higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T1410**(E)**(A11)T

NATIONAL CERTIFICATE

PRODUCTION AND QUALITY CONTROL N4

(8140034)

11 April 2018 (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. ALL calculations must be clearly shown and the answers rounded off to TWO decimal places where appropriate.
5. Rule off across the page on completion of each section.
6. Write neatly and legibly.

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SECTION A

QUESTION 1

1.1 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'true' or 'false' next to the question number (1.1.1–1.1.15) in the ANSWER BOOK.

1.1.1 A retrenchment strategy is usually followed when an enterprise performs poorly.

1.1.2 In a quality costing programme, warranty costs should be captured as an example of internal failure costs.

1.1.3 The technique used when a product can be configured in a number of ways, is known as final assembly scheduling.

1.1.4 The ordering policy which involves ordering exactly the quantity needed, is known as a fixed-order quantity.

1.1.5 Sampling entails selecting a representative sample of the product for inspection or testing on the basis of statistical sampling criteria.

1.1.6 The financial function is limited to all other functions.

1.1.7 Control and evaluation bridge the gap between strategic planning and the implementation of strategy.

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

1.1.9 Production management is also known as operations management.

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

1.1.11 When calculating economic order quantity (EOQ), the carrying cost of inventory is assumed to be constant.

1.1.12 Any unexplained variation around the basic trends is called random variation.

1.1.13 To make a forecast for a particular time period, the data series should be composed into the patterns in the data over the time period.

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

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1.1.15 A listing of components that go into a parent part is known as a bill of materials.

(15 × 1) (15)

1.2 1.2.1 Define *planning.* (3)

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

1.2.3 Explain what is meant by *order costs.* (4)

[25]

TOTAL SECTION A: 25

SECTION B

QUESTION 2

2.1 State SIX points on which a foreman in a workshop will base his daily tactical plan. (6)

2.2 Name 10 production inputs in the production system. (10)

2.3 The administrative function serves as an aid to management in achieving the business objective of an enterprise.

State FOUR functions of the administrative department. (4)

2.4 Choose a description from COLUMN B that matches a/an word/item in COLUMN A. Write only the letter (A–E) next to the question number (2.4.1–2.4.5) in the ANSWER BOOK.

COLUMN A		COLUMN B	
2.4.1	Financial policy	A	method of estimating economic, technological, political and social trends
2.4.2	Brainstorming	B	process whereby goods and services are produced
2.4.3	Delphi technique	C	draw up production schedule for balancing work load
2.4.4	Production	D	used to generate ideas
2.4.5	Product planning	E	indicate policy and procedure for budgets

(5 × 1) (5)

[25]

TOTAL SECTION B: 25

SECTION C

QUESTION 3

3.1 State FIVE information inputs that the planner needs, to enable him/her to do master production scheduling. (5)

3.2 A company has the following orders for a certain product:

MONTH	UNITS
February	900
March	1 200
April	1 200
May	900
June	1 000

The starting inventory on 1 February is 500 units.

Calculate the inventory level at the end of each month if production is maintained at 1 000 units per month. Give the answer in table form, showing the monthly order, production and inventory levels. (10)

3.3 State SEVEN benefits of using MRP. (7)

3.4 Name THREE possible causes for poor production in a factory. (3)
[25]

TOTAL SECTION C: 25

SECTION D

QUESTION 4

4.1 Define *budget*. (2)

4.2 A breakfast cereal producer uses a pack of 1 kg. Government regulators prohibit packs that are more than 2% underweight. At 2% underweight the producer's profit becomes very low. Samples taken from two of the filling machines show that their standard deviations are 4,3 g and 5,9 g respectively.

Show, by means of calculations, if each of the machines is capable at 1,33 level. (8)

4.3 State FIVE circumstances under which quality inspections are usually carried out. (10)

4.4 State FIVE control elements of a proper functioning system. (5)
[25]

TOTAL SECTION D: 25
GRAND TOTAL: 100

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