higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

PRODUCTION AND QUALITY CONTROL N5

5 April 2018

This marking guideline consists of 5 pages.

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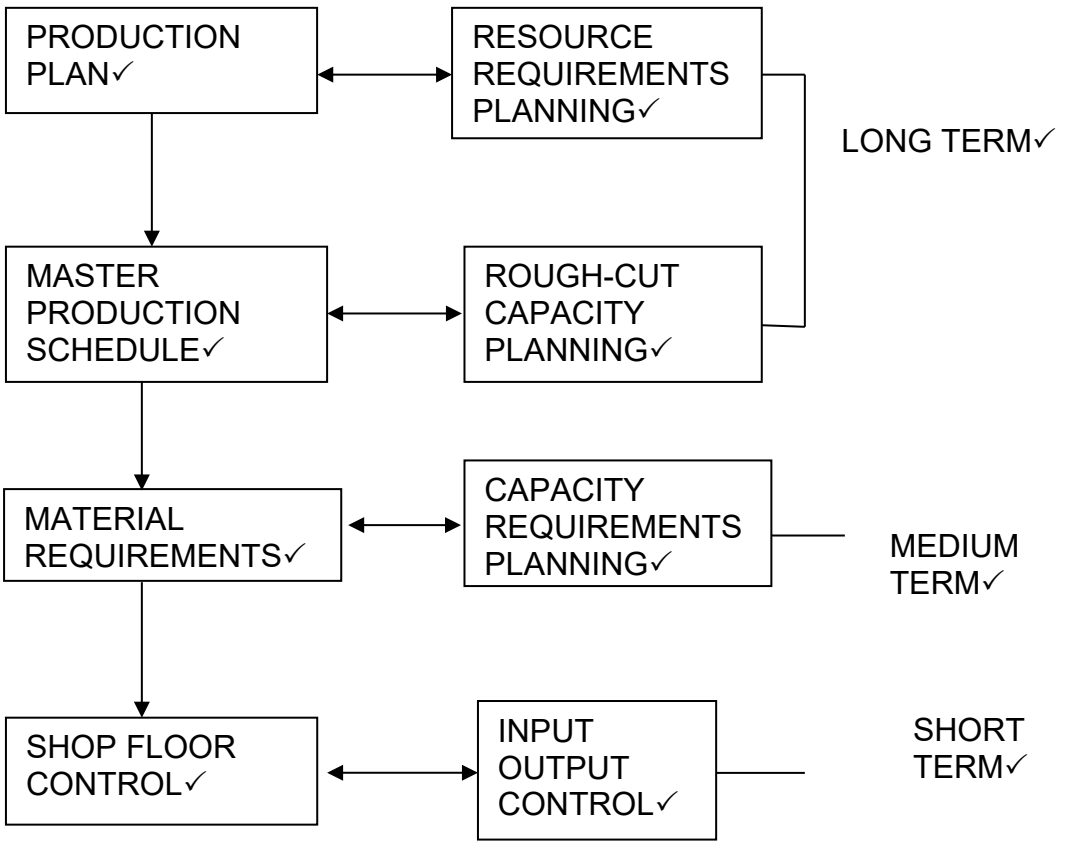
QUESTION 1

1.1 True
1.2 True
1.3 False
1.4 False
1.5 True
1.6 True
1.7 True
1.8 True
1.9 True
1.10 False

(10 × 2) **[20]**

QUESTION 2

2.1 **CAPACITY MANAGEMENT HIERARCHY**



(11)

2.2 2.2.1 This fundamental principle directs management's attention to the product and service characteristics that are of actual value to customers. A clear understanding of exactly what creates value for customers is necessary in order to focus all the efforts and resources of an organisation on creating value. (3)

2.2.2 Understanding each step in the process of how a product or service is produced or provided is necessary to determine which steps create value and which do not. Those that do not create value are regarded as waste and should be eliminated. (3)

2.2.3 Obstacles to the flow of WIP, people or information through the production/service process need to be eliminated or reduced. (2)

2.2.4 Traditional manufacturing attempts to balance demand with capacity by holding inventory. The new approach is to develop the capability to respond quickly to customers' needs so that it is only necessary to make what they want and when they want it. This approach consumes the least resources and therefore costs less. (3)

2.2.5 This principle is aimed at continuously improving the production/ service process to deliver better operational performance. Perfectly satisfying customers whenever they require it may not be possible, but trying to achieve perfection sustains efforts to improve the operation. (3)

2.3
- Delay
- Mistakes
- Duplication
- Movement
- Processing waste
- Resource waste (Any 5 × 1) (5)

[30]

QUESTION 3

3.1 3.1.1 Under FIFO the 650 units issued are assumed to be from the first receipt, that is from day 1, therefore the value of the remaining stock is:✓

(650 – 650) at R24 + 1200 units at R19 = R22 800✓✓ (3)

3.1.2 Under LIFO the 650 units issued are to be from the most recent receipt i.e. from day 2, therefore the value of the remaining stock is:✓
650 at R24 + (1200-650) at R19 = R26 050✓✓ (3)

3.1.3 Total stock receipt = 1200 + 650 = 1850

Weighted value of stock received on day
1 = 650/1850 x R24 = R8,43✓

Weighted value of stock received on day
2 = 1200/1850 x R19 = R12,32✓

Therefore the total weighted average value of stock
= R8,43 + R12,32 = R20,75✓

The value of the remaining stock is
(1850 – 650) x R20,75 = R24 900✓ (4)

3.2
- To keep capital investment in stock at minimum. The investment in inventory represents a substantial amount in many businesses. It is not uncommon that 25% of the total capital employed in manufacturing industries is invested in inventory✓✓
- To effect savings in storage costs✓
- To prevent damage, theft and the spoilage of stock✓
- To eliminate, where possible, unnecessary varieties, and to promote the standardisation of raw materials, parts and equipment✓✓
- To prevent inventory losses resulting from poor inspection on receipt✓
- To ensure the availability of sufficient stocks of raw materials, parts and indirect materials, so that the production department will not experience any shortage of stock✓✓
- To ensure the efficient transportation of stocks including transport to the plant, handling during manufacture and transport to the client✓
- To undertake demand forecasting, in order to determine inventory requirements✓
- To liaise with the purchasing department so that the economic purchasing can take place✓
- To design an efficient inventory information system which may, in turn, serve as a basis for efficient production planning, efficient purchasing, correct cost-accounting and precision in the compilation of financial statements✓✓✓ (15)

[25]

QUESTION 4

4.1
- Working overtime – capacity response
- Subcontracting some work – capacity response
- Focusing on improving output of bottlenecks – capacity response
- Rerouting some jobs to other work centres – load response
- Rescheduling some orders – load response (10)

4.2.1 Marketing costs (sales or distribution costs) are those costs which are incurred in the promotion of sales, storage of the completed products and transportation of the finished goods to the consumers.✓✓

These costs are incurred from the point at which manufacturing costs end, in other words from the point when production is concluded and the product is ready for sale.✓✓ (4)

4.2.2 Administrative costs include those expenses which are incurred in directing, administrating and controlling the operating unit.✓

The salaries of executives and office personnel, research costs, development costs, rent, legal expenses, bad debts, telephone expenses, stationery, postage expenses, cost of public relations donations and other sundry administrative expenses usually fall in the category of administrative costs.✓✓✓ (4)

4.3 EOQ = √(2DS/IC)✓
= √2 x 950 x 25 / 0,2 x 100✓✓
= √47 500 / 20✓
= √2 375✓
= 48,73 kg✓✓ (7)
[25]

TOTAL: 100

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