higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T1410**(E)**(A12)T

# NATIONAL CERTIFICATE

# PRODUCTION AND QUALITY CONTROL N4

(8140034)

**12 August 2019 (X-Paper)**
**09:00–12:00**

**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

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**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. Write neatly and legibly.

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**QUESTION 1**

Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'True' or 'False' next to the question number (1.1–1.15) in the ANSWER BOOK.

1.1 In master production scheduling, the time period during which changes to the schedule should be avoided is known as the demand-time fence.

1.2 A continuous flow of order is an important factor in achieving high productivity and high cost.

1.3 Production management is also known as operations management.

1.4 Quality products always cost more.

1.5 Conglomerate diversification comprises the removal of products that do not profit the enterprise.

1.6 The systems approach is a technique which creates a theoretical framework for the systematic study of the enterprise.

1.7 A plan is not complete without a budget.

1.8 Strategic management concentrates on efficiency while tactical management concentrates on effectiveness.

1.9 If a work centre produces 120, 110, 120, 120 and 130 units a day over a 5-day period, the demonstrated capacity of that centre over that 5-day period is 110 units per day.

1.10 The values of top management have a great influence on the choice of strategy.

1.11 The Delphi method is an extension of the expert in that a group of experts are used to make forecasts.

1.12 A linear trend refers to data that is constant over a certain period.

1.13 The more variations there are in delivery times the higher the standard deviation.

1.14 A list of components that go into a parent part is known as a bill of materials.

1.15 The process of estimating future market demand for a company's products is known as forecasting.

(15 × 1) (15)

1.2 1.2.1 State SEVEN requirements of developing a successful business plan. (7)

1.2.2 Define *planning*. (3)
**[25]**

## QUESTION 2

2.1 Choose a description from COLUMN B that matches a term in COLUMN A. Write only the letter (A–E) next to the question number (2.1.1–2.1.5) in the ANSWER BOOK.

| COLUMN A | | COLUMN B | |
|---|---|---|---|
| 2.1.1 | Concept gap | A | the product does not meet the specifications |
| 2.1.2 | Specific gap | B | rate of change is continuous to increase or decrease beyond the turning point |
| 2.1.3 | Quality gap | C | management did not understand the customer's requirements |
| 2.1.4 | Communication gap | D | the product does not match the market message |
| 2.1.5 | Parabolic | E | the organisational specification did not match the customer's requirements |

(5 × 1) (5)

2.2 Name TEN production inputs that may be found in the production system. (10)

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

2.4 Define a *goal*. (3)
**[25]**

## QUESTION 3

3.1 Draw a large, neat diagram of the budget process of an enterprise. (10)

3.2 Corrective action should be taken when certain characteristics or patterns occur.

Name FOUR of these patterns that can occur. (4)

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3.3 The planner of the master production schedule needs certain information inputs with which he/she has to do scheduling.

Name FIVE of these inputs. (5)

3.4 Explain what is meant by *market orientation*. (6)
**[25]**

**QUESTION 4**

4.1 A breakfast cereal producer produces 1 kg packs. Government regulations prohibit packs that are more than 2% underweight. At 2% overweight the producer's profit is too low. Samples taken from two of the filling machines show that their standard deviations are 4,5 g and 6,2 g respectively.

Are the machines up to standard at the 1,22 level?

Show ALL the calculations. (10)

4.2 At the end of May a forecast of 749 units was made for the sales of a product for June. The sales of this product were 776 units in June.

Using a smoothing constant of 18%, calculate a forecast for July. (10)

4.3 State THREE possible causes if there is poor production on a factory floor. (3)

4.4 State TWO purposes of process control. (2)
**[25]**

**TOTAL: 100**

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