Material costing

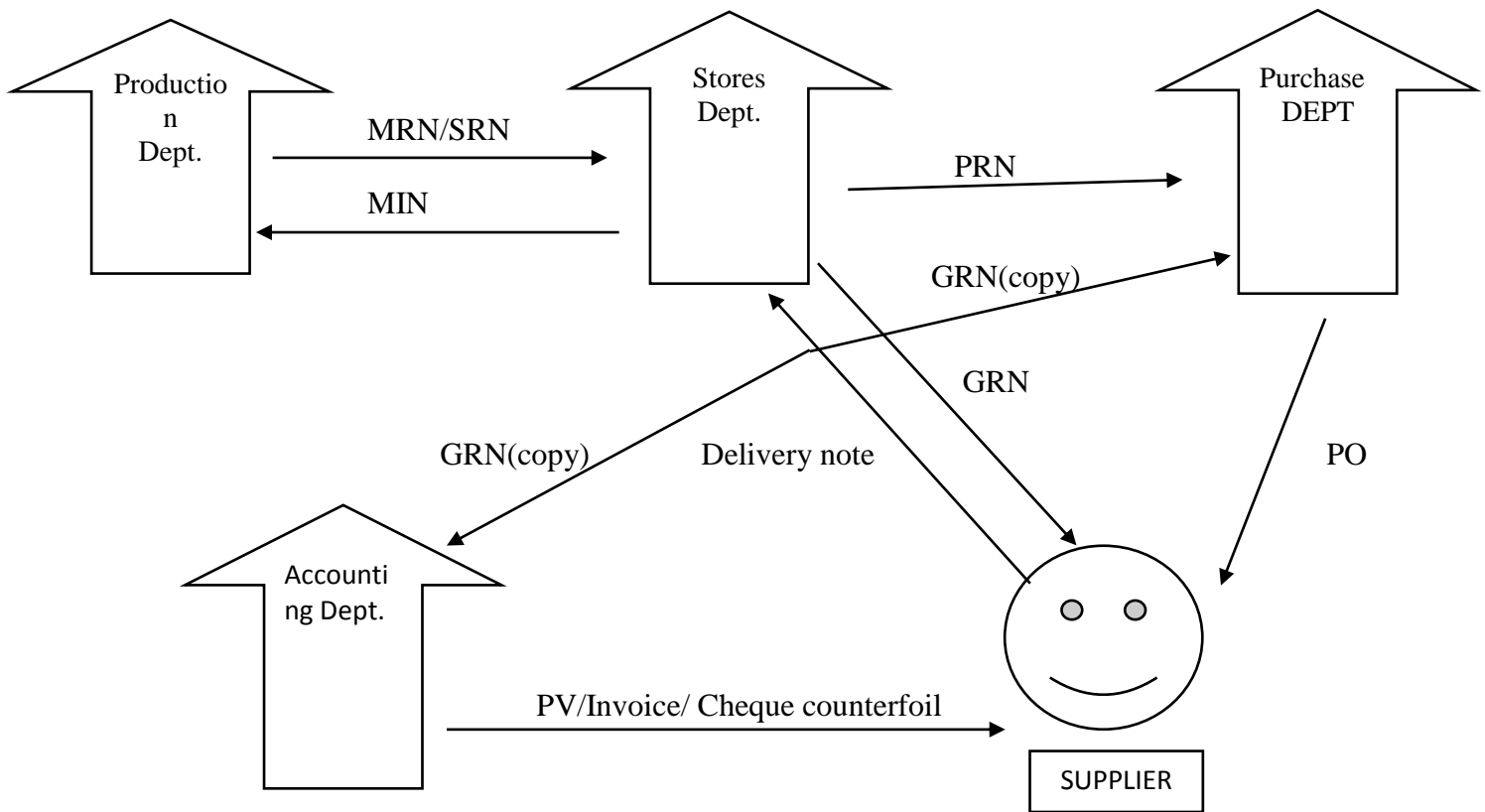- **Purchase control**

Material purchasing process

- **Stock control**

1) EOQ model

EOQ Assumptions
-Annual demand constant
-Holding cost per unit constant
-Cost per order is constant

Annual ordering Cost   =   cost per order   X   No of order

Annual Holding Cost   =   Average inventory   X   Holding cost per unit

EOQ X 50%

$$EOQ = \sqrt{\frac{2DC_o}{C_h}}$$

2) Stock level method

Re –order level = maximum consumption X maximum lead time

Minimum stock level = Re order level – (Average consumption **x** average lead time)

Maximum stock level = ROL – (Minimum consumption **x** Minimum lead time) +EOQ

Average stock level = Minimum stock level + $\frac{\text{Economic order Quantity}}{2}$

Or

Average stock level = $\frac{\text{Minimum stock level + Maximum stock level}}{2}$

01. Following information is available in respect of a particular material used by sammani Ltd.

Average materials consumption/demand	:	400 units per week
Maximum reorder period	:	13 weeks
Average re-order period	:	10 weeks
Minimum stock level	:	2,500 units
Economic Order Quantity (EOQ)	:	10,000 units

The company uses economic order quantity as the re-order quantity

Required:
(1)   Re-order level
(2)   Maximum consumption
(3)   Maximum stock level
(4)   Average stock level

02. The following information relates to a material of Lisini business. A stock of 8000 Kg was available in the stores as at 01.01.2019, out of this stock 5 000 kg were purchased each by Rs. 40 and the balanced 3000 kg were purchased each by Rs. 50
  -   6 000 kg were issued to the production department on 12.01.2019
  -   15 000 kg were purchased each by Rs.60 on 15.01.2019
  -   7 000 kg were issued to the production department on 20.01.2019. Stocks were valued under FIFO method
  -   Monthly consumption of materials is 10 000 units
  -   Cost per order is Rs.50
  -   Holding Cost of the stock is Rs.3/=

Required
(i) Cost of materials issued
(ii) Economic order quantity
(iii) Number of orders per month
(iv) Cost of purchase per month   **(10 Marks)**

03. Following information are relevant for the Item "P" produced by the Nikado PLC

Quarterly demand	2 000 Units
Cost per order	Rs. 50
Holding cost per unit	Rs. 20
Daily consumption	20 - 80 Units
Lead time	10 - 20 Days

Required:
i)   Economic order quantity & No of orders to be placed for the year
ii)   Annual ordering cost
iii)   Re-order level

iv)   Maximum stock level
v)   Minimum Stock level

- **Issue control**

Differences

Bin Card	Stores Ledger
Quantity Only	Value and Quantity
Maintain the stores	Maintain in the accounts department

04. Tharusha Ltd provides following information in respect of inventories.

Date	Description	units	unit cost(Rs)
01.01.2018	Balance	3,000	8
08.01.2018	Purchases	7,000	10
19.01.2018	Purchases	6,000	12
28.01.2018	Sales	11,000	

Calculate
   i.   Value of total purchases
   ii.   Value of cost of sales
   iii. Value of closing stock

05. Dinithi Limited uses the First in First Out (FIFO) method for pricing material issue by them. The following information is applicable for the month of June 2018

   (i)   Balance as at 01.06.2018   :   Rs. 40 000 (2 000 units)
   (ii)   Goods Received Notes (GRNs):

Date	GRN No.	Units
05.06.2018	0831	10 000 (Rs. 22 per unit)
20.06.2018	0832	10 000 (Rs. 25 per unit)

   (iii) Materials Requisition Notes (MRNs) by production plant:

Date	MRN No.	Units
10.06.2018	0320	9 000
27.06.2018	0321	9 000

   (iv)   Materials Return Notes (RNs) by production plant:

Date	RN No.	Units
28.06.2017	0670	1 000 (from the materials purchased on 20.06.2018)

Required:
  (1) Stores ledger using the FIFO method
  (2) Materials consumption by production plant assuming that no inventories are maintained in production plant