



ZIMBABWE

**MINISTRY OF HIGHER AND TERTIARY EDUCATION,
INNOVATION, SCIENCE AND TECHNOLOGY
DEVELOPMENT**

**HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

NATIONAL CERTIFICATE

IN

PUBLIC HEALTH SUPPLY CHAIN MANAGEMENT

SUBJECT: Communication

PAPER NO: 543/23/M01

DURATION: 3 Hours

MAY/JUNE 2024 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1) Answer all questions.
- 2) Start each answer on a fresh page.

This paper consists of 3 printed pages.



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PAPER NO: 543/23/M01-COMMUNICATION

QUESTION 1: COMMUNICATION DISSEMINATION (20 MARKS)

At any workplace communication flows along prescribed formal channels. Write notes on the following forms that are used to disseminate information in an organisation:

- | | |
|--------------|-----------|
| a) e-mail | (4 marks) |
| b) Telephone | (4 marks) |
| c) Meeting | (4 marks) |
| d) Letter | (4 marks) |
| e) Report | (4 marks) |

QUESTION 2: ROLES OF COMMUNICATION AT WORKPLACE (20 MARKS)

Explain the following functions which communication performs at a workplace:

- | | |
|-----------------------------------|-----------|
| a) Inform (informative function) | (4 marks) |
| b) Control (regulatory function) | (4 marks) |
| c) Unite (integrative function) | (4 marks) |
| d) Persuade (persuasive function) | (4 marks) |
| e) Sales (marketing function) | (4 marks) |

QUESTION 3: MEMORANDUM (15 MARKS)

You are the Production Manager of Newlands Foods a beverages producing company. The year end festive holidays are approaching and production need to increase. Write a memorandum to the production unit staff informing them of the extended working ours to makeup for the annual festive season break.

QUESTION 4: LETTER (15 MARKS)

You are the stores general hand a position you have held for the past five (5) years at your company. A position within your department of the stores controller has arisen which is a grade higher in terms of promotion or progression. Write a letter of application to the general manager concerning this post you are interested in.

PAPER NO: 543/23/M01-COMMUNICATION

QUESTION 5 REPORT WRITING (20 MARKS)

The Managing Director of your company has noticed with concern the drop in sales figures of one of your cleaning detergents. You have been instructed as the sales manager to carry out an investigation into the causes and to come up with recommendations. The report is to be presented in memorandum format.

QUESTION 6: ORGANISATIONAL COMMUNICATION (10 MARKS)

Provide five (5) duties of a manager.

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NATIONAL DIPLOMA

IN

PUBLIC HEALTH SUPPLY CHAIN

MODULE: Health Laws and Regulations

PAPER NO: 642/23/M04

DURATION: 3 Hours

MAY/JUNE 2024 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

1. Answer any five (5) questions.
2. Each question carries twenty (20 marks)

This paper consists of 2 printed pages.



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QUESTION 1

Discuss the importance of regulatory environment. (25 marks)

QUESTION 2

Outline the duties of the following in public health act:

- a) Local authority. (10 marks)
- b) Ministry of health. (10 marks)
- c) National housing. (5 marks)

QUESTION 3

Discuss the main pillars of National Medicine Policy (NMP). (25 marks)

QUESTION 4

Discuss the role of the following regulatory boards in Zimbabwe Supply Chain System:

- a) MCAZ (10 marks)
- b) HPA (10 marks)
- c) RPAZ (5 marks)

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NATIONAL DIPLOMA

IN

PUBLIC HEALTH SUPPLY CHAIN MANAGEMENT

SUBJECT: Research Methods

PAPER NO: 660/23/M02

DURATION: 3 Hours

OCTOBER/NOVEMBER 2024 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1) Answer any five (5) questions.
- 2) Each question carries a total of twenty (20) marks.

This paper consists of 2 printed pages.

PAPER NO: 660/23/M02-RESEARCH METHODS

QUESTION 1

With reference to suitable examples, give an overview of the research process in your area of specialisation. (20 marks)

QUESTION 2

Describe the components of a research proposal, highlighting significance of each component. (20 marks)

QUESTION 3

Discuss the purpose of the literature review in research process. (20 marks)

QUESTION 4

Discuss the skills required to interpret data and the impact of interpretation on research conclusions. (20 marks)

QUESTION 5

Examine any four (4) types of research. (20 marks)

QUESTION 6

Explain the importance of research instruments in the research process. (20 marks)

QUESTION 7

Discuss the motion that "Plagiarism is a serious threat to business research methods". (20 marks)

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IN

PUBLIC HEALTH SUPPLY CHAIN MANAGEMENT

SUBJECT: Economic Evaluation

PAPER NO: 642/23/M02

DURATION: 3 Hours

OCTOBER/NOVEMBER 2024 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1) Answer any five (5) questions.
- 2) Each question carries 20 marks.

This paper consists of 3 printed pages.



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PAPER NO: 642/23/M02-ECONOMIC EVALUATION

QUESTION 1

- a) Define the following terms:
- i) Cost minimisation analysis (2 marks)
 - ii) Cost benefit analysis (2 marks)
 - iii) QALY (2 marks)
 - iv) Economic evaluation (2 marks)
 - v) Pharmacoeconomics (2 marks)
- b) Outline any five (5) principles of cost benefit analysis. (10 marks)

QUESTION 2

- a) Differentiate between QALY and DALY (10 marks)
- b) Demonstrate how the cost benefit analysis method can be applied in public health. (10 marks)

QUESTION 3

Demonstrate how the following costs are calculated assuming the following information:

A hospital produces 1000 units of a medical services per month. The service requires 10 nurses, 5 doctors, and 5 administrative staff. The hospital rents a building for \$50 000/month equipment and supplies cost \$10 000/month. Each nurse is paid 5000//month, doctors \$10000/month and administrative staff \$3.000/month

- a) Marginal costs (5 marks)
- b) Average costs (5 marks)
- c) Total costs (5 marks)
- d) Fixed costs (5 marks)

QUESTION 4

- a) Briefly explain the Cost Effective Analysis process. (10 marks)
- b) Highlight the cost minimisation analysis process. (10 marks)

PAPER NO: 642/23/M02-ECONOMIC EVALUATION

QUESTION 5

Analyse five (5) characteristics of economic evaluation.

(20 marks)

QUESTION 6

Discuss any five (5) uses of pharmaeconomics.

(20 marks)

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NATIONAL DIPLOMA

IN

PUBLIC HEALTH SUPPLY CHAIN

SUBJECT: Fundamentals of Public Health Supply PAPER NO: 660/23/M01

DURATION: 3 hours

MAY/JUNE 2024 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1. Answer any four (4) questions.**
- 2. Each question carries twenty-five (25) marks.**

This paper consists of 2 printed pages.



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PAPER NO: 660/23/M01 - FUNDAMENTALS OF PUBLIC HEALTH SUPPLY

QUESTION 1

Discuss the different methods of quantification used in health care, briefly outlining the advantages and disadvantages of each system. (25 marks)

QUESTION 2

Ethics play a pivotal role in supply chain management. Discuss the ethics involved in supply chain management. (25 marks)

QUESTION 3

Outline the procurement cycle. (25 marks)

QUESTION 4

Discuss the following:

- a) FIFO (5 marks)
- b) FEFO (5 marks)
- c) JIT (5 marks)
- d) Cold chain cycle (5 marks)
- e) Stock card (5 marks)

QUESTION 5

Outline the role of technology in health care supply chain management. (25 marks)

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NATIONAL DIPLOMA

**IN
PUBLIC HEALTH SUPPLY CHAIN MANAGEMENT**

MODULE: Medicine Retailing

PAPER NO: 660/21/S03

DURATION: 3 Hours

NOVEMBER/DECEMBER 2025 EXAMINATION

REQUIREMENTS

Blue / black Pen, Pencil, Ruler.

INSTRUCTIONS TO CANDIDATE

- 1. This question paper comprises of six questions. Each question comes twenty (20) marks.**
- 2. Answer any five (5) questions.**
- 3. Do not write anything on the question paper.**
- 4. Do not write your Name on the answer booklet.**

QUESTION 1

Discuss the structure and functioning of supply chains in healthcare, highlighting the importance of value chain in ensuring quality service delivery. In your answer, explain how effective supply chain management can reduce costs and improve patient outcomes. (20 marks)

QUESTION 2

Define a trade area and explain the factors that affect it. Analyse how trade area delineation a location decisions impact retail pharmacy performance. Use practical examples to show how pricing strategies and supply chain networking trade area planning. (20 marks)

QUESTION 3

- a) Describe the key elements of store layout, planning including space planning. Store image and fixtures. (10 marks)
- b) Evaluate how merchandise presentation techniques and store atmospheric influence customer behaviour and sales in pharmaceutical retail setting. (10 marks)

QUESTION 4

- a) Explain the concept of merchandising in pharmaceutical retail and describe the five rights of merchandising. (10 marks)
- b) Discuss the importance of shelf maintenance and drug expiry data monitoring and how these influence customer safety and satisfaction. (10 marks)

QUESTION 5

- a) Evaluate the importance of product mix, customer service, and after sales service in the marketing of drugs and allied products. (10 marks)
- b) How can proper handling of complaints and understanding consumer characteristics improve brand loyalty. (10 marks)

QUESTION 6

Discuss the role of Customer Relationship Management (CRM) in pharmaceutical retail includes in your discussion the benefits of CRM, the techniques used to gather consumer data and how this information can be used to tailor services to customer needs.

(20 marks)

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NATIONAL DIPLOMA

IN

PUBLIC HEALTH SUPPLY CHAIN

**MODULE: Drugs and Medicines Distribution PAPER NO: 660/21/S05
Management**

DURATION: 4 Hours

NOVEMBER/DECEMBER 2025 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

Answer any five (5) questions

This paper consists of 3 printed pages.



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PAPER NO: 660/21/S05-DRUGS AND MEDICINES DISTRIBUTION
MANAGEMENT

QUESTION 1

- a) Define physical distribution planning and state three (3) strategic factors that affect the choice of a distribution network. (5 marks)
- b) Discuss five (5) operational elements involved in effective distribution planning. (15 marks)

QUESTION 2

- a) Explain the differences between inbound, internal and outbound logistics. (6 marks)
- b) Describe four (4) types of equipment and their relevance to cost and performance in medical logistics. (8 marks)
- c) Outline three (3) key VAT or legislative consideration in drug distribution. (6 marks)

QUESTION 3

- a) Define a cold chain and explain its relevance in public health. (5 marks)
- b) Discuss any four (4) common causes and consequences of cold chain breaches. (12 marks)
- c) State any three (3) components of a cold chain protocol checklist. (3 marks)

QUESTION 4

- a) Describe the concept of total distribution cost and trade offs. (6 marks)
- b) Discuss the environmental considerations in recycling and disposal of goods. (8 marks)
- c) Highlight any three (3) legislation that governs these environmental concerns. (6 marks)

PAPER NO: 660/21/S05-DRUGS AND MEDICINES DISTRIBUTION
MANAGEMENT

QUESTION 5

- a) Explain any four (4) methods used to monitor distribution performance. (12 marks)
- b) Suggest any four (4) KPIs used to assess quality and service. (4 marks)
- c) Briefly describe how benchmarking and direct product profitability are applied. (4 marks)

QUESTION 6

- a) Discuss four (4) ways IT enhances physical distribution. (8 marks)
- b) Explain the role of Inventory Control Systems. (12 marks)

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QUESTION 1

- a) Define business analytics and explain its importance in decision making within the healthcare supply chain. (10 marks)
- b) Discuss how supply chain management can enhance efficiency in the procurement of medical supplies. (10 marks)

QUESTION 2

- a) Compare and contrast linear programming and simulation as decision-making tools in supply chain management. (10 marks)
- b) Using an example, explain how transportation models can be used to determine the most economical transportation system for medical supplies. (10 marks)

QUESTION 3

- a) analyse the key factors that influence supply chain relationships in international drug supply chains. (10 marks)
- b) Evaluate the role of contract management in maintaining effective supplier relationships. (10 marks)

QUESTION 4

- a) Define sustainable development and discuss its strategic implications for healthcare supply chains. (10 marks)
- b) Identify the drivers and barriers of sustainable procurement in the medical supply chain. (10 marks)

QUESTION 5

- a) Outline the steps involved in the risk management process model for procurement systems. (10 marks)
- b) Discuss the challenges associated with global purchasing in the healthcare sector. (10 marks)

QUESTION 6

- a) Explain how value chain analysis can be used to assess competitive advantage in the medical supply chain. (10 marks)
- b) Describe the criteria for sustainable supplier selection and evaluation and their importance in healthcare procurement. (10 marks)

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NATIONAL DIPLOMA

IN

ENVIRONMENTAL HEALTH

MODULE: Epidemiology and Biostatistics

PAPER NO: 605/23/M15

DURATION: 3 Hours

JUNE 2026 EXAMINATION

REQUIREMENTS

Non programable scientific calculator and graph paper.

INSTRUCTIONS TO CANDIDATE

Answer any five questions.

PAPER NO: 605/23/M15 – EPIDEMIOLOGY AND BIOSTATISTICS

QUESTION 1

- (a) Identify eight (8) factors that promote prevalence of a disease. (4 marks)
- (b) Describe three (3) types of surveillance that are commonly used in Zimbabwe. (9 marks)
- (c) Discuss the importance of observation as a data collection method in epidemiology. (7 marks)

QUESTION 2

Discuss the following types of epidemiological studies: -

- (a) case-control (7 marks)
- (b) cross sectional (6 marks)
- (c) cohort (7 marks)

QUESTION 3

The ages of nine (9) patients admitted at Nyamhunga Hospital last month were recorded below:-

6 7 10 11 11 13 16 18 25

Calculate the following: -

- (a) mean (2 marks)
- (b) mode (2 marks)
- (c) median (2 marks)
- (d) variance (8 marks)
- (e) standard deviation (4 marks)
- (f) range (2 marks)

PAPER NO: 605/23/M15 – EPIDEMIOLOGY AND BIOSTATISTICS

QUESTION 4

Table below shows temperatures recorded for six (6) days of February against ice cream sales

T°C	10	21	27	16	35	36
Sales	1	4	6	3	8	10

- (a) Present the information in the table above on a scatter diagram and comment on the relationship that exists between the variables (temperature and sales). (10 marks)
- (b) Explain the following terms as they are used in epidemiology and biostatistics
- (i) Prevalence (2 marks)
 - (ii) Relative risk (2 marks)
 - (iii) Confounding variable (2 marks)
 - (iv) Bias (2 marks)
 - (v) Confidence interval (2 marks)

QUESTION 5

Discuss the following factors in disease causation

- (a) predisposing factors (5 marks)
- (b) enabling factors (5 marks)
- (c) precipitating factors (5 marks)
- (d) reinforcing factors (5 marks)

QUESTION 6

Explain the following

- (a) Natural active immunity (4 marks)
- (b) Artificial passive immunity (4 marks)
- (c) Artificial active immunity (4 marks)
- (d) Natural passive immunity (4 marks)
- (e) Herd immunity (4 marks)