**Material Control**

1. From the following calculate various stock levels:

Normal usage-75 units per week

Minimum usage-50 units per week

Maximum usage-100 units per week

Re-order Quantity- 450 units

Re-order period- 4-6 weeks

1. Two Components A and B is used as follows, calculate the various stock levels.

Normal usage-50 units per week

Minimum usage-25 units per week

Maximum usage-75 units per week

Re-order Quantity- For A-300 units and for B-500 units

Re-order period- For A- 4-6 weeks and for B-2-4 weeks.

1. The particulars of A and B materials are as follows.

Normal usage-15 units per week

Minimum usage-10 units per week

Maximum usage-20 units per week

Re-order Quantity- For A-80 units and for B-120units

Re-order period- For A-2-4 weeks and for B-3-5 weeks

Calculate various stock levels.

1. Two Components X and Y are used as follows

Normal usage-600 units

Maximum usage-900 units

Minimum usage-300 units

ROQ- for X-4,800 units and for Y-7,200 units

ROP- For X-4-6 weeks and for Y-2-4 weeks

Calculate various stock levels.

1. Three components X, Y and Z used as follows:

Minimum usage-50 units, maximum usage-150 units and normal usage-100 units

|  |  |  |  |
| --- | --- | --- | --- |
| Particulars | X | Y | Z |
| ROQ | 600 | 1000 | 800 |
| Delivery period | 4-6 weeks | 2-4 weeks | 3-5 weeks |

Calculate various stock levels.

1. Calculate Economic Order Quantity ( EOQ) and Number of orders from the following:

Annual Requirement -600 units, ordering cost per order-Rs.12

Annual Carrying cost-20% p.a, Price per unit-Rs.20

1. The following are the details of the two different materials:

|  |  |  |
| --- | --- | --- |
| Particulars | Material-A | Material-B |
| Annual demand | 2,000 units | 1,280 units |
| Ordering cost per order | Rss.1,200 | Rs.1,400 |
| Carrying cost per unit | Rs.480 | Rs.560 |

Calculate the following for two materials.

* EOQ
* Total Cost at EOQ
* Total Ordering Cost
* Total Carrying cost
* Number of Orders
* Gap between two consecutive orders.

1. A manufacturing company uses 50,000 units per year. The cost per unit is Re.1. Administrative cost per order is Rs.50 per order, carrying cost is 20% on average purchase price. The company currently has optimum purchase policy but has offered 4% discount if they purchase 5 times per year. Should the offer be accepted? If not what counter offer should be made?
2. Your factory buys and uses a component for production at Rs.10 per unit. Annual requirement is 2,000 units. Carrying cost is 10 p.a, ordering cost is Rs.40 per order. The purchase manger argues that as the ordering cost is very high, it is advantageous to place a single order for the entire requirement. He also says that if we order 2,000 units at a time we can get 3% discount from the supplier. Evaluate the proposal and make your recommendations.
3. A purchasing house purchases 2,000 units per year, unit cost is Rs.20 per unit, ordering cost Rs.50 per order, carrying cost is 25%

Calculate the

* EOQ.
* If 3% discount is offered by the supplier for the purchase of 1,000 or more units, should the offer accepted.
* Total carrying cost
* Total ordering cost
* Number of orders
* Number of time gap per order ( 365/EOQ)

1. A factory requires 1,500 units of an item per month. The costing of each unit is Rs27. The s. cost per order is Rs.150 and inventory carrying charges is 20% p.a. Find out EOQ and ascertain the number of orders to be placed per order. Would you accept a 2% price discount on a minimum supply of 1,200 units?
2. Your factory buys and uses a component for production at Rs10 per piece. Annual requirement is 20,000 units. The carrying cost of inventory is 10%% p.a and ordering cost is Rs40 per order. The purchase manager argues that as the ordering cost is very high, it is advantageous to place a single order for the entire annual requirements. He also says that if we order 20,000 units at a time we can get a 3% discount from the supplier. You are required to evaluate the proposal.

**Stores Control**

1. A lorry load of materials of mixed goods was purchased for Rs.1,00,000. Later on these were sorted out into the following categories :

|  |  |  |
| --- | --- | --- |
| Category -A | 1,000 units | Selling price Rs.20 per unit |
| Category -B | 2,000 units | Selling price Rs.22.50 per unit |
| Category -C | 2,400 units | Selling price Rs25 per unit |

1. Find the purchase rate per unit of each category of the material assuming that all the grades yield same rate of profit.

After inviting tenders, two quotations are received as under:

Supplier-X- Rs.2.20 per unit

Supplier-Y- Rs2.10 per unit plus Rs.2,000 fixed charges irrespective of units ordered.

Calculate the order quantity for which the purchase per unit will be the same. Considering all factors regarding production requirements and availability of finance. The purchase officer wants to place an order for 15,000 units .Which supplier should be selected?

1. A consignment consisting of four grades of materials was purchased for Rs.2,40,000. The storekeeper sorted them out and recorded the following:

|  |  |  |  |
| --- | --- | --- | --- |
| Grade A | 4,000 units | Grade C | 10,000 units |
| Grade B | 8,000 units | Grade D | 12,000 units |

The total sales of grade A amounted to Rs32,000, ( the rate of profit being 1/3rd of cost) and those of grade B at a price 1.5 times that of grade A ( but the rate of gross profit was 1/3rd of sales). Similarly, the grade C materials sold for Rs.1,00,000, yielding gross profit 20% on sales. Calculate purchase price per unit of each grade.

1. Following figures are taken from the records of a company for the year 2016. The valuation of inventory is Rs.2 per kg.

|  |  |  |  |
| --- | --- | --- | --- |
| Particulars | Opening stock (Kg) | Purchases (Kg) | Closing stock(Kg) |
| Material X | 1,400 | 23,000 | 400 |
| Material Y | 2,000 | 3,600 | 2,400 |

Calculate the Material Turnover Ratio of the materials and also determine which of the material is fast moving and slow moving.

**Best of Luck**