higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

PRODUCTION AND QUALITY CONTROL N5

(8140055)

13 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 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 black or blue pen.
5. Write neatly and legibly.

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QUESTION 1

The following statements are FALSE. Write the word or term that will correct the statement next to the question number (1.1–1.5) in the ANSWER BOOK.

1.1 The factor weighting method is based on the premise that a warehouse located centrally to the shops that receive goods from it, will minimise the overall costs of distribution.

1.2 Design capacity provides and formalises an integrated framework of processes with defined roles, responsibilities and competencies to sustain and improve efficiency.

1.3 A Gantt chart is a difficult way of visually representing the tasks of a project, their duration and their sequence of execution.

1.4 The term control is used for obtaining assets as well as for incurring current expenses.

1.5 The difference of the direct material costs and the direct labour costs is known as the prime cost of the final product(s).

(5 × 2) **[10]**

QUESTION 2

Choose a description from COLUMN B that matches a term in COLUMN A. Write only the letter (A–F) next to the question number (2.1–2.5) in the ANSWER BOOK.

COLUMN A		COLUMN B	
2.1	Capacity	A	customer orientation
2.2	Bottleneck	B	interest costs
2.3	Total quality management	C	slowest rate of output
2.4	Cost of capital	D	sales and distribution costs
2.5	Marketing costs	E	job costing
		F	rate of output

(5 × 2) **[10]**

QUESTION 3

3.1 Distinguish between a make-to-order and a make-to-stock manufacturing policy and give ONE advantage of each. (2 × 3) (6)

3.2 3.2.1 Explain what is meant by Just-in-time (JIT) manufacturing. (2)

3.2.2 State FOUR benefits of this manufacturing strategy. (4)

3.3 A project is planned as follows:

ACTIVITY	DURATION	DETAILS
A	3 days	
B	4 days	Depends on A
C	6 days	Depends on A
D	2 days	Depends on B
E	3 days	Depends on C
F	2 days	Depends on E
G	3 days	Depends on E

Prepare a Gantt chart to determine the overall length of the project. (10)

3.4 State FOUR advantages of using project scheduling techniques. (4)
[26]

QUESTION 4

4.1 The factor weighting method allows each factor under consideration to be rated independently for each potential site and for each factor to be weighted according to the relative importance of each factor:

Discuss the FIVE simple steps used to calculate overall scores by using the factor rating method. (5 × 3) (15)

4.2 Write down the formula for calculating the Takt time. (3)

4.3 Just-in-time manufacturing is focused on reducing waste from the supply chain and internal production process.

Name and discuss the FOUR elements included in the deployment of a Just-in-Time programme. (4 × 3) (12)
[30]

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QUESTION 5

5.1 Assume that a company experiences the following stock movements over a FIVE day period:

Day 1: Receipt of 650 units at R24 per unit
Day 2: Receipt of 1 200 units at R19 per unit
Day 5: Issue of 650 units

Calculate the value of stock at the end of day 5 using the following methods of inventory evaluation:

5.1.1 The FIFO method

5.1.2 The LIFO method

5.1.3 The weighted average method

(3 × 3) (9)

5.2 Inventory control must occur for various reasons and it is often necessary to compromise when objectives clash.

Discuss the most important aims of inventory control. (15)
[24]

TOTAL: 100

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