higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

PRODUCTION AND QUALITY CONTROL N4

12 AUGUST 2019

This marking guideline consists of 5 pages.

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QUESTION 1

1.1 False
1.2 False
1.3 True
1.4 False
1.5 False
1.6 False
1.7 True
1.8 False
1.9 False
1.10 True
1.11 True
1.12 False
1.13 True
1.14 True
1.15 True

(15 × 1) (15)

1.2 1.2.1

- All goods and objectives to be achieved by the specific plan should be decided upon.
- Standards are derived from the objectives and norms of completion to which the performance of work should comply.
- Programs should give an explanation of the steps and order that must be followed to perform the different activities.
- Schedules should determine the time at which each activity must begin and end.
- Procedures and methods should prescribe a fixed manner in which tasks, requiring regular attention, must be performed.
- Rules and regulations should also give fixed orders as to what may not be done in a given situation with the purpose of achieving the objective according to load and plans and procedures.
- A budget is a quantified statement of the expected results or objectives that are expressed in financial and physical units.

(7 × 1) (7)

1.2.2

- It is the management function
- that encompasses the purposeful consideration of future objectives
- of an enterprise or part thereof. (3)

[25]

QUESTION 2

2.1
2.1.1 C
2.1.2 E
2.1.3 A
2.1.4 D
2.1.5 B

(5 × 1) (5)

2.2
- Management
- Information
- Technology
- Capital
- Land
- Labour
- Energy
- Raw materials
- Components
- Documents
- Persons (e.g. patients)
- Environmental influence (Any 10 × 1) (10)

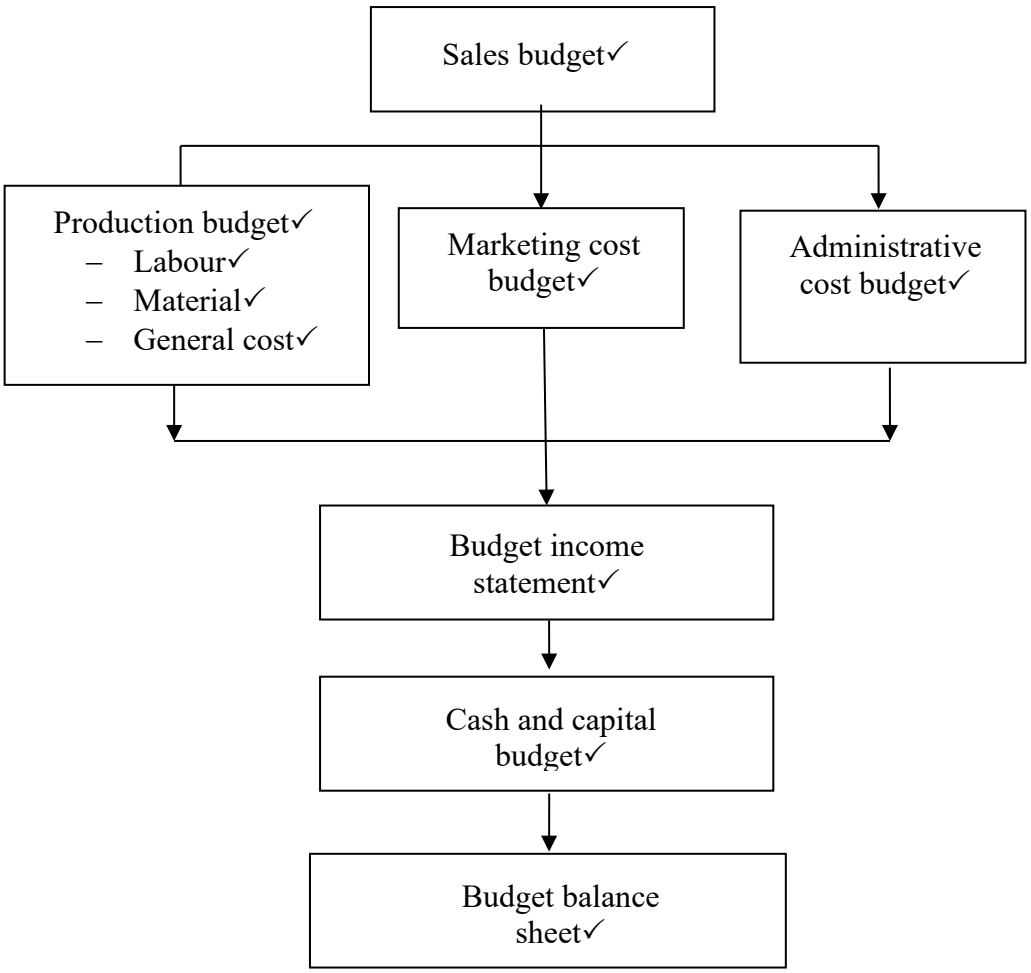
2.3
- Production management plans and controls the activities
- to be performed in the production system
- and includes decision making and supervision
- over the production process
- so that goals and/or services are manufactured or rendered according to the prescribed specification,
- in the right quantity, according to the planned schedule,
- at the lowest cost in a safe way. (7)

2.4
- It is a desired situation or result that an enterprise, group or individual strives for.
- It is derived from the mission, is not strictly defined
- and is set over a long term. (3)

[25]

QUESTION 3

3.1



(10)

3.2
- Peak/Dip: When a measurement occurs above or below control limits
- Trend: Several data points show an increase or decrease in a trend.
- Level change: Several data points occur on one side of the average.
- Low variation: Unusual small changes occur in the data.
- Erratic: Unusual large change occurs in the data. (Any 4 × 1) (4)

3.3
- The starting inventory at the beginning of the planning period
- A forecast of orders in a short term
- The number of confirmed orders received from customers
- The batch size in which the product is produced
- The MPS rule, which specifies how much safety stock must be kept (5)

3.4
- it is a management philosophy
- which originated in the need
- for the marketing process
- to be planned
- and controlled purposefully
- according to the specific business objectives. (6)

[25]

QUESTION 4

4.1 Specified tolerance range = (2% × 1 000) × 2✓
= 40 g✓

Machine 1 Cp = $\frac{40}{6\times4,5}$ ✓

= $\frac{40}{27}$ ✓

= 1,48✓ Machine 1 is up to standard at the 1,22 level ✓

Machine 2 Cp = $\frac{40}{6\times6,2}$ ✓

= $\frac{40}{37,2}$ ✓

= 1,08✓ Machine 2 is not up to standard at the 1,22 level✓ (10)

4.2 Solution

F1 + 1 = F1 + α(Dt – F1)✓
FJuly = FJune✓ + α(DJune – FJune)✓
FJuly = 749✓ + 0,18✓ (776 – 749)✓
= 749 + 0,18(27)✓
= 749 + 4,86✓
= 758,18✓
= 758 units (rounded up)✓ (10)

4.3
- Poor conditions of machines
- Lack of proper procedure
- Inadequate training
- Old or outdated equipment
- Poor quality of raw materials
- Poor working conditions
- Cluttered workspace (Any 3 × 1) (3)

4.4
- To ensure that operations are performed according to plan.
- To continuously monitor and evaluate the production plan and to see if modifications can be devised to better meet cost, quality, delivery flexibility and other objectives. (2)

[25]

TOTAL: 100

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