higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

PRODUCTION AND QUALITY CONTROL N5

(8140055)

29 November 2023 (X-paper)
09:00–12:00

This question paper consists of 4 pages.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
PRODUCTION AND QUALITY CONTROL N5
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 blue or black pen.
5. Write neatly and legibly.

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QUESTION 1: CAPACITY MANAGEMENT AND CAPACITY CONTROLS

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 (1.1.1–1.1.5) in the ANSWER BOOK.

1.1.1 The regional level in location issues is an example of a qualitative factor.

1.1.2 Macro issues relate to the issues covering the outside of the site or plant.

1.1.3 The regional trade pact is a contemporary location issue.

1.1.4 The centre-of-gravity method allows each factor under consideration to be rated independently.

1.1.5 The rough-cut capacity plan is a capacity component of the production plan.

(5 × 2) (10)

1.2 Describe any FOUR objectives of rough-cut capacity planning. (4)

1.3 Determine which warehouse (A or B) in the table below will have the lowest total transport cost using the centre-of-gravity method.

Store	Units sold pm	Distance	
		Warehouse A	Warehouse B
1	850	35 km	25 km
2	950	30 km	24 km
3	1 050	42 km	33 km

(5)

1.4 Define or explain what is meant by *bottleneck.* (2)

1.5 Give ONE advantage and ONE disadvantage of overcapacity or capacity leading demand. (4)

1.6 Write down the formula to determine *utilisation*. (2)

1.7 Describe the difference between *fixed costs* and *variable costs*. (4)

[31]

QUESTION 2: SHOP FLOOR MANAGEMENT AND PRODUCTION ACTIVITY CONTROL

2.1 Name any SEVEN major requirements for production activity control. (7)

2.2 Describe the difference between *make to order* and *make to stock*. (4)

2.3 Describe FIVE elements of just-in-time manufacturing. (5)

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2.4 Draw a labelled diagram of a change-point analysis. (6)

2.5 Determine the weekly variance and cumulative variance from the table below.

NOTE: Copy and complete the table in the ANSWER BOOK.

Weeks	**1**	**2**	**3**	**4**
Actual Input	90	95	102	95
Actual Output	85	90	105	90
Weekly Variance				
Cumulative Variance (or WIP)				

(8)

2.6 Name SEVEN types of waste found in manufacturing. (7)

[37]

QUESTION 3: INVENTORY MANAGEMENT

3.1 Name FIVE types of inventory found in manufacturing. (5)

3.2 List FOUR functions of material management. (4)

3.3 Describe FIVE elements/variables needed to draw up a Gantt chart. (10)

[19]

QUESTION 4: PRODUCTION COSTING

4.1 Name the SIX most important uses of *cost data*. (6)

4.2 Name FOUR types of manufacturing costs. (4)

4.3 Give THREE types of cost centres. (3)

[13]

TOTAL: 100

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