higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

PRODUCTION AND QUALITY CONTROL N5

29 November 2023

This marking guideline consists of 5 pages.

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QUESTION 1

1.1 1.1.1 False
1.1.2 True
1.1.3 True
1.1.4 False
1.1.5 False

(5 × 2) (10)

1.2
- It determines the flexibility of the MPS.
- It highlights potential bottlenecks.
- It is a means to assist the planners to level the load.
- It is a means to managing work in progress on the factory floor.
- It provides an indication of future loads on critical resources.
- Load profiles can be set up for any resource that is classified as critical.

(Any 4 × 1) (4)

1.3 Warehouse A= (850 × 35) + (950 × 30) + (1 050 × 42)✓
= 29 750 + 28 500 + 44 100
= 102 350 km✓

Warehouse B = (850 × 25) + (950 × 24) + (590 × 33)✓
= 21 250 + 22 800 + 19 470
= 63 520 km✓

Warehouse B has the lowest transport cost.✓ (5)

1.4 A bottleneck is the resource (equipment or people) that causes the slowest rate of output in a process. (2)

1.5 Advantage:
Sudden increases in demand can be accommodated relatively easily because the equipment is already in place.

Disadvantage:
While standing idle, the excess capacity will cause high overhead costs. (4)

1.6 Utilisation = $\frac{\text{Actual capacity}}{\text{Design capacity}}$✓✓ (2)

1.7
- Fixed costs refer to the expenses incurred for the facilities to manufacture products or provide services, before anything has been produced.
- Variable costs are directly linked to each unit produced, and therefore increase with each additional item manufactured or services rendered.

(2 × 2) (4)

[31]

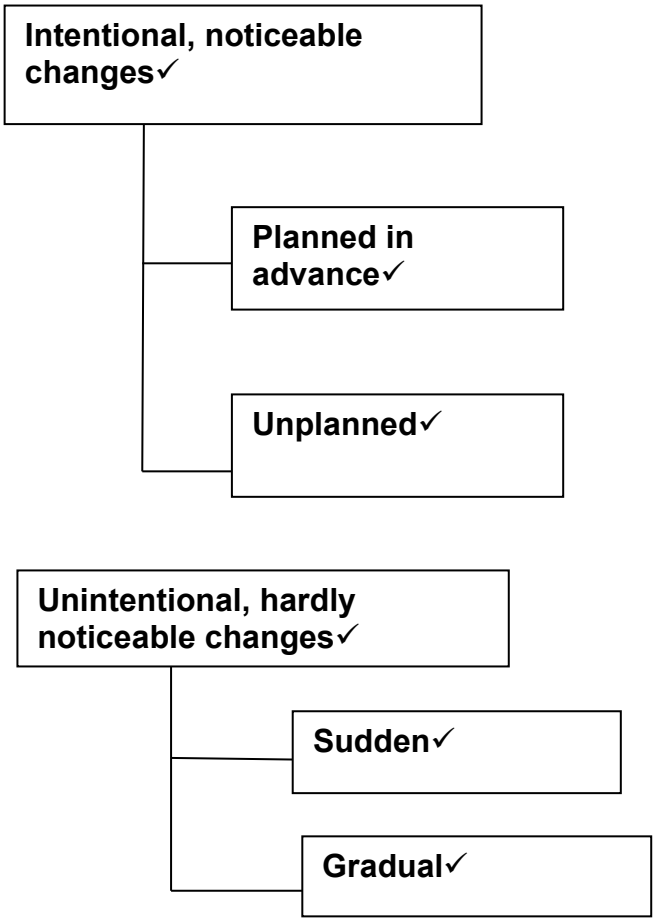
QUESTION 2

2.1
- Executing the master production schedule
- Controlling the sequence and priority of work
- Improving the efficiency of the operations
- Maintaining low stock levels
- Improving efficiency to customers
- Feedback systems
- Planning reports or customer care (7)

2.2
- Make to order − This means that the manufacturing operations make the product as specified by a customer's order.
- Make to stock − The organisation forecasts which products will be required by the customer. (2 × 2) (4)

2.3
- Production at the rate of the customer's demand
- Process-based shop-floor layout
- Reduction of work in progress
- Quality at the source (5)

2.4



(6)

2.5

Weeks	**1**	**2**	**3**	**4**
Actual Input	90	95	102	95
Actual Output	85	90	105	90
Weekly Variance	**✓5**	**✓5**	**✓ (3)**	**✓5**
Cumulative Variance (or WIP)	**✓5**	**✓10**	**7✓**	**✓12**

(8)

2.6
- Over-production
- Inventory
- Processing
- Defects
- Waiting
- Transportation
- Motion

(7)
[37]

QUESTION 3

3.1
- Raw materials
- Components
- Semi-finished products
- Finished products
- Consumable goods

(5)

3.2
- Purchases
- Material handling
- Stock keeping and control
- Production planning control

(4)

3.3
- Identify all the project tasks
- Establish how long each task will take
- Establish whether a task can be done independently of other tasks
- Establish whether tasks share the same resource
- Establish the sequence in which the tasks need to be executed (5 × 2) (10)

[19]

QUESTION 4

4.1
- Preparation of final accounts
- Profit planning
- Inventory valuation
- Cost control
- Determining selling prices
- Production decisions (6)

4.2
- Direct material costs
- Direct labour costs
- Indirect material costs
- Indirect labour costs (4)

4.3
- An auxiliary cost centre
- A service cost centre
- A major cost centre (3)

[13]

TOTAL: 100

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