Financial Accounting
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Lecture – 13
Inventory Valuation

Namaste. Let us start our next module 3.2 which is on Inventory Valuation. I hope you remember our earlier modules, earlier we have discussed about balance sheet, we have also discussed about profit and loss account and in the last two sessions we have discussed about depreciation, its calculation and various methods of depreciation as well.

Today we are going to start with another important item in both P and L balance sheet which is known as inventory. So, we will specifically look at inventory valuation. Now what do you understand by inventory? It is also called as stock.

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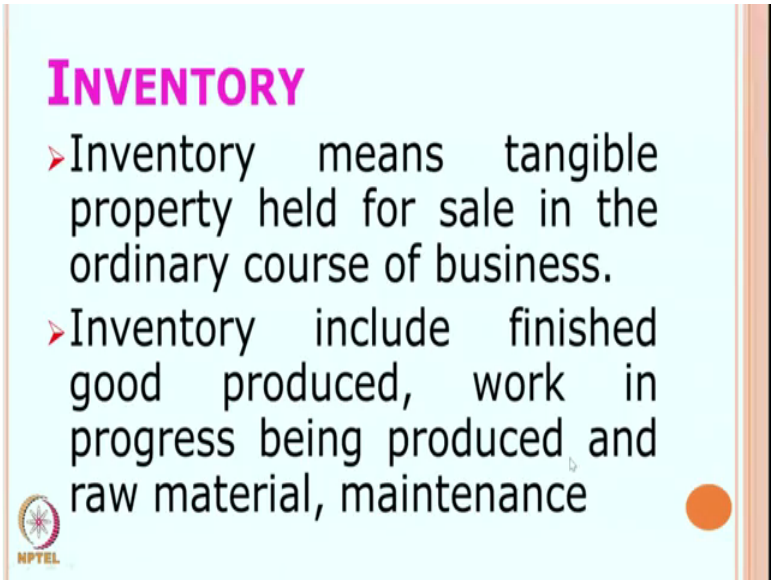

So, this is referring to tangible property which is held for sale in the normal course of business. So, there are variety of inventories you can have, normally you start with purchasing of raw material. So, if there is any unused raw material which is lying at the end of a period or say year, then that will be called as stock of raw material or inventory of raw material; then the raw material is processed to make finished goods.

Now, in the course of processing if it is not completed. So, it is not finished goods neither it is raw material, then we will call it as a work in progress. There will be also goods which are ready for dispatch, but not yet sold so, you will have stock of finished goods. So, these are the three major items of stock RM stock, then WIP stock and FG stock this is in case of a manufacturing concern. For a trading concern, they may only have stock of finished goods sometimes it can be also called as a stock of purchased items which are meant for resale.

Now, apart from this, there could be some items which are retained for retained with us for maintenance purposes. They would also be forming part of spare parts, part of inventory of spare parts or such type of stocks. So, this is what is inventory. Now for example, if you are holding some land will it be an inventory? Can we classify it as an inventory? Mostly the answer is no because land is a fixed asset land is not meant for reset. You buy land generally you use it for construction purposes or you may use it for factory or you may use it for your shop.

So, land becomes a fixed asset to be used and not to be resold. So, land would normally not be a part of inventory; now I am using the word normally. So, in which cases it will be a part of inventory can somebody tell? I think yes some of you are giving correct answers for a company which is into construction, for builders, developers for such companies land is an inventory. So, they buy land, either they sell land or they buy land then they construct a some flats or shops or godowns then they sell it as finished products.

So, for them land becomes an inventory, but other than them then the land should be classified should not be classified as inventory because, we are defining it as items which are for sale in the normal course of business. Now one more example for example: cars, can you treat cars as an inventory? Again mostly the answer is no car are cars are meant for own use so, they are classified as vehicles and put it as tangible fixed assets.

Only for certain companies car is an inventory for which company? For example, Tata motors they are manufacturers of car or Maruti they are manufacturers of car so obviously, for them car is an inventory; even for car dealers they are in to buying and selling of cars so, for them car is an inventory, but for all others it is not. So, I hope the point is clear any item which is normally bought and sold or you buy a raw material

process it and sell, then these items which are raw material, work in progress and finished goods these are the ones which you call them as inventory.

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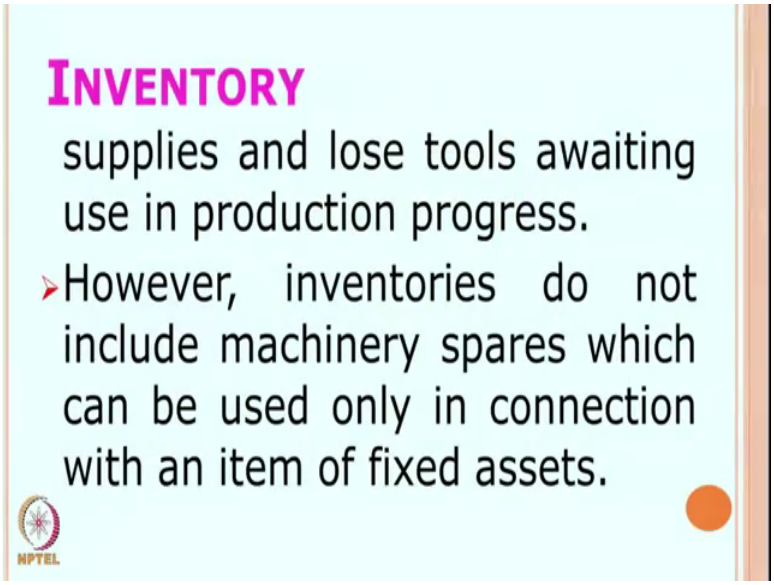

Now, apart from these very small items like lose tools or maintenance supplies, they are also part of inventory because they would be also absorbed into the product. However, if you are keeping men machinery spares, then such items should be classified as fixed assets because they are not into for the purpose of selling ok.

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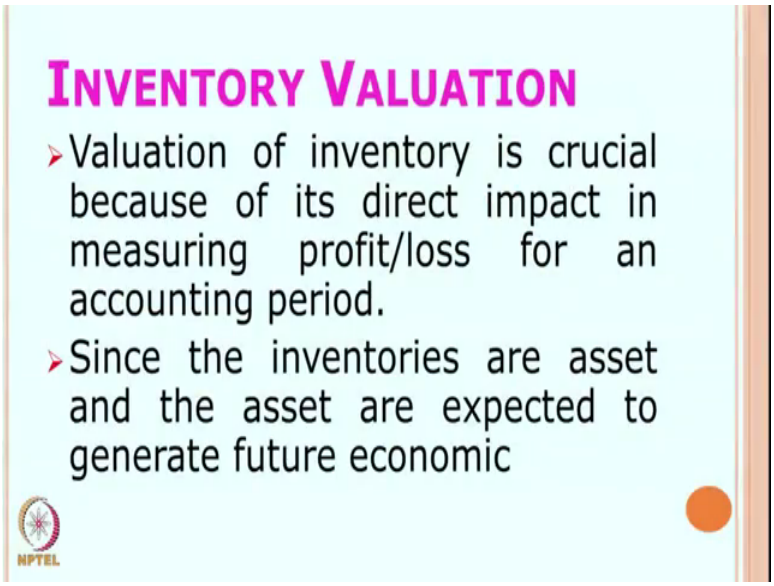

Now, the valuation of inventory is very important because inventory is one of the items of your assets in the balance sheet. So, any overvaluation will mean that you are showing excess value of the asset. If you are under valuing inventory then also it is wrong because you are showing less value of your assets and this is very important item because on one side it affects our balance sheet, it also affects our P and L account because inventory is a item in P and L as well.

So, change in the inventory if you remember is a profit and loss item. So, it will impact our profit or loss for the period as well that so, for this reason it is very important to apply proper principles to arrive at a correct valuation of inventory. So, now we will look at what goes into the cost of inventory ok.

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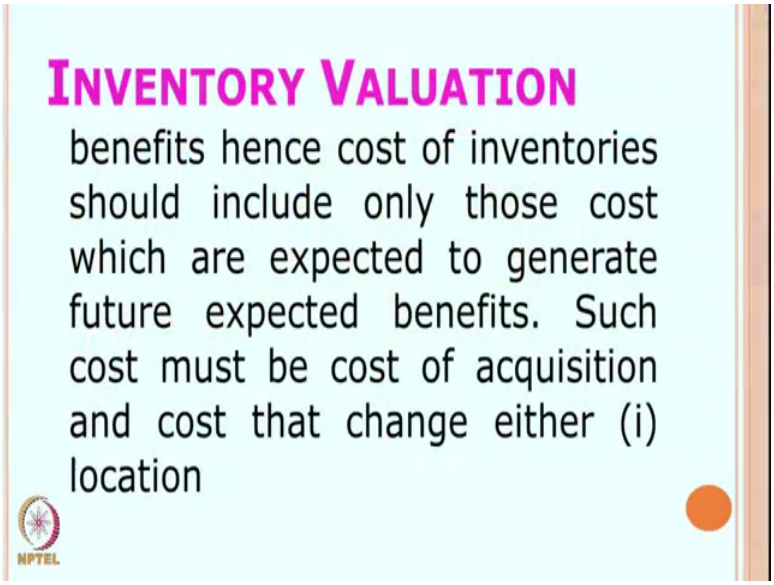

So, cost of inventory one obvious part is the cost at which we have purchased or the cost of acquisition ok. So, if you have purchased raw material for 20,000, then the 20,000 which will come as a bill from our vendor that will be the cost of inventory, but apart from that we add a few more items. So, suppose we are bringing it in we are paying some carriage involved on it or some freight on it to bring it to our factory or to our storage godown, then the cost which is spent on carrying it inward will also be added to the cost of inventory because it is not just the purchase cost, but we are also looking at the change of location.

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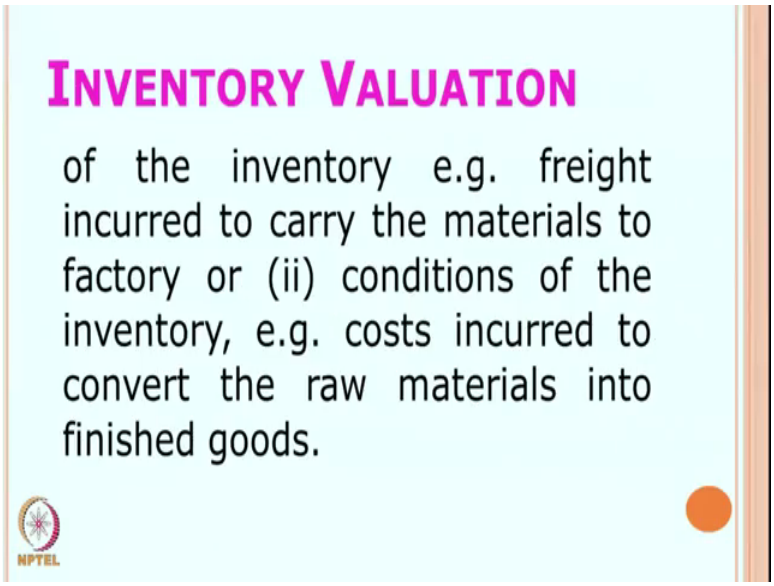

If you are changing the location then it is added to the cost of inventory, if the condition of inventory change then those costs are also added. So, for example, we have purchased raw material for 20,000, we have spent 1,000 for the carriage. So, 20 plus 1 now the cost is 21, then we spend some 5,000 rupees to convert the raw material into finished goods.

Then when we are valuing finished goods inventory, we will take 20 plus 1 that is 21 plus 5. So, inventory will be valued at 26,000 ok. So, any amount which is spent for change of location or change of condition then that can be added for calculating the cost of inventory. In change of condition there can be some other things like we provided some finishing, we have added some extra items on it or we have changed the packing all these things can be added to the cost of inventory.

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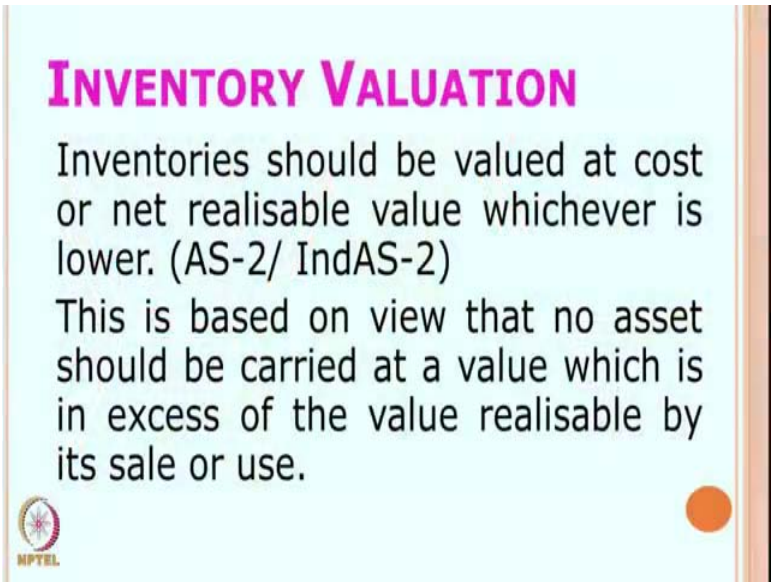

Now, there is an accounting standard 2 and in the new series there is IndAS 2 that defines how the valuation of inventory is to be done. So, as per AS 2 inventory should be valued at cost or net realisable value whichever is lower. I hope you remember that while discussing depreciation we had discussed some concept and that concept has direct bearing on the valuation of inventory, which was that concept do you remember? That was concept of conservatism.

Because of conservatism if inventory is say having cost of 26,000 as we discuss, but its market value has gone down to say 22,000; we will not take 26,000 in the balance sheet we will record it at only 22,000, but if the cost is 26, but its market value is 29. So, we have 3,000 rupees of profit, but the profit is still unrealized. So, we will not value it at 29 we will keep it at 26 only ok.

So, for the purpose of valuation it is the cost or net realizable value whichever is lower. So, you have understood what is meant by cost, but what do you understand by net realizable value can somebody tell what it is? It is very close to market value, but there is slight adjustment to the market value for calculating net realizable value so, it is the estimated selling price of that item in the normal course of business.

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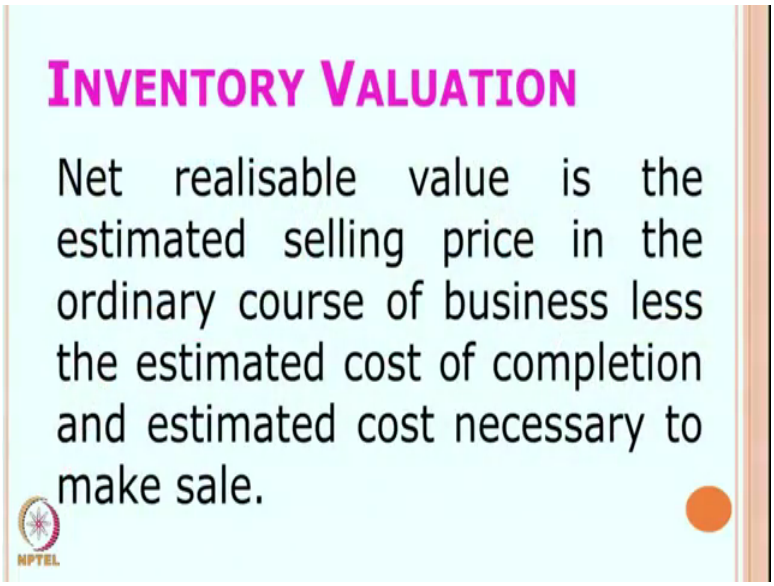

So, if you value the item at selling price we take that, but you may have to incur some cost for selling the item. So, the estimated selling price minus the cost which is required to complete the sale that will be reduced; now that can be selling expenses, it can be commission, it can be some packing which is required on it because we are not going to realise that much, but we will have to spend it, we will reduce it from the cost we will reduce it from the market value to arrive at net realizable value.

So, net realizable value refers to the amount which you will recover if you happen to sell that particular item of inventory in the normal course of business are you getting? Ok.

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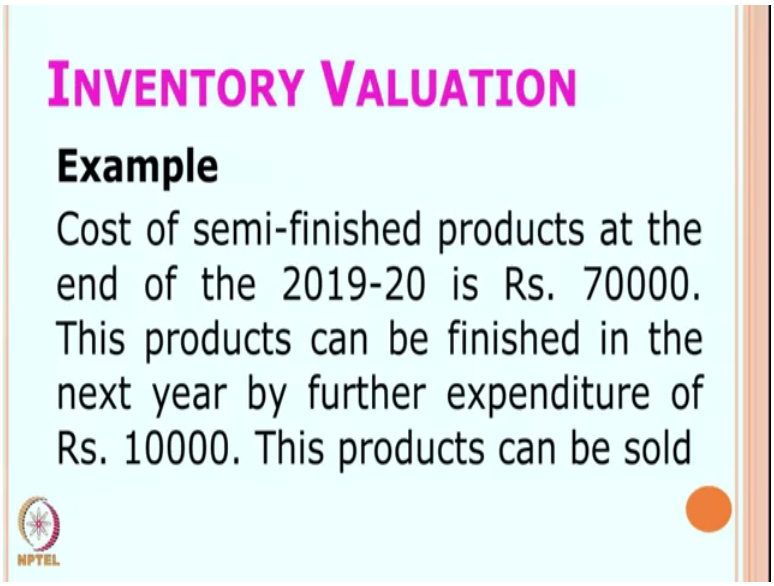

Now, let us take a very simple case for calculation of net realizable value. Now suppose for the year end 19-20 now the cost of semi finished product is 70,000, we will have to spend further 10,000 rupees for finishing it and then the product can be sold at 60,000.

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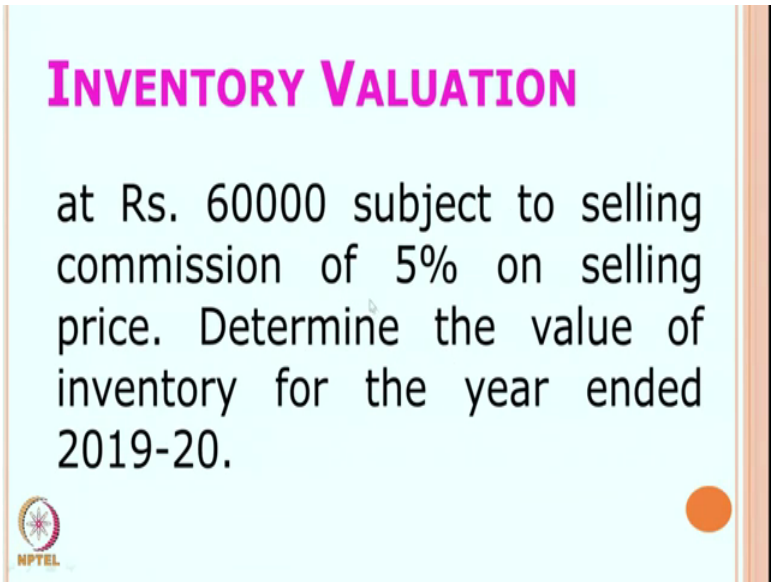

But again we will have to pay commission of 5 percent on the selling price. Now what will be the value of inventory in the balance sheet for year ended 19 and 20 just have a relook.

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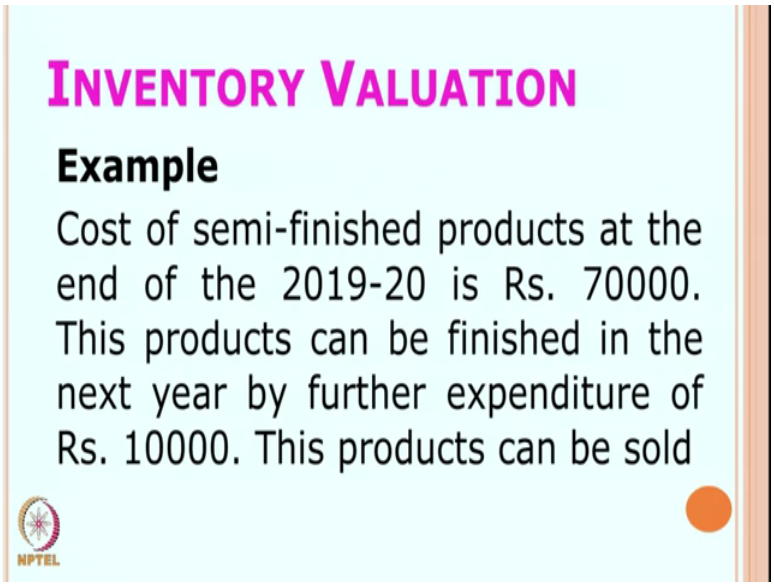

So, how much will be the value will you pay 70 or will you pay 60 or something else because the cost is 70 as you can see but its selling price is unfortunately only 60.

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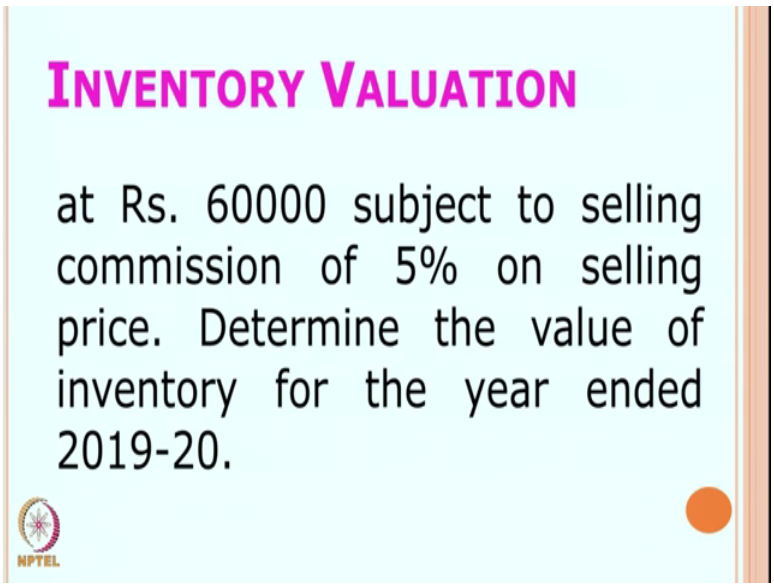

So, will you take 60? Actually you will have to calculate NRV or Net Realizable Value I will just show you the calculation.

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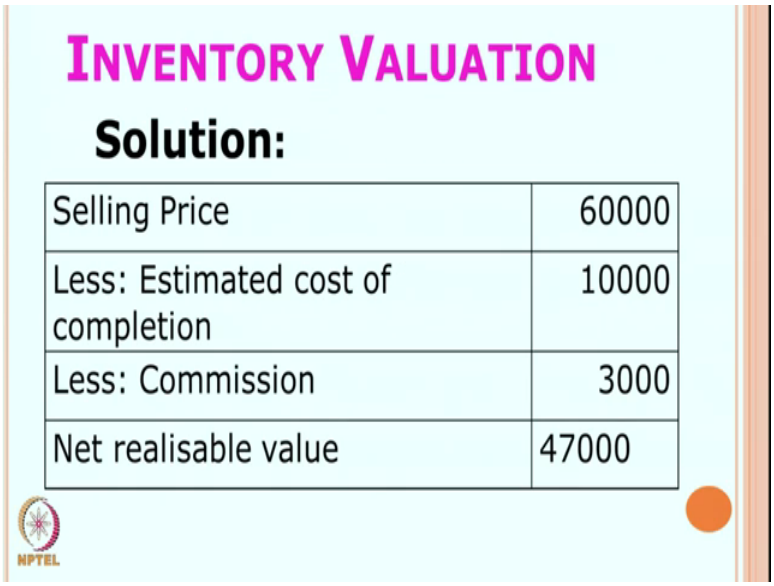

Now, see in any case the cost which is 70 we will not be able to consider because the market value is less than 70. So, we have started with the selling price which is 60, from that since this is a semi finished items some more cost is required to complete the item which is 10,000. So, estimated cost of completion which is 10 so, 60 minus 10 and we will have to pay commission of 5 percent on sales. So, 60,000 into 5 percent so, 3,000 is a commission, 60 minus 10 minus 3; that means, if you sell that item if you complete and sell that item you will realize 47,000, but the cost which you have incurred is 70.

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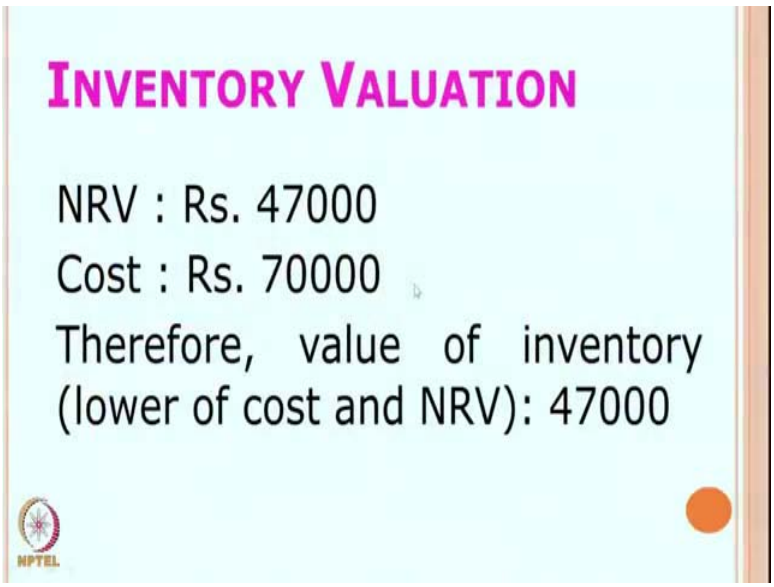

But in the balance sheet we are going to record only 47,000 are you getting? Cost or NRV whichever is lower that will be the value of inventory for balance sheet purposes. Now suppose just for discussion, if the cost of this item would have been 47,000 what we would have done? We would have still calculated this 60 minus 10 minus 3 net realisable value 47, but its purchase cost is 40.

So, 47 or 40 in which case we will consider it at cost that is at 4000 are you getting? Ok. So, this was one important basic rule for valuation that always go for lower of cost or NRV. Now, there are some techniques or some methods for valuation of inventory we will also discuss about them.

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Now, see there are five methods we have already seen how to calculate the cost, but when it comes to calculating the market value, we have to go into further technicalities. So, we are going to discuss five important methods that is specific identification FIFO, LIFO, weighted average and adjusted selling price.

Now, what happens is when the item is identifiable it becomes very simple we know how much is the cost for it. So, suppose you are making a painting or you are making a something like customized product like say tailor made garment or if you are selling a car, but it is not a normal car it is a designer cost car which is extremely costly in such cases you know that item that item can be identified and you can know the cost of that item.

But in many cases what happens you are into a bulk production scenario. So, you are making thousands of or in some cases lacks of units continuously, and it becomes impracticable. And, it is impossible for us to know the cost of a particular item in such cases what we do is, if we can identify always go for specific identification, but where we cannot identify, we will have to go for other methods one of the very popular methods and acceptable method is first in first out.

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Now, in first in first out what happens is, suppose we have got 50 items which are the older items, new 200 items are coming and you have issued 30 items in a particular week or a month. So, 50 items are there, new 200 items have come in and 30 items are going out we will assume that since the 50 items are already there in the opening inventory, the 30 items which are issued must have been issued from the opening inventory.

So, this is a simple queuing system like we are in a queue, whoever has come first will get the ticket first, then second, then third, then forth. So, as per the chronology of the receipts whenever an item has come in the inventory, we will issue it in the same sequence. Keep in mind actually the issues may be random because all the units are alive and this is a scenario of mass production.

So, you exactly do not know which item is newer and which item is older, but for valuation purposes we will assume that the older items are issued out first, they will be valued at that cost and the remaining items which are comparatively new will remain in

the inventory and they will be valued at their purchase cost are you getting me? We will take a look at a simple example.

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Now, let us say in a particular month this is the data, now the date of receipt is known to you these are various purchases the units purchased is known and the price is also known.

So, we have purchased 5 units on date 5th we have purchased 5000 units at 7, then 12th 3000 units at 9 and then on 20th 6900 units at 9.

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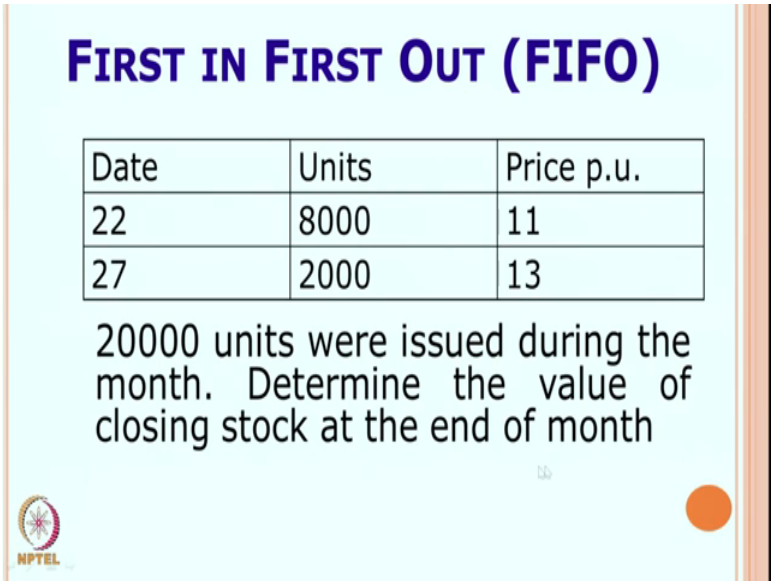

After that on 22nd 8000 units at 11 and 27, 2000 units at 13 so, in a month totally there are five different purchases and we know the units and the prices

Now, 20,000 units were issued during the month and we have to determine the value of closing stock. Now you understand that since 20,000 units are issued in the month they can be from any of the lots, but for valuation purposes we must know or we must estimate or assume that from which lots they are issued.

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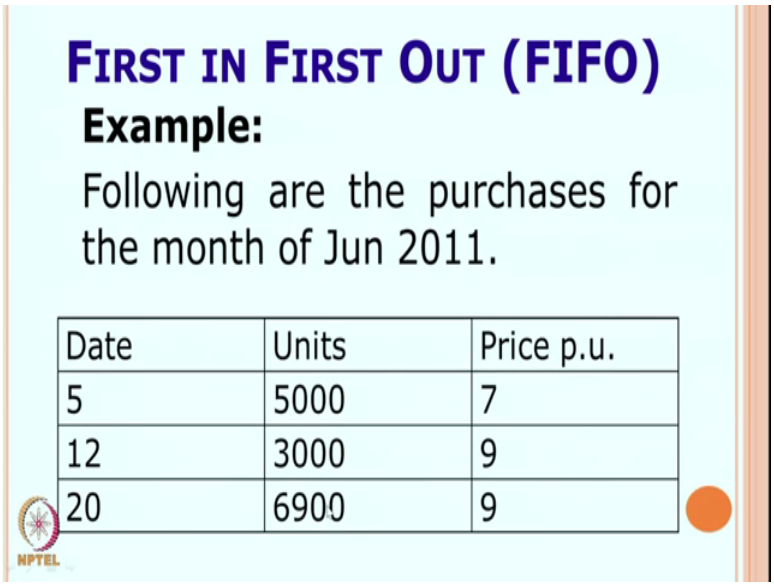

Since there are five items, I would assume based on first in first out that the most old items or those which were received early date they would be issued first. So, we will first issue 5000, then 3000, then 6000, 9000 and so, on.

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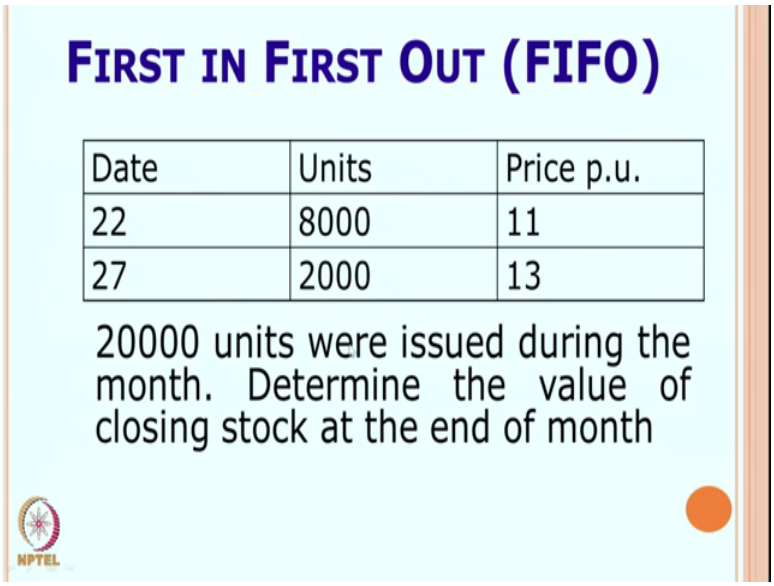

Till 20,000 units are issued and then the remaining items that is a newer items they would remain in the stock.

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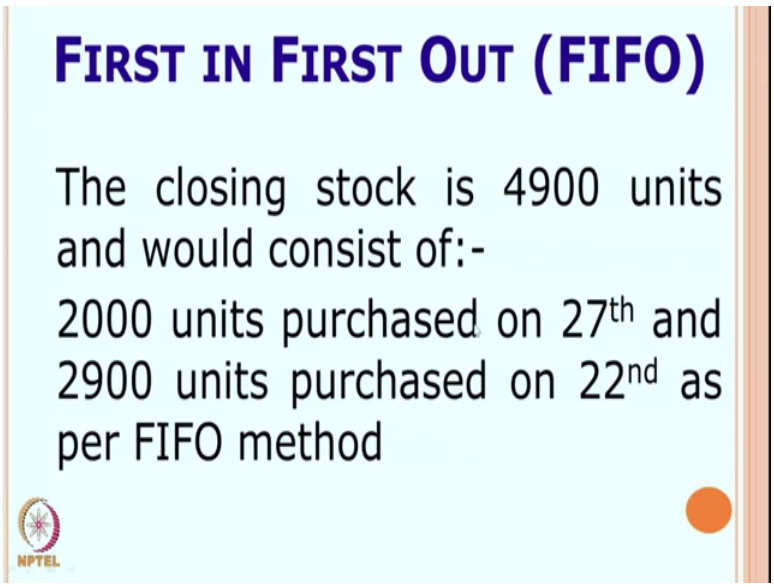

Now, let us have a look now the closing stock is 4900. So, what we have done is, we have taken total purchases which is 5 plus 3 plus 6900 plus 8 and plus 2 from which 20000 are issued.

So, total 24900 items are available and 20 are issued. So, 4900 is in the stock the older ones, that is those which were received on 5th 12th and 20th they have been issued

completely the newer ones will remain in the stock. So, which are the most latest items? 27 2000 13 is a latest item and since we have a stock of 2009 4900 of which 2000 is a purchased on 27 the remaining 2900 is purchased on 22nd ok. So, are you getting? So, 2000 units at 27th and 2900 purchased on 22nd.

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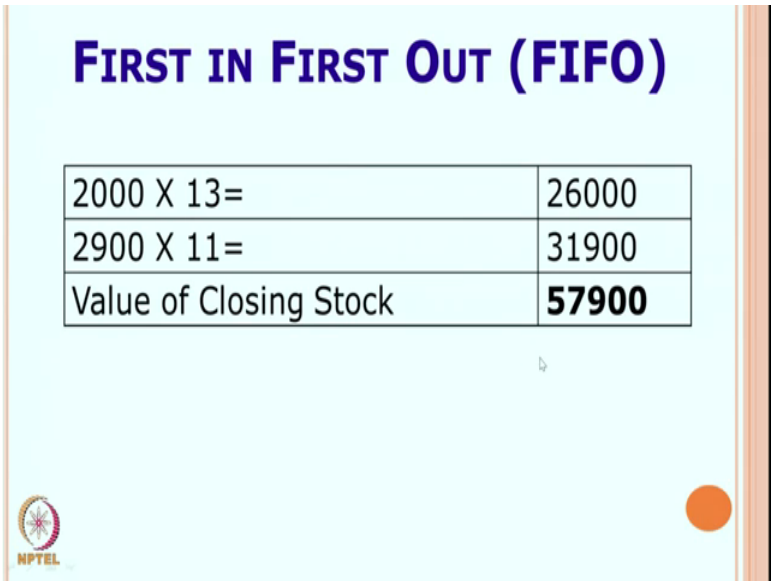

Now, we will go for valuation 2000 into 13 and 2900 at 11 this is the value of closing stock are you getting? Now if we would have been using LIFO what would have happened? In LIFO method the third method last in first out.

So, in LIFO method what is assumed is the last items are issued first. So, we would have assumed that all the earlier items or all the later items are issued and the oldest purchase that is on 5th at 5000 is what is there in stock. So, 5000 rupee units were purchased at 7 rupees.

So, I would have valued my stock as 5000; 4900 into 7 instead of 57900 the cost would have been much lesser. So, the value of stock changes by the use of methods either FIFO or LIFO are you getting.

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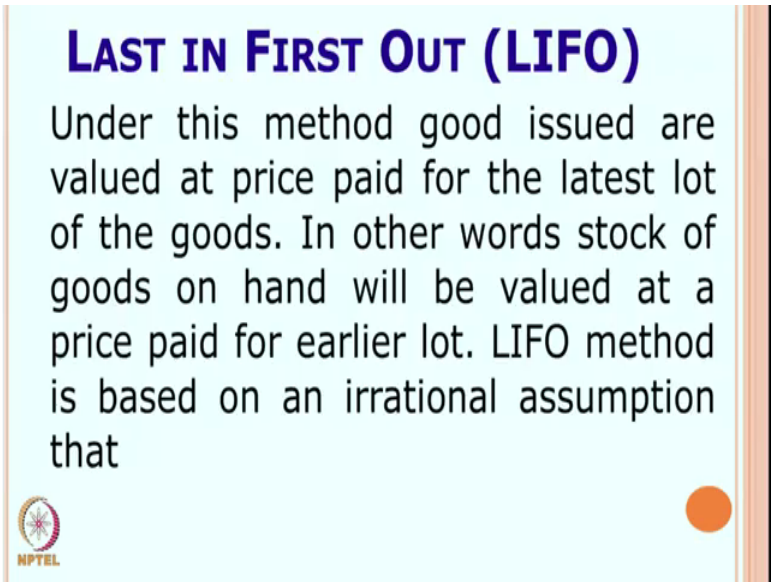

Now, we will just it have a look at the LIFO method. So, as I have just explained you in LIFO method the assumption is the latest goods are issued out first.

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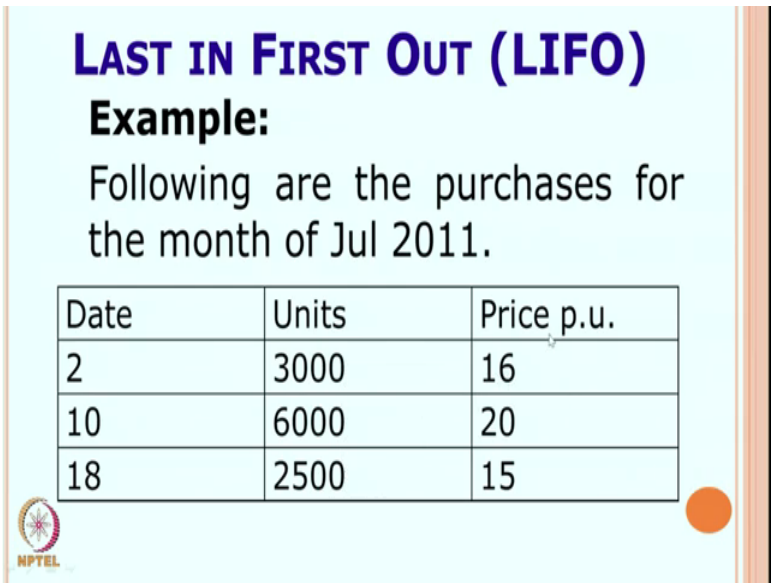

Now, example now the various dates are given and again the units of units and prices are known to you.

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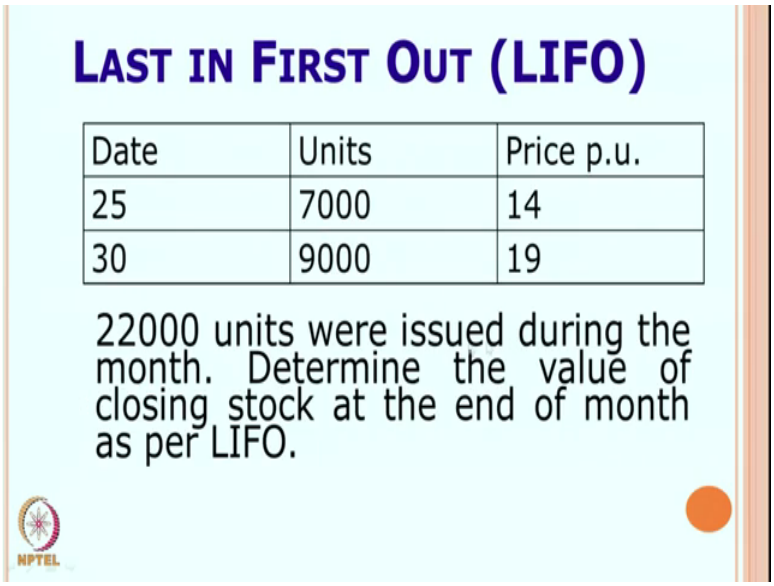

Now, 22000 units are issued during the month.

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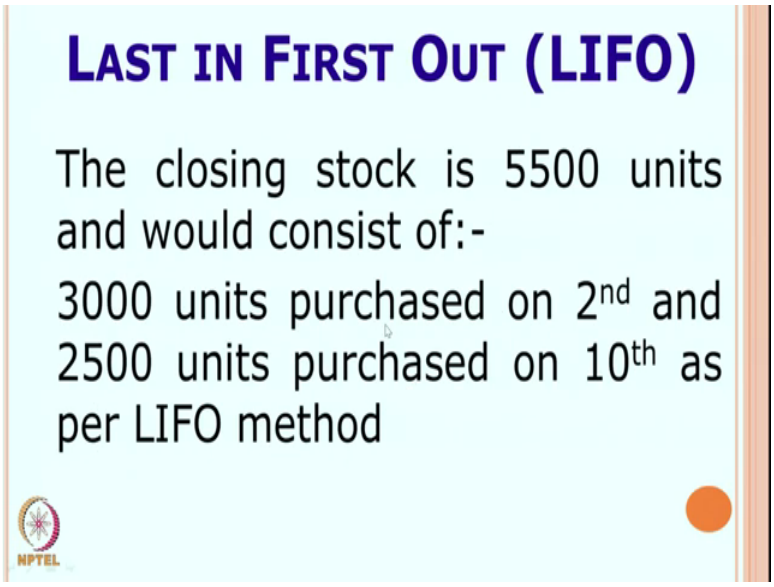

So, what we will do is, first we will have a look at the total purchases from that deduct 22000. So, we come to know that 5500 units are available in the stock; are you getting? So, orally tried to take total 3 plus 6 plus 2500 plus 7000 plus 9000 these are the total purchases from which 22000 units have been issued ok.

So, total purchases were 27500 minus 22. So, I am having a stock of 5500 units. Now question is stock consists of which items the older items or newer items? In FIFO

method we had assumed that the older items are issued out and the newer item is in stock where as in LIFO it is assumed that the latest items have already been issued and the oldest items are in stock.

Since our stock is now 5500 we assume that these four purchases are already issued, but the oldest item which is purchased on 2nd at 3000 at 16 is still in stock and there are another 2500 from 10th purchase at 20 that is also in stock. So, now, you can have a look. So, 3000 units purchased on 2nd and 2500 units purchased on 10th.

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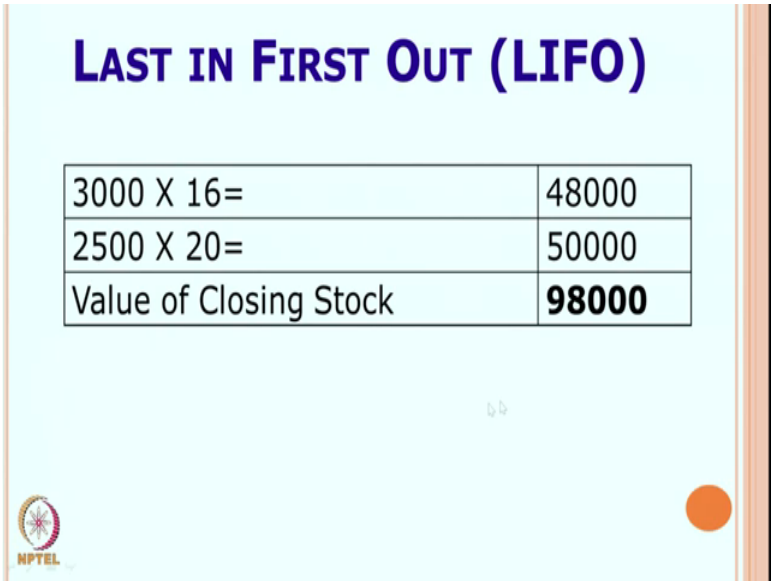

So, the stock is now 3000 into 16 and 2500 into 20. So, value of closing stock is 98000 are you getting? So, now if you have understood LIFO and FIFO method which method will give you more value of closing stock? Generally since the prices are rising; you can have a look here the prices are slowly rising in most cases as you can see here, in FIFO what happens is the older items are issued out and the newer items remain in stocks. So, normally the stock value will be slightly on higher side and this stock value is closer to the market value that is why FIFO method is normally preferred over LIFO.

In LIFO method it will be assumed that the latest units are already issued and older units will be there in the stock. Now between LIFO and FIFO which method will give you more profit? In the scenario of rising prices which normal is a case, in FIFO the stock value is high. So, assets value will be high the profits will also be higher, in LIFO asset

value will be lower and profit will be lower. Now most of the cases companies have to pay tax on profits. So, they want to show lesser profit. So, they would prefer LIFO.

However income tax authorities are equally smart income tax authorities do not allow the use of LIFO method normally FIFO method only is allowed by most of the regulatory authorities ok; but it is interesting to understand and compare the two methods. Now I have taken two different cases one for FIFO and one for LIFO, I will request you to calculate now the stock as per LIFO and FIFO for both the examples, then you can get comparative figure of stock under LIFO and under FIFO are you getting me? Ok.

Now, LIFO is one extreme FIFO is another extreme. In FIFO the value of stock is normally higher in LIFO it is lesser there is one more method which acts as a via media its a midway.

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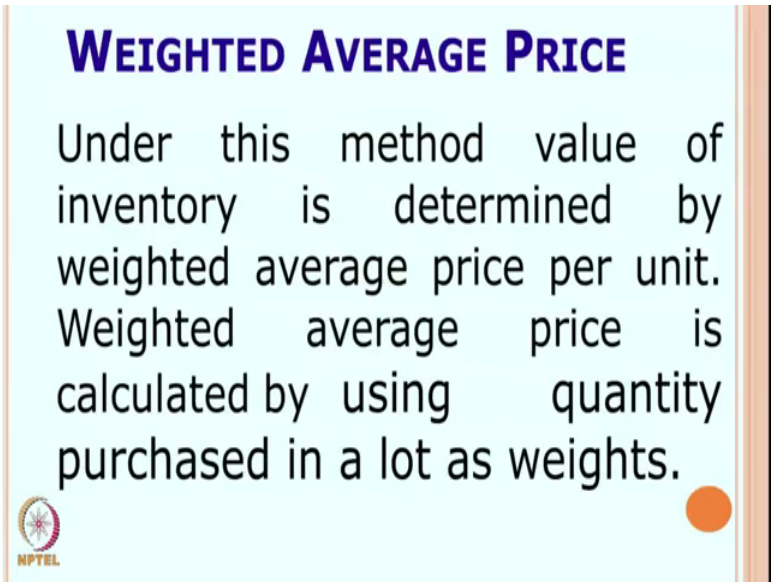

In that method what is done is, here we go for a weighted average. Instead of only using older or newer prices we go on calculating the weighted average. So, under this method the value of inventory slowly changes.

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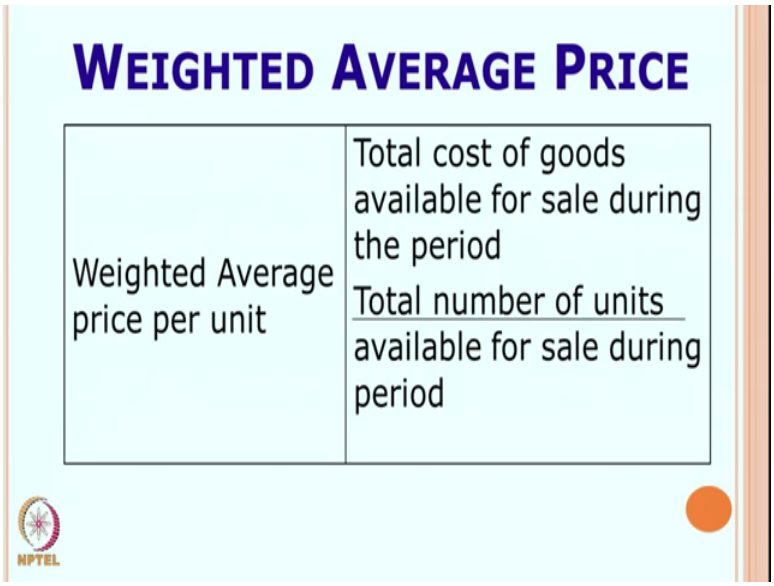

So, the weighted average you can see the formula the total cost of goods available for sale upon the units.

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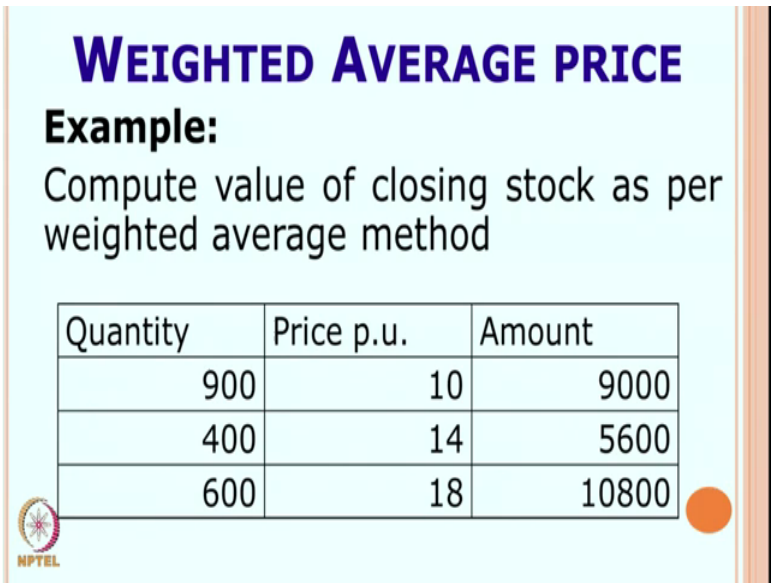

So, we will get the average price. So, you can just have a look at the example we know the quantity, price and the amount.

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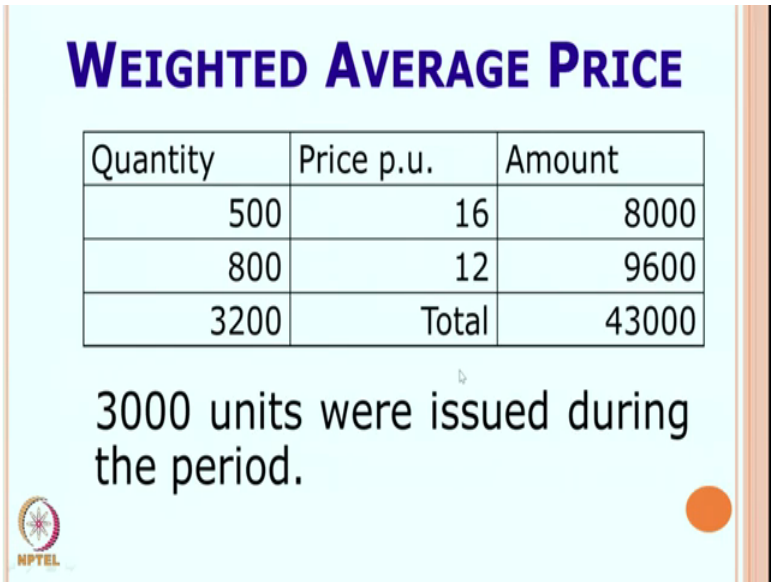

And we are given that 3200 units are issued in the period.

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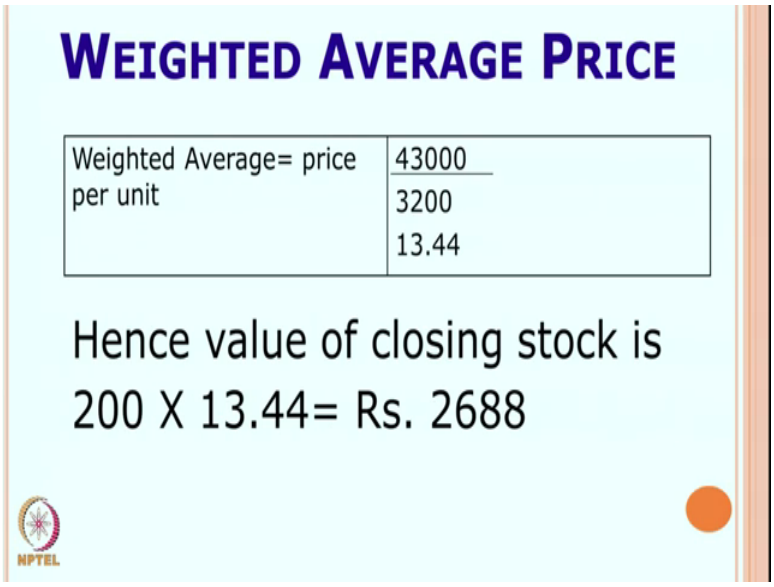

So, what we do is since total quantities 3200 the total cost is 43, we can calculate 43 upon 32. So, 13.44 is a weighted average price and the stock is 200. So, 200 into 13.44 you get 2688 as a weighted average price I hope you have got it.

The issue price weighted average is better because once you calculate the issue price, you can show it as a issue price and you can also take that value. So, you can just have a look here, the old cost was ten and at the end it was 12 and there were fluctuations in

between, but we have calculated a weighted average 13.44 and that is taken as a issue price and it is also taken as a closing stock. So, the stock price is changed here, but does not change suddenly that is the advantage of weighted average most of the regulatory authorities either used allow use of FIFO or use weighted average ok.

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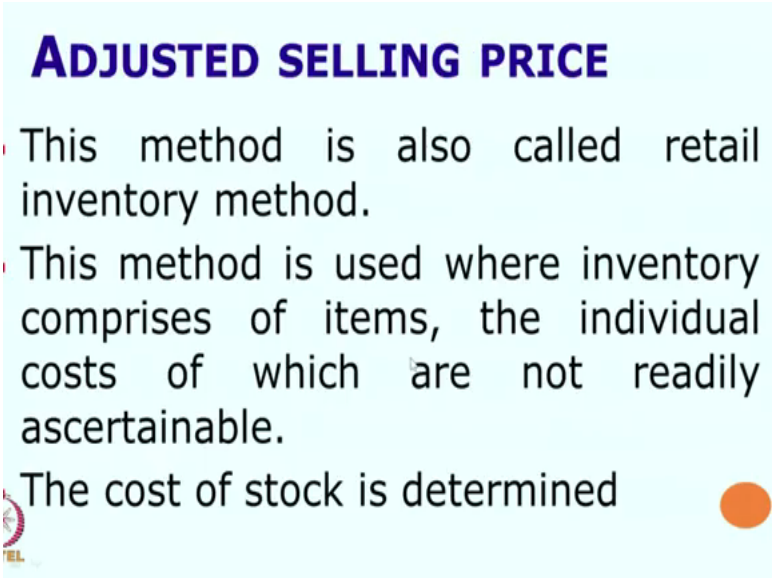

Now, let us go to the next method that is adjusted selling price. Now what happens is in many cases there are no much records available, there are hundreds of items which are traded or which are sold if you think of a kirana shop there are so, many types of items 100 or 500 items are kept and lot of items are purchased and sold every time. So, the stock keeper or the shopkeeper does not know exact price and the date.

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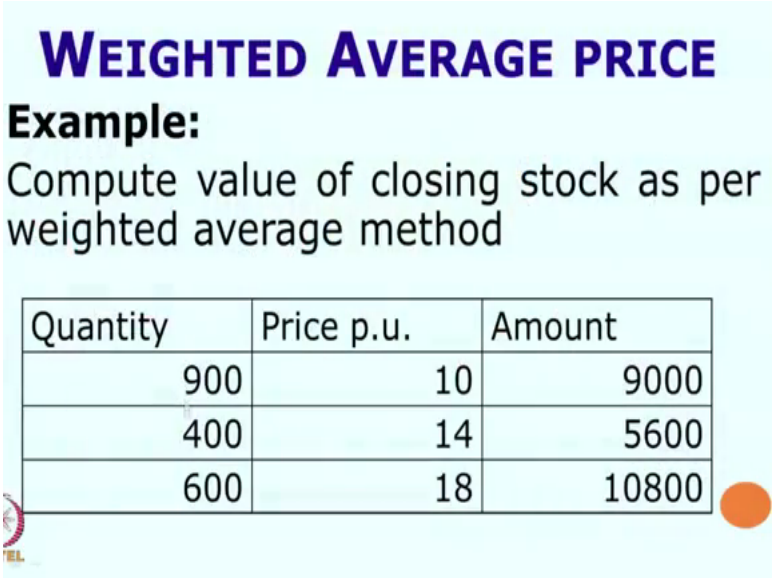

So, here we were looking at the quantity and prices such information may not be available, but at the end of the period let us say on 31st March they can calculate the actual items which are available. So, we will know the number of units, but we will not know the cost. However, they will know the selling price you know that most of the retail items the selling price is required to be written on the package. So, it is very easy to know the selling price.

So, what is done is, first the selling price of the stock is calculated, but we know that the stock cannot be shown at a selling prices. So, we reduce the profit margin on it, there will be estimates of profit margin on different types of products. So, they will calculate the value of stock list the margin you will get the cost of stock, it is an estimate it is not a exact value, but it will be close to the correct value ok. So, let us have a look.

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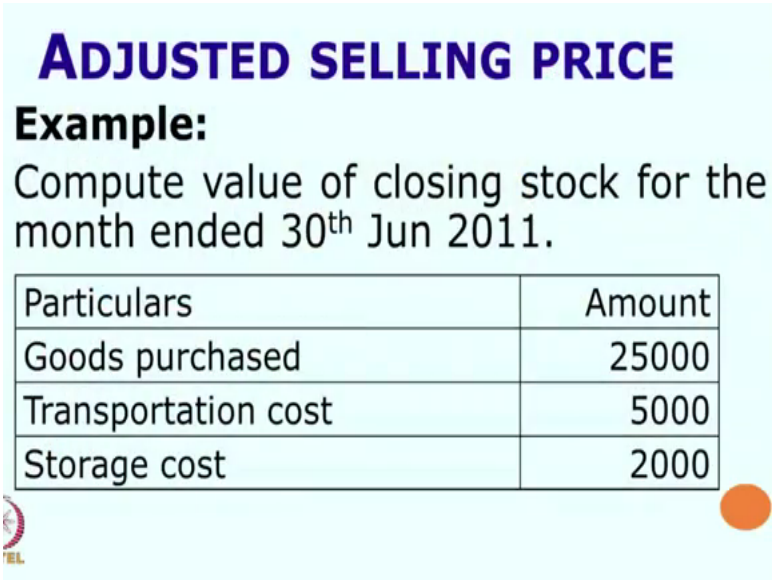

So, here date wise information is not known, but during a particular month they know the goods purchased, transport cost and storage cost.

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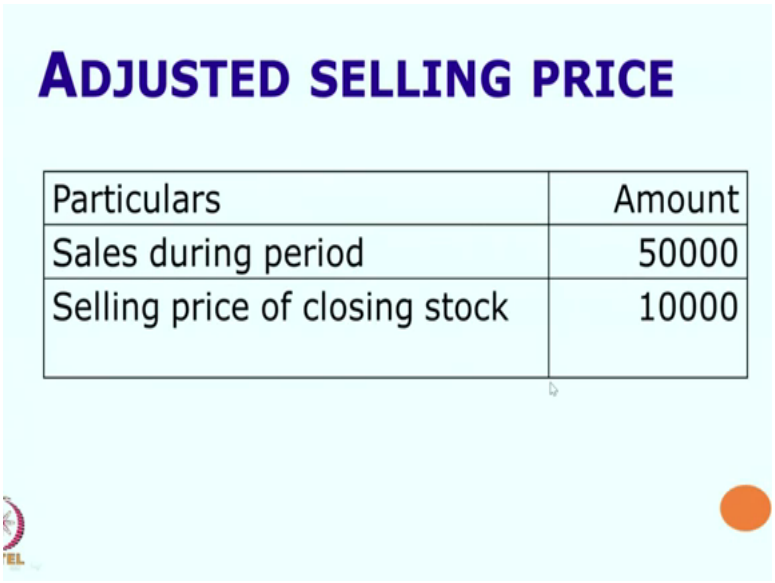

Now, they also know the sales and selling price of closing stock because they do not know exact cost of closing stock.

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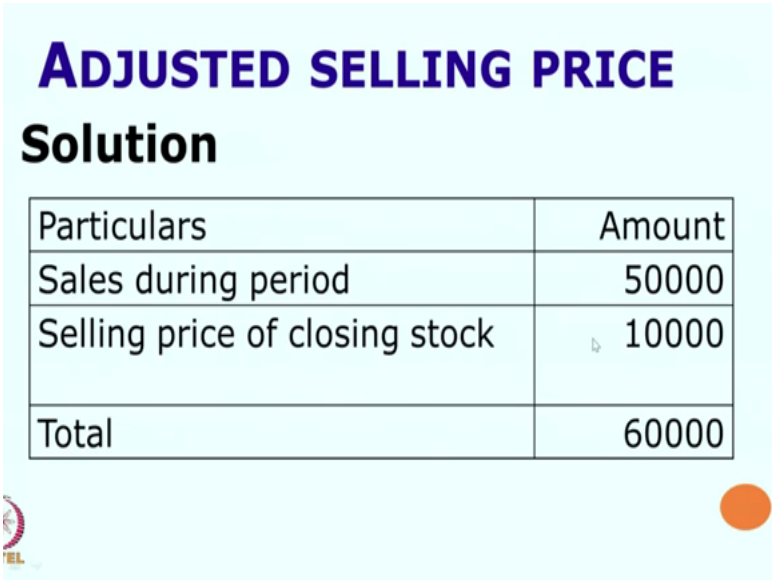

Now, what is first one is you will add sales and the selling price of stock. So, the total value is 60,000.

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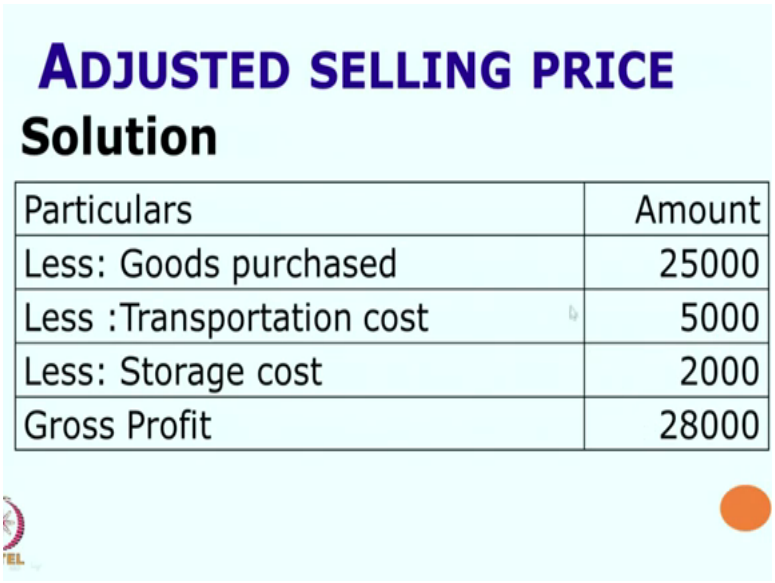

Then we will deduct various types of expenses. So, less purchase cost, transport cost and storage cost; that means, there is a gross profit of 28000

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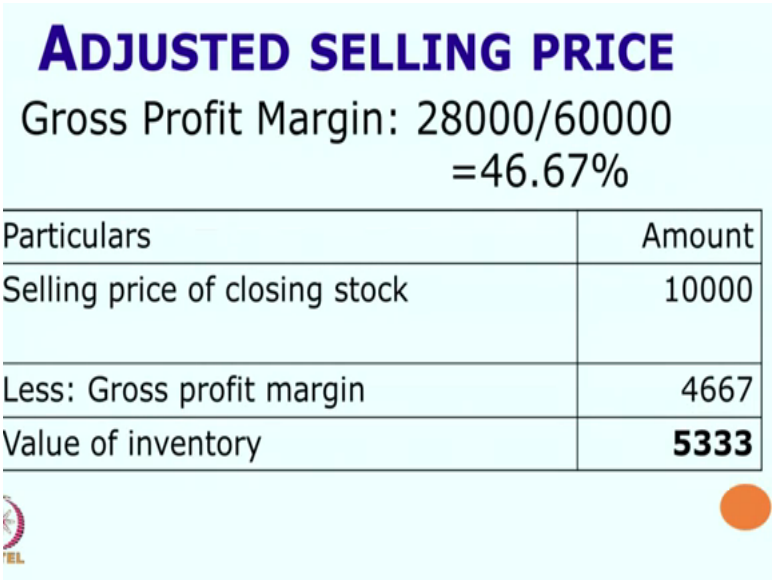

Now, 28000 is on a total of 60. So, 28 upon 60 the gross margin is 46.67 percent. So, for each type of product line a gross margin is calculated which is 46.67 percent. So, the selling price of closing stock is 10000 minus 46.67 percent that is 4667 you get the value of inventory as 5333 are you getting? This is the cost estimated cost of the inventory they do not know the exact value.

Suppose the profit margin is negative; that means, the cost is more than the selling price then we will simply show it as the selling price. But here since the cost estimated cost is 5333 and selling price is 10000 the stock will now be valued at 5333.

Now, the last method that is adjusted selling price is not very suitable method, but if the records are not available in such cases this method is used. So, with this we complete this topic on inventory valuation of course, we are going in a hurry those who want to learn more I would request you to discuss more on discussion forum, create different cases and try to understand in different scenarios what are the evaluations of FIFO under LIFO under weighted average and under adjusted selling price.

So, that we realise as to what method is suitable another important thing you should do is, go to your own annual report and check which method the company is using. They would write a note on the inventory and we will also give the method which they are using for inventory valuation and that will give you more insights into valuation of inventory, I hope you have all like the sessions. Namaste.