higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T1430**(E)**(J23)T

NATIONAL CERTIFICATE

PRODUCTION AND QUALITY CONTROL N6

(8140066)

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09:00–12:00

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 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. Clearly show ALL calculations.
5. Round off answers to TWO decimal places where appropriate.
6. Rule off across the page on completion of each section.
7. 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 The allowable tolerable limits for a product may be bigger, but not smaller, than the control limits for the specific process.

1.1.2 Each system and subsystem will have its own inputs to process to produce an output.

1.1.3 The primary focus of analysis is to increase machine downline.

1.1.4 Possible causes of assigned variation are the malfunctioning of tools, poor raw-material consignments, inattention of workers to the task or the occurrence of extraordinary working conditions.

1.1.5 An increased number of changeovers can be accomplished only after setup time has been increased.

1.1.6 The level of quality and the reliability of a product are closely related.

1.1.7 Level loading suggests that if one sells a product every month then the product is good.

1.1.8 The single most substantial ingredient of JIT is production.

1.1.9 Computer programs are particularly useful where a large number and variety of data must be processed for quality-control purposes.

1.1.10 A quality-control chart is a statistical aid used mainly for the evaluation and control of the quality of products produced by repetitive processes.

1.1.11 JIT is a cure-all for every manufacturing problem.

1.1.12 Quality policy depends particularly on the way in which clients judge the product.

1.1.13 Statistical process control (SPC) is useful for controlling and improving processes.

1.1.14 The administrative function serves as an aid to management in achieving business objectives.

1.1.15 The classification of various business functions and subactivities within each function will differ from business to business depending on the type and size of the particular business.

(15 × 1) (15)

1.2 1.2.1 Name the SEVEN categories used to judge organisations. (7)

1.2.2 List THREE responsibilities during the preproduction stage. (3)
[25]

TOTAL SECTION A: 25

SECTION B

QUESTION 2

2.1 Name NINE benefits that can be expected when extending TOC concepts to the supply chain. (9)

2.2 Choose a description from COLUMN B that matches a term in COLUMN A. Write only the letter (A–E) next to the question number (2.2.1–2.2.5) in the ANSWER BOOK.

COLUMN A		COLUMN B	
2.2.1	Inventory	A	activities representing the first operation in the system
2.2.2	Operating expense	B	constraint in a production flow process
2.2.3	Bottleneck	C	steps or processes to identify and alleviate constraints
2.2.4	Five focusing steps	D	investment in the equipment necessary to convert raw material into throughput
2.2.5	Gating	E	one of the measurements used to manage a TOC organisation

(5 × 1) (5)

2.3 List NINE production or service processes where numerous unplanned losses can affect actual capacity. (9)

2.4 Define the term *lead time*. (2)
[25]

TOTAL SECTION B: 25

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SECTION C

QUESTION 3

3.1 State 13 management-accounting activities within TOC. (13)

3.2 Stoner (1982:598-595) identified various factors that stimulate the need for control which include change, complexity, errors and delegation.

Give EIGHT reasons for control. (8)

3.3 Name FOUR requirements that performance measurement should comply with to be effective. (4)
[25]

TOTAL SECTION C: 25

SECTION D

QUESTION 4

4.1 The management function covers the activities of all other functions and draws them together towards a common goal.

Summarise the SIX management processes of the management functions.
(6 × 2) (12)

4.2 Discuss the limitation, criteria and impact of the production-mix decision. (9)

4.3 Name THREE types of control. (3)

4.4 Define the term *takt*. (1)
[25]

TOTAL SECTION D: 25
GRAND TOTAL: 100

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