higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

PRODUCTION AND QUALITY CONTROL N4

(8140034)

21 April 2021 (X-paper)
09:00–12:00

Nonprogrammable calculators may be used.

This question paper consists of 5 pages.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
PRODUCTION AND QUALITY CONTROL N4
TIME: 3 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer all the questions.
2. Read all the questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. Use only a black or blue pen.
5. Write neatly and legibly.

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QUESTION 1

Complete the following sentences by writing only the missing word or words next to the question number (1.1–1.10) in the ANSWER BOOK.

1.1 The complexity of … is increased as a result of the uncertain future and the influence that uncontrollable variables, such as the general economic climate and technological development have on an enterprise.

1.2 By exploiting the …, top management can choose a strategy of growth through diversification.

1.3 … particularly concerns manufacturing small quantities of a large variety of products.

1.4 … attempts to prioritise the inclusion of functions that add value for customers into products or services.

1.5 Variable data is information that is measured on a/an … scale.

1.6 Forecasts are generally divided into … and… types of forecasting.

1.7 The most basic behaviour of data in a/an … is whether it is increasing, decreasing or remains stable over time.

1.8 … specifies what, how much and when raw materials, parts and sub-assemblies are required by the master schedule.

1.9 Demand management encompasses all forecasts, customer orders and …

1.10 … is the process of producing similar products on a repeat basis usually in large volumes.

(10 × 2) **[20]**

QUESTION 2

2.1 Name the THREE different types of production processes. (3)

2.2 Name the various kinds of comprehensive plans made by both the head and subordinate staff members of an enterprise to achieve objectives. (7)

[10]

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QUESTION 3

3.1 Name SEVEN elements used by World Class Manufacturing (WCM) to create and maintain customer satisfaction. (7)

3.2 The cost of quality is the cost of non-conformance.

Briefly discuss the TWO types of costs:

3.2.1 Control costs (5)

3.2.2 Failure costs (3)

3.3 What are the THREE main inputs that need to be considered when generating the production plan? (3)

3.4 Why is it necessary that all persons involved in production planning are advised of any changes? (2)

[20]

QUESTION 4

4.1 Name and discuss FIVE of the circumstances under which quality inspections are usually carried out. (10)

4.2 The annual demand for a type of raw material is 400 kg, the ordering cost is R10 per order, the inventory holding cost is 10% per year and the unit cost is R50 per kg.

Calculate the economic order quantity (EOQ) where EOQ = $\frac{\sqrt{2 \text{ X Ds}}}{\text{IC}}$. (5)

4.3 Information about and knowledge of the business economics environment of an enterprise must be analysed and forecast based on certain analysis. Forecasts are multidimensional and involve complex activities.

Write down such activities. (10)

[25]

QUESTION 5

5.1 Choose a description from COLUMN B that matches a term in COLUMN A. Write only the letter (A–E) next to the question number (5.1.1–5.1.5) in the ANSWER BOOK.

COLUMN A		COLUMN B	
5.1.1	Attribute data	A	satisfying customers' expectations
5.1.2	Variable data	B	information that is measured on a continuous scale
5.1.3	Linear	C	written plan expressed in terms of a financial amount
5.1.4	Budget	D	information that is counted in a whole number
5.1.5	Quality	E	changes by the same rate in an evenly time

(5 × 1) (5)

5.2 Name the SIX points on which a foreman in a workshop will base his daily tactical plans. (6)

5.3 What is the purpose of strategic planning? (7)

5.4 Discuss the production management system of an enterprise. (7)

[25]

TOTAL: 100

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