higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

PRODUCTION AND QUALITY CONTROL N6

20 November 2023

This marking guideline consists of 5 pages.

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QUESTION 1

1.1 D
1.2 C
1.3 B
1.4 D
1.5 B
1.6 A
1.7 C
1.8 D
1.9 A
1.10 C
1.11 A
1.12 C
1.13 B
1.14 A
1.15 C

(15 × 2) **[30]**

QUESTION 2

2.1 2.1.1 Fixed costs remain constant over a wide range of manufacturing activities.✓

Examples: depreciation, leasing charges, supervisors' salaries.✓

2.1.2 Variable costs vary in direct proportion to the level of activity.✓

Example: raw material cost.✓

2.1.3 Indirect labour costs refer to the wages and salaries of employees who do not work directly on a product but whose services are related to the overall production process.✓

Example: supervisors, cleaners, forklift operators, storemen, et cetera✓

2.1.4 Direct material costs refer to the cost of material that enters into and becomes the specified finished product.✓

Example: wood processed to furniture.✓

(4 × 2) (8)

2.2
- The operating budget✓ shows planned revenues and expenses for the coming year.✓
- The cash-flow budget✓ shows the anticipated sources and uses of cash during the coming year.✓
- The capex budget✓ shows planned purchases of fixed assets such as plant, machinery, and vehicles.✓ (3 × 2) (6)

2.3
- Identify internal and external set-up activities.
- Start external activities whilst the preceding batch is being worked on.
- Convert as many internal activities into external activities as possible.
- Continuously strive to improve or eliminate elements of the set-up procedure. (4 × 1) (4)

2.4 Preventative maintenance is concerned with getting everyone, especially the operators, involved in improving the performance and reliability of production equipment. (2)

2.5
- Preventative maintenance aims to adhere to good housekeeping principles and keep the equipment clean to minimise contamination and wear.
- Report oil leakages and ensure they are repaired.
- Apply experience with the equipment to recognise unusual noises, vibrations, et cetera which may indicate problems.
- Continually check the tightness of nuts and bolts.
- Report any deterioration in the quality of the product being produced.
- Continually check monitoring gauges and instruments and report any abnormal readings. (Any 5 × 1) (5)

[25]

QUESTION 3

3.1
- Operators are responsible for their own quality (quality at source).
- The QC department helps to educate people on quality issues.
- QC and operations work together to foolproof systems.
- Quality comes first before production.
- The focus of each process is the customer.
- Suppliers are involved in the improvement process.
- Quality teams are formed to work on improving processes. (Any 5 × 1) (5)

3.2
3.2.1 Internal failure
3.2.2 External failure
3.2.3 Appraisal
3.2.4 Prevention
3.2.5 Appraisal
3.2.6 External failure
3.2.7 Prevention

(7 × 1) (7)

3.3
- It provides an objective means of measuring quality.
- It describes quality in the language of management (money)
- It allows for identifying sources of waste and taking action to correct them.
- It allows for the identification of priority problem areas.
- It helps to make everyone aware of the need to produce 'right first time, every time'. (Any 4 × 1) (4)

3.4 Eliminating incoming inspections, delegates responsibility for the quality of raw materials to suppliers, thereby encouraging a partnership approach.✓ It also saves company money.✓ (2)

3.5
- Specify requirements to suppliers.
- Build credibility and trust with suppliers.
- Conduct periodic quality audits of suppliers to ensure capability and compliance. (3)

[21]

QUESTION 4

4.1
- Management takes decisions which imply that a purposeful action programme is selected✓ from various alternatives to achieve a desired result.✓
- Management specifies definite targets for the business, plans and lays down the policy which should be followed by the business.✓ The future is thus anticipated, and a work-performance plan is organised in an orderly manner.✓
- Management designs a suitable organisational structure for the task to be performed✓ and provides the necessary personnel.✓
- Management communicates with subordinates, equals and superiors✓ to convey information and commands.✓
- Management directs, supervises, and motivates subordinates✓ so that a coordinated contribution may be made towards achieving the common objectives.✓
- Management control activities by comparing actual output with the set standards✓ and where necessary, by applying corrective measures.✓

(6 × 2) (12)

4.2 Whenever a limitation exists that restricts the number of products that can be produced, a decision must be made to choose one product (or product line) over another so that profits can be maximised.✓

The criteria used to drive the segmentation decision include:
- Strategic focus and long-term objectives for the product
- Existing agreements with trading partners that would limit the extent of changes that can be made to the existing mix
- Relative contribution margin of the available products and services
- Demand for various product/service bundles
- Impact of the various products on the constrained resource
- Interdependence or complementary purchase patterns for two or more of the available products
- Purchase resource constraints, such as long lead times that affect the flexibility of the process
- Cost and availability of outsourcing to offload critical constraints (9)

4.3
- Pre-control
- Post-control
- Concurrent- or steering control (3)

[24]

TOTAL 100

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