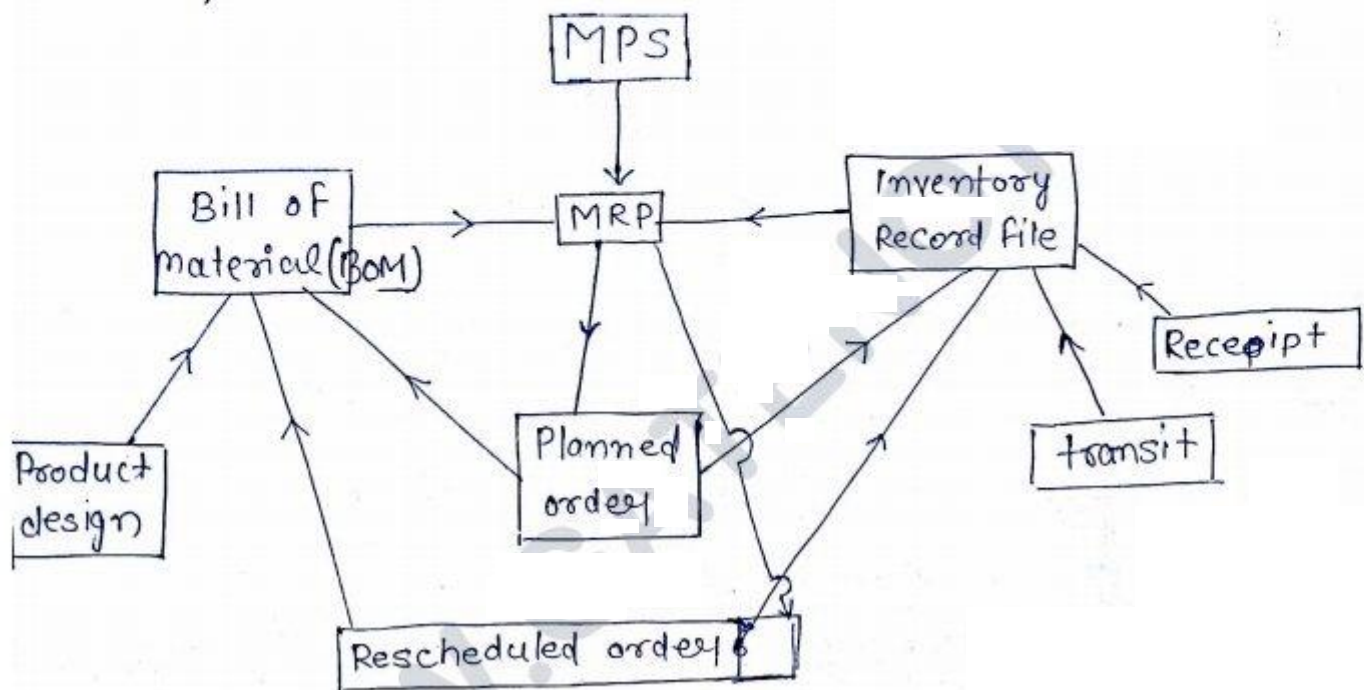


Material Requirement planning (MRP)!:-

Structure of MRP



MRP is a method of working out the production plan in a multistage production system that produce many product and required their raw material and subassembly. It is used ~~to~~ so that all the things needed should be available within the production system at an appropriate time and production ^{can} be carried out without

any delay. Today MRP is computer based information system for scheduling, production and purchasing of dependent demand items.

Master Production System:.

it is a complete time table of our schedule production in future. it gives information about what product is to be produce, when it is to be produced and in what quantity.

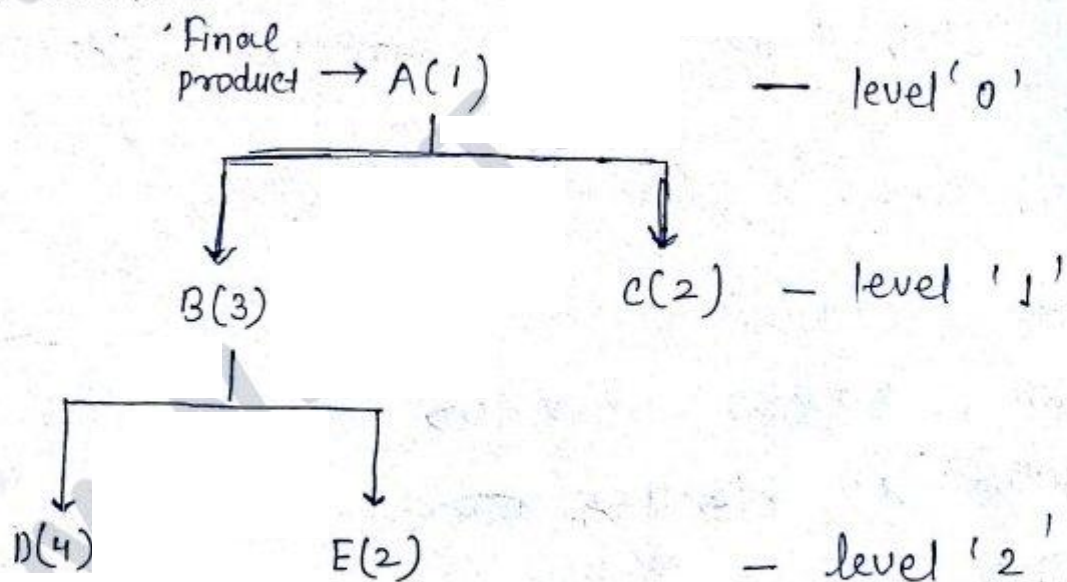
Inventory Record File.

This file give complete and upto date information about on hand inventory, transit inventory, planned orders and scheduled receipt.

Bill of Material (BOM)

This file contains information how our final product is manufactured, specifying all ^{sub} component item and their sequence of build up in the final product.

Product structure

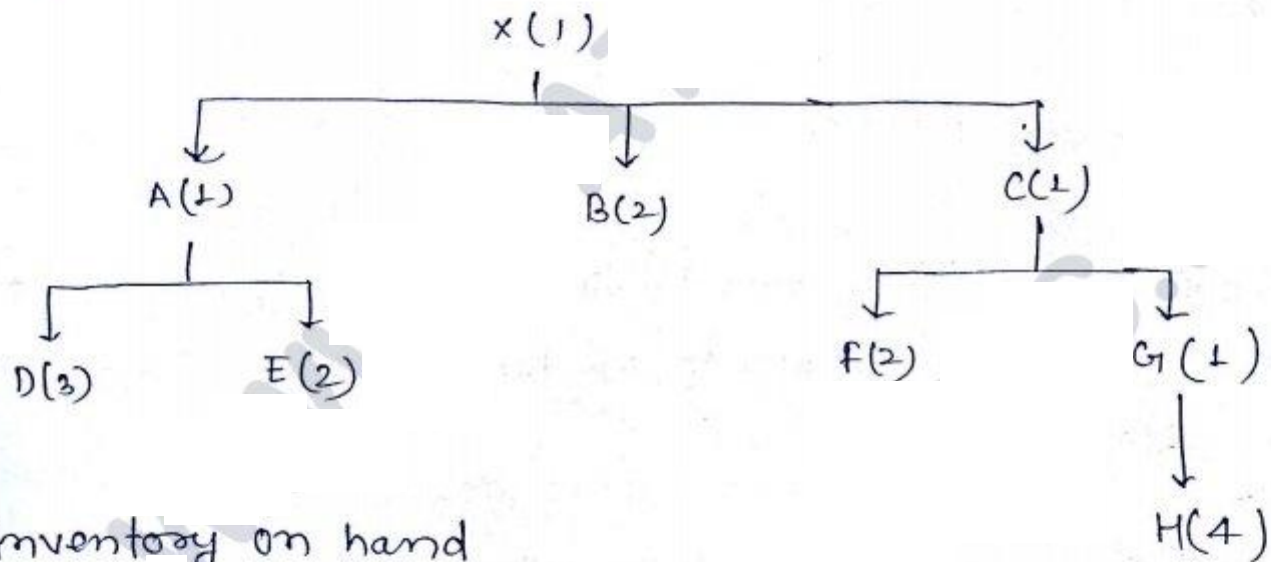


MRP

$$\text{Net Requirement} = \text{Gross Requirement} - [\text{Inventory on hand} + \text{scheduled receipt}]$$

Problem 44

~~Problem 44~~ Find the net requirement for which we should place an order in order to produce 400 unit of X, when inventory on hand and scheduled receipt given below



Inventory on hand

A-80, B-210, C-110, D-180, G-90, H-240

Scheduled receipt

B-290, D-280, E-300, H-460

Solⁿ Gross Requirement

~~A-400, B-800, C-400~~
~~D-1200, E-800, F-800, G-400~~
~~H-1600~~

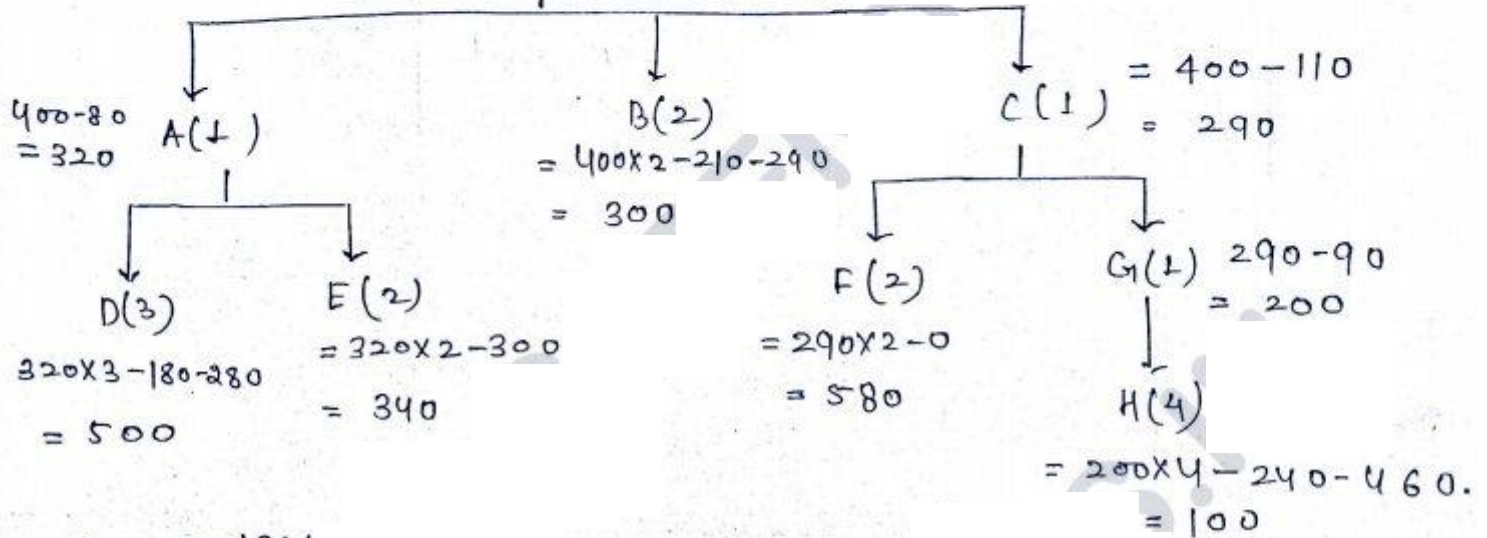
Net requirement

~~400 - 80 = 320~~

~~320 - 180 = 140~~

~~140 - 280 = -140~~

$$X(1) = 400$$



So order

B - 300

D - 500

E - 340

F - 580

H - 100

Advantages of MRP:-

1. it helps us to know when and how much to order
2. it helps in inventory reduction
3. it helps to avoid delay in production
4. it gives timely information to marketing department about the expected delivery time.

