higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

PRODUCTION AND QUALITY CONTROL N6

(8140066)

18 November 2024 (X-paper)
09:00–12:00

Nonprogrammable calculators may be used.

This question paper consists of 5 pages.

011Q1E2418

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
PRODUCTION AND QUALITY CONTROL N6
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

Indicate whether the following statements are TRUE or FALSE by writing only 'True' or 'False' next to the question number (1.1–1.5) in the ANSWER BOOK.

1.1 The production function is the central, umbrella function of any business.

1.2 Inspection entails measuring the quality properties of a completed product or finished operation and comparing it to the prescribed standard.

1.3 A constraint schedule is created for capacity-constrained resources to exploit a plant's productive capability.

1.4 The push system is also known as the Kanban system.

1.5 Flexibility is a characteristic of an effective control process.

(5 × 1) **[5]**

QUESTION 2

Choose an item from COLUMN B that matches a description in COLUMN A by writing only the letter (A–E) next to the question number (2.1–2.5) in the ANSWER BOOK.

COLUMN A		COLUMN B	
2.1	A well-ordered grouping of various interdependent components or elements with the aim of achieving a planned target	A	template
		B	work cell
2.2	Example of an inspection aid	C	a system
2.3	Optimises use of floor space	D	post-control
2.4	Common-cause variations in output quantity or quality	E	statistical fluctuations
2.5	Concentrates on completed enterprise achievements		

(5 × 1) **[5]**

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QUESTION 3: PRODUCTION AND MANAGEMENT SYSTEMS

3.1 State FOUR steps involved in the use of quantitative methods. (4)

3.2 Name FIVE possible classifications of business activities according to their functions or subdivisions. (5 × 1) (5)

3.3 Name SIX responsibilities of the production management. (6 × 1) (6)

3.4 What are TWO reasons why most production systems are open? (2)
[17]

QUESTION 4: TOTAL QUALITY MANAGEMENT (TQM)

4.1 State the FOUR components or lenses that a system comprises to view the world simultaneously. (4)

4.2 Describe FOUR disadvantages of floor inspection. (4)

4.3 State TWO ways of assessing a diameter assuming that the diameter is the critical property of that product in quality control. (2 × 2) (4)

4.4 Give FIVE reasons why 100% inspection may be uneconomical or even impossible. (5)
[17]

QUESTION 5: JUST-IN-TIME (JIT)

5.1 Define or explain the term *just-in-time*. (4)

5.2 State FIVE steps or elements of the implementation process according to JIT literature. (5 × 1) (5)

5.3 Complete the statement below:

To identify waste in your company … should be performed. (2)

5.4 Explain the difference between *internal setup* and *external setup*. (2 × 2) (4)

5.5 Name THREE levels of scheduling under a traditional MRP system. (3)
[18]

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QUESTION 6: THEORY OF CONSTRAINTS (TOC)

6.1 Explain the fundamental thesis of TOC. (2)

6.2 Name THREE elements of DBR methodology. (3)

6.3 State FIVE improvements as a result of implementing the DBR method. (5)

6.4 State FIVE benefits expected from extending the TOC concept to the supply chain. (5 × 1) (5)

6.5 Name FOUR other costs than those you mentioned in QUESTION 6.4 that must be deducted from sales revenue when calculating throughput. (4)

[19]

QUESTION 7: BUSINESS PROCESS RE-ENGINEERING (BPR), PERFOMANCE MEASUREMENT

7.1 Name TWO human factors among problems faced during BPR. (2)

7.2 State FOUR requirements that performance measurements should comply with. (4)

7.3 State THREE basic characteristics of strategic control points. (3)

7.4 Name SEVEN types of standards that should be established for strategic control points. (7)

7.5 Describe THREE potential obstacles in control. (3)

[19]

TOTAL: 100

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