higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

PRODUCTION AND QUALITY CONTROL N6

(8140066)

14 November 2022 (X-paper)
09:00–12:00

Nonprogrammable calculators may be used.

This question paper consists of 4 pages.

013Q1E2214

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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. Start each section on a new page.
5. Use only a blue or black pen.
6. Write neatly and legibly.

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QUESTION 1: PRODUCTION AND MANAGEMENT SYSTEMS

1.1 Explain the term *marketing*. (3)

1.2 Name THREE characteristics of a system. (3)

1.3 Give FIVE very important advantages of using the system approach. (5)

1.4 Name any FIVE inputs found in the production system. (5)

1.5 Name FIVE responsibilities of production management during the pre-production stage. (5)
[21]

QUESTION 2: TOTAL QUALITY MANAGEMENT (TQM)

2.1 Describe FOUR key concepts of Total Quality Management as undertaken by the navy in the 1980s. (8)

2.2 Name SEVEN basic tools for achieving quality. (7)

2.3 What is meant by *quality*? (3)

2.4 Explain what is meant by *inspection*. (2)
[20]

QUESTION 3: JUST IN TIME (JIT)

3.1 Choose an item from COLUMN B that matches a description in COLUMN A. Write only the letter (A–E) next to the question number (3.1.1–3.1.5) in the ANSWER BOOK.

COLUMN A		COLUMN B	
3.1.1	To identify waste	A	produce with perfect quality
3.1.2	A properly implemented JIT system	B	reduction in down time
3.1.3	German word for *baton*	C	defining the requirements
3.1.4	Benefits of JIT	D	value-added analysis
3.1.5	Prevention of quality problems	E	taktstockt

(5 × 1) (5)

3.2	Give FOUR conceptual stages of SMED (single minute exchange of die).	(4)
3.3	List EIGHT benefits of implementing a JIT system.	(8)
3.4	Name THREE management responsibilities.	(3)
		[20]

QUESTION 4: THEORY OF CONSTRAINTS (TOC)

4.1	Explain what is meant by *theory of constraints*.	(3)
4.2	Name FIVE principles of the theory of constraints.	(5)
4.3	Describe FIVE foundation elements of implementing logistics or flow-orientated concepts of theory of constraints management.	(5)
4.4	Describe any SEVEN benefits that can be expected from extending the theory of constraints to the supply chain.	(7)
		[20]

QUESTION 5: BUSINESS PROCESS RE-ENGINEERING (BPR) AND PERFORMANCE MEASUREMENT

5.1	Explain the aim of *business process re-engineering* according to Sherwood-Smith.	(2)
5.2	Describe the FOUR tenets of business process re-engineering.	(4)
5.3	Name any SEVEN characteristics of an effective control process.	(7)
5.4	Name SIX contingency factors in the control process.	(6)
		[19]

TOTAL: 100

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