms. Gloria Tshoopara**

INSTRUCTIONS

1. Answer ALL the questions.
2. Write clearly and neatly.
3. Number the answers clearly.

PERMISSIBLE MATERIALS

1. Examination paper
2. Examination script

THIS QUESTION PAPER CONSISTS OF 5 PAGES (INCLUDING THIS FRONT PAGE)

QUESTION 1: MULTIPLE CHOICE QUESTIONS **[2X15]**

1.1 Which of the following best explains the strategic purpose of internal supply chain integration?
a) To reduce external partnerships
b) To outsource non-core processes
c) To align internal functional goals and eliminate silos
d) To increase procurement flexibility

1.2 Which metric would most directly reflect the impact of integration on inventory levels?
a) Total quality cost
b) Inventory turnover ratio
c) Market share
d) Customer retention index

1.3 Which scenario best illustrates horizontal integration in a supply chain context?
a) A distributor acquiring a retail chain
b) A logistics provider forming a joint venture with another logistics firm
c) A manufacturer vertically integrating with raw material suppliers
d) A firm developing a customer loyalty programme

1.4 Which of the following is the least likely result of poor supply chain integration?
a) Increased redundancy in operations
b) Enhanced forecasting accuracy
c) Delayed customer deliveries
d) Reduced inventory visibility

1.5. In inventory classification, which type of inventory provides a buffer against uncertainties in demand?
a) Cycle stock
b) Transit stock
c) Safety stock
d) Dead stock

1.6 Company A makes widgets and sells them to Company B, who incorporates some software and other materials to produce gadgets. Company B sells these gadgets to Company C, the end user. Which is the best statement regarding the relationship among Companies A, B, and C?
a) Company B is upstream from Company A.
b) Company C is downstream for both Company A and Company B.
c) Company A is a first tier supplier for Company C.
d) Company B is a second tier supplier of Company A

1.7 You order a box of pencils from an office supply store and use them one-by-one until they are all gone. The pencils in your possession are:
a) Transit inventory.
b) Anticipation inventory.
c) Safety stock.
d) Cycle stock

1.8 The bullwhip effect refers to:
a) Constant supply patterns
b) Large demand variations at the retail level
c) Increasing variability in orders upstream of the supply chain
d) High inventory turnover

1.9 The reorder point in inventory systems is influenced by:
a) Product price only
b) Supplier location
c) Lead time and demand variability
d) Distribution channel

1.10 What does lean supply chain strategy focus on?
a) High responsiveness
b) Eliminating waste and increasing efficiency
c) Product customisation
d) High flexibility

1.11 One major limitation of the push-based strategy is:
a) Dependence on demand signals
b) Overproduction and inventory obsolescence
c) Lack of forecast models
d) Minimal supply chain integration

1.12 Which of the following is a primary objective of JIT inventory systems?
a) Maximise warehouse stock
b) Reduce inventory carrying cost
c) Increase order sizes
d) Extend lead times

1.13 The fill rate metric is used to:
a) Evaluate stock turnover
b) Measure how much customer demand is fulfilled from stock
c) Track supply delays
d) Monitor order errors

1.14 Which cost is associated with lost customer orders due to stockouts?
a) Holding cost
b) Service cost
c) Shortage cost
d) Setup cost

1.15 A high inventory turnover ratio generally indicates:
a) Inefficient use of inventory
b) High holding cost
c) Efficient inventory management
d) Poor demand forecasting

Sub-total: 30 marks

QUESTION 2

STATE WHETHER THE FOLLOWING STATEMENTS ARE TRUE OR FALSE **[2X10]**

2.1 The fill rate is used to determine how much demand is met directly from stock.

2.2 Supply chain visibility can significantly reduce the impact of the bullwhip effect.

2.3 Dead stock includes items that have become obsolete or deteriorated.

2.4 Safety stock is the extra inventory held by a business to protect against stockouts.

2.5 External integration excludes coordination with third-party logistics providers.

2.6 Periodic review systems trigger orders whenever inventory reaches a predetermined minimum level.

2.7 Speculative stock is held in anticipation of price stability and consistent supply.

2.8 Push supply chain systems rely on actual customer demand to trigger production.

2.9 JIT inventory systems are designed to maintain high safety stock levels.

2.10 Logistics strategies do not influence the competitiveness of a firm.

Sub-total: 20 marks

QUESTION 3

3.1 Case: Regional Distribution Pressures **(20 Marks)**

A mid-sized manufacturing firm based in Windhoek has recently experienced significant delays in fulfilling customer orders across Namibia. The CEO suspects this is due to inefficiencies in the company's supply chain operations.

Question

Using your understanding of supply chain structure and logistics, identify the likely bottlenecks in their supply chain. Propose improvements by applying the five SCM components (Plan, Source, Make, Deliver, Return) and justify how each step can contribute to reducing delays and increasing efficiency.

3.2 Case: Fragmented Operations in a Food Distribution Chain **(10 Marks)**

A national food distribution company operates with independent procurement, logistics, and warehousing units. Communication breakdowns and lack of coordination have led to overstocking and frequent stockouts.

Question:

Explain how internal and external integration can solve these problems. Identify the types of integration most relevant in this case and recommend an approach to enhance information flow, inventory visibility, and joint decision-making.

3.3 Case: Choosing Between Lean and Agile Models **(10 Marks)**

A local fashion company is debating whether to implement a lean or agile supply chain strategy. Their product range includes basic, functional items (e.g. school uniforms) and fast-changing trendy items (e.g. seasonal wear).

Question:

Compare the lean and agile strategies using the company's product categories. Recommend a suitable hybrid model for implementation and justify how the push-pull boundary can be managed effectively.

3.4 Case: Disruption at the Border **(10 Marks)**

A Namibian agribusiness regularly imports agricultural inputs (seeds, fertilisers, equipment) from South Africa. Recently, border delays due to political unrest and changing customs regulations have disrupted their planting schedule, leading to significant revenue losses.

Question:

Identify the external supply chain risks highlighted in this case. Discuss how the company can apply the PPRR (Prevention, Preparedness, Response, Recovery) risk management model to build resilience. Propose at least three proactive mitigation strategies tailored to this business context.

Sub-total: 50 Marks

Grand Total: 100 marks