Management Accounting
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Lecture 45: Marginal Costing- III

Welcome students, so we are learning about the marginal costing and in the previous class we discussed something basic concept about the marginal costing and usefulness of the techniques of the what kind of the market situations, or a competitive situation this technique can be used by the firms to stay in the market or the sustain the competition otherwise they have to go out of the market if they are not able recover that total cost. So by dividing the total cost into variable and fixed cost we move step by step in this case.

It is divided into three steps first we recover the variable cost then we tend to recover the fixed cost and then we try to have some margins or the profits. So in the previous class I was telling you the basic difference between the absorption costing and marginal costing and the difference is that in the absorption costing we take into account the total cost variable plus fixed and after that we come to the profit, but in case of the marginal costing we do not follow the concept of profits straight way.

Profit is the calculated in two steps, first we calculate the contribution and then we calculate the profit from the contribution we move to the profit so we add one more step under marginal costing in the absorption costing or the total costing what we do? We take the selling price minus total cost variable and the fixed cost and then, we arrive at the difference of the selling price minus the total cost is the profit or the margin.

But in this case we do not straight way jump to the profit, we move to the profit and one more step, one more step is added here so selling price minus variable cost first, because first we have to recover that and then we calculate the contribution. It means selling price minus variable cost whatever is now the balance is that is a contribution towards, meeting the fix expenses and earning some profits. So then we subtract perfect expenses and then we see that after subtracting the fix expenses from the contribution is something is a left, then that is the profit otherwise there is no profit.

So contribution means how much contribution this firm has from the total sales after mating variable cost towards mating the fixed cost and earning the profits. So this is the one more important difference here and then other difference I told you that there is a difference in the evaluation of the closing stock. There is difference in the evaluation of closing stock and which makes a serious difference in the profits of the forms because we calculate the profits in a different way by evaluating the closing stock. Closing stock plays a very very important role because if you are call what is the role of the closing stock in any firm for example when we prepare the profit and loss account the first part of that from that, Profit and loss account is what that is the trading account of the form.

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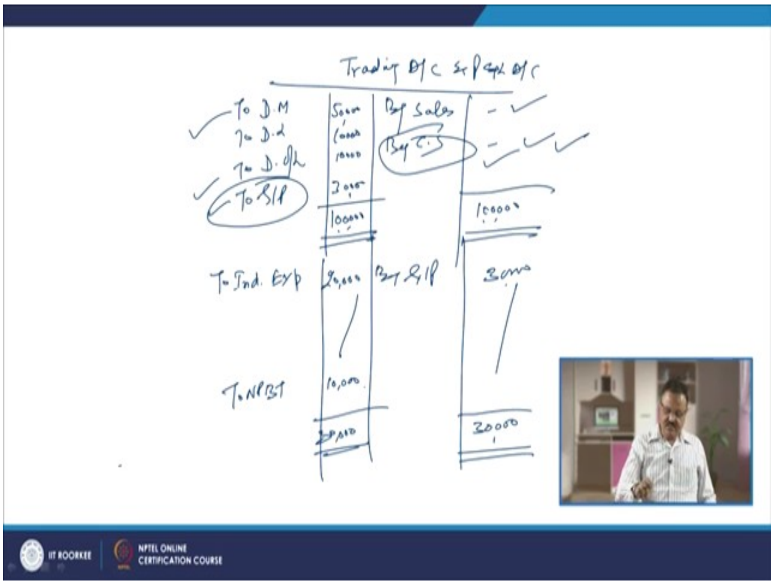

Trading and profit and loss account so, upper part is called as the trading account and lower part is called as the profit and loss account what you take here you take here the direct material you take here the direct labor and you take the direct overheads right here. Then we take here by sales a put here to it is to and then we put here first is the sales and then we put here by closing stock.

So, This total amount of the production this means depicts a total amount of production the firm has part of the production he sold in the market and part of the production is available with us and kept as a closing stock for selling in the next period and from this total for example this comes out as one lac rupees this our total value of the production after adding the profits and recovering the total cost.

Now first we recover the total cost here is, that is direct material for example the direct material cost is 50,000 rupees, labor cost is 10,000 rupees and the overheads cost is 10,000 rupees. So it means how much is the direct cost is? 70,000 rupees. And the difference is to gross profit we call it as GP which is 30,000 in this case. So your both the sides are equal to 1,00,000.

So it means you can understand the importance of the closing stock, if the closing stock value is high the profit the gross profit will be high, if the value of the closing stock is less the balance of the gross profit will be less.

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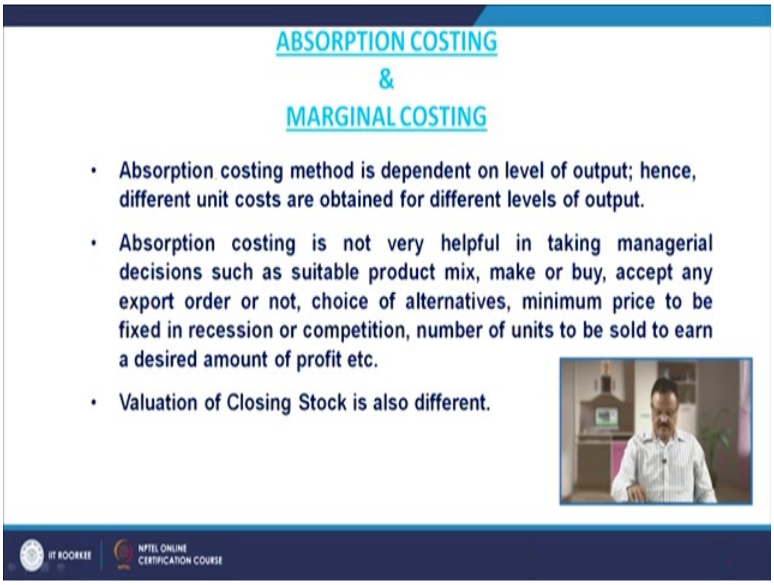

So under the marginal costing when we evaluate the closing stock or we values the closing stock, the method is different and you will see what is the difference in the profit by valuing the closing stock under the absorption costing system under the marginal costing system.

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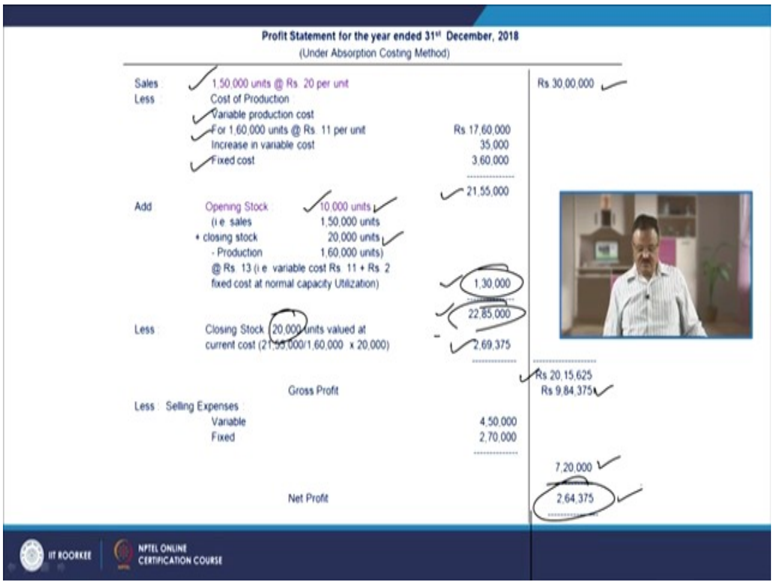

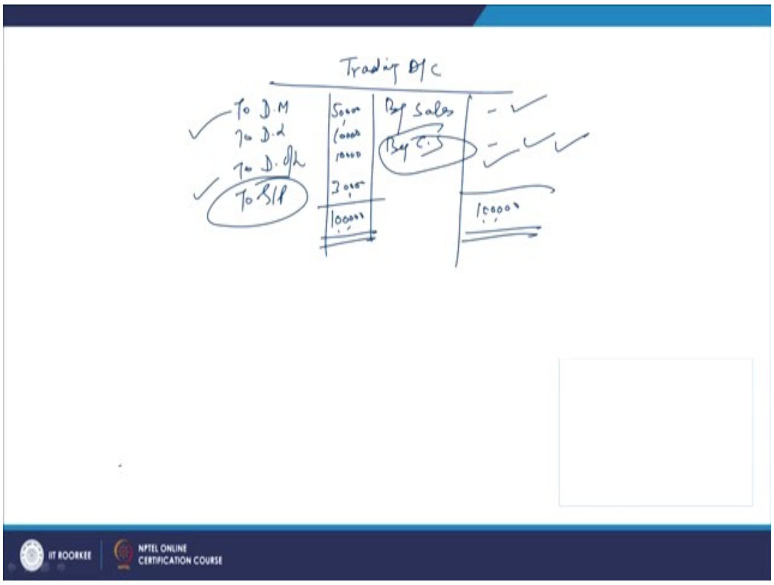

So I have given you here the hypothetical statement here and this is basically you can call it as profit statement of the company or the income statement of a company. and if you look at the income statement of the company you can say that total sales value here we have is we have put on the top is the sales value the total sales value here is how much thirty lacs.

Less cost of production this is under the total costing system under the absorption costing system normal balance sheet which we prepare will income statement which we prepare normal profit and loss account which we prepare by taking on to concertation on the total cost variable cost and the fixed cost that is the normal income statement or the profit statement you can say. So at the top and this is prepared in the vertical form these days means act from the companies act 2013 the income statements are prepared in the vertical order not in the once which I told you this is just I told you to explain now this format is old now this form at is required so the income statements are prepared like this to arrive at the profit.

So, what is the amount of profit here this is the 2,64,375. Now how we have arrived at this profit let see this. We have taken the sales 1,50,000 units and the rate of twenty per unit the selling price we are going to earn thirty lac rupees. Cost of production is how much? The total production we have done in the present period is 1,60,000 units at rupees 11 per unit, So it means this cost become 17,60,000.

Increase in the variable cost is 35,000 right. So the standard variable cost was expected to be 11 but it has little increase, so normal cost is means it is not a certain time also this 35,000 rupees will be there in the next round of production we may be able to complete the total production at the rate of 11 rupees per unit but this time because of some uncontrollable factors. This variable cost has increase by this amount so we have added it over and above the this 17,60,000 I have not put it already, because it is a one time increased next time it may be that this increase not there or may be if increase is there it can be more or less. So we are putting it is a separate figure and then the next cost is the.

So first we have taken the variable cost then we have taken the fixed cost and this is normal cost sheet and here we have calculated the total cost of production is how much? That is 21,55,000. Now, in this case we have to adopt the opening stock of 10,000 units. Opening stock of ten thousand units ~~And~~and how I have evaluates the opening stock of ten thousand units there that the total value of the stock is 1,30,000 rupees total value of this stock is 1,30,000 rupees it means we have valued the opening stock of the form by taking the total cost of production.

And total cost of production is 11 rupees as a variable cost and 2 rupees per unit as the fixed cost which is standard given to us so we have calculated the opening stock. Now how this figure of the opening stock has been calculated? We have sold how many units in the market? We have sold 1,50,000 units in the market.

We are keeping the closing stock of how much 20,000 units. So it means 1,50,000 it means the total production should be of 1,70,000 units. So out of this means 1,70,000 units, if we are saying we have produced but in the current period we have produced only ~~this~~these 1,60,000 units it means from where this 10,000 came.

This 10,000 was available with us as opening stock from the previous period production, so the opening stock is here now the opening stock value we have to take and opening stock value is normally at the total cost that is the variable cost and the fixed cost means totaling it up and the valuation of the opening stock has come up here as the 1,30,000 rupees.

So what is a total cost of production now, total cost of production for the 1,50,000 units is this much, 21,55,000 plus opening stock cost is 1,30,000 Plus the total cost of the production here is 22,85,0000 rupees. And this is for the 1,60,000 units, so it means we have now shown here 1,50,000 units are sold in the market.

So have produce 1,60,000 units so this cost is 21,55,000 plus adding the cost of the opening stock 1,30,000 rupees this cost becomes 1,30,000 rupees and now in this case is less closing stock.

Total cost is with us how much? 22,85,000 rupees which is the cost of production of the current period of 1,60,000 units plus the cost of the opening stock which is 1,30,000 so total is 22,85,000.

From this, now this production total production of 1,70,000 units is not going to market only 1,50,000 units are going to the market so it means out of 1,70,000 units if 1,50,000 units are going to the market it means where this 20,000units are they are kept as closing stock they are kept as closing stock as in the previous period we calculate the closing stock of the 10,000 units in the present period in the current period we are keeping the closing stock of the 20,000 units.

So what we did? Out of this 22,85,000 ~~rupees~~rupees’ total cost. we subtracted this value of the closing stock, no how we have calculated the value of this closing stock? We have taken this as the total amount that cost of production of the current period production is 21,55,000. And if this is for how many units? 1,60,000 units so cost of production in the current period for manufacturing 1,60,000 units is 21,55,000. Then what is the cost of production for 20,000 units? Because it is standard practice then, whatever the closing stock you keep you keep from the current years or current period’s production not from the previous period of its production.

So, when we will start selling in the market first we will exhaust this 10,000 units means you sale this 10,000 units in the market and then will starts selling from the current period production of the 1,60,000 units and whatever the closing stock is left their closing stock is from the current period production so we have calculated the value of the closing stock here, for 20,000 units proportionately by taking it 21,55,000 divided by the 1,60,000 units and multiplied by the 20,000 units of the closing stock so this a value of the closing stock

So this figure minus this figure if you calculate here, we arrive at this figure that is 20,15,~~625 this~~625 this is 20,15,625 is the cost of production of this 1,50,000 units of the sales so sales value is thirty lacs then the cost of the production is of those 1,50,000 units is 20,15,625. So finally the gross profit is how much? 9,84,375 from this now we are subtracting the selling expenses, selling expenses are both variable and fixed 4,50,000 plus 2,70, so these total expenses become 7,20,000 so from this gross profit when you subtract this you arrive at this the net profit of two 2,64,375.

This is ~~an~~a profit before tax you can say, this is 2,64,375 so it means when I was telling you we are preparing the trading account, You call it as trading a profit and loss account so first upper part is called as a trading account and lower part is called as the profit and loss account. After calculating this GP. This GP comes here by GP now, this amount of 30,000 will come here then you subtract here the all indirect expenses. All indirect expenses and then finally you will arrive here at for example this is the total income gross profit of 30,000 all indirect expenses are say 20,000 so your final net profit is this is 30,000 and the net profit is to net profit before tax is how much? This amount is 10,000.

So this is a net profit of the 10,000 this is basically the income statement or the profit and loss account or trading and profit and loss account whatever the name you want to call it as same way this income statement of the profit statement of this company has been prepared under the absorption costing system where we have taken in to concertation both the cost variable cost and the fixed cost and after subtracting all kind of the cost from the sales value we have arrived at the net profit before taxes 2,64,375.

Now we move to the second statement all figures are same total situation is same total production is same, total sales are same and total opening and closing stocks are the same but this income statement or the profit statement has been prepared under marginal costing and when it is prepared under marginal costing how much your net profit is now? 2,39,375.

What was the profit here? 2,64,375 it means what is a difference here, here is a difference of 25,000 rupees this profit has come down under the marginal costing by a sum of rupees 25,000 rupees. Now why this difference has occurred this is basic difference between the absorption costing and marginal costing why the difference has come up? Again we start from the top sales is again of,

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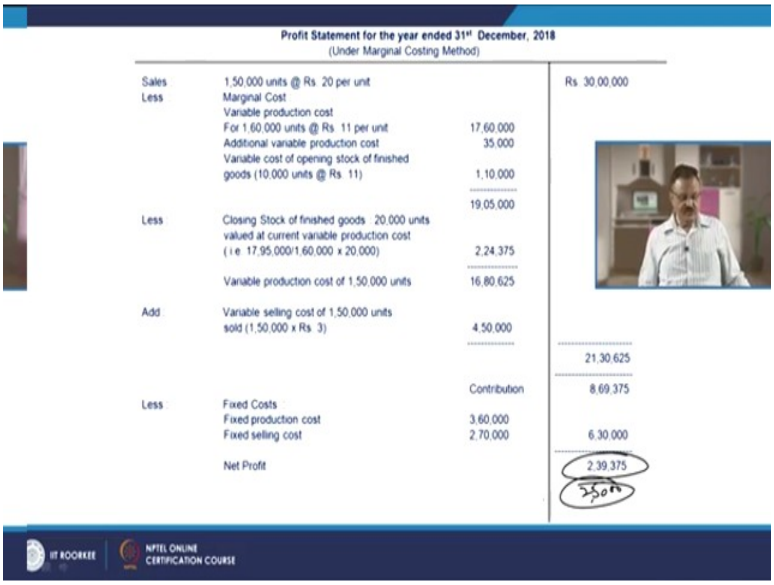

1,50,000 unit at the rate of 20 rupees per unit again this amount of 30 lacs now less cost. Now you look at technique differs methodology differs. Now we are not subtracting the total cost here, we are only subtracting the first, we are subtracting your variable cost and then we are going for the subtraction of your other cost, So we are taking here the sales value is 30 lacs.

Marginal cost only variable cost of production is how much? At the rate of 1,60,000 units at the rate of 11 rupees per unit is 17,60,000 additional variable cost 35,000 and now the value of opening stock is different here, if we took allocate this figure1,10,000 what was this figure? This figure was 1,30,000 rupees so opening stock is valued here more as compare to the valuation of the opening stock under the marginal costing, and the difference is because in this case we are taking in to account only the variable or the marginal cost in the previous case we have taken the total cost accordingly we have valued the opening stock so opening stock value here is 1,10,000 rupees. Earlier it was 1,30,000 so difference of the 20,000 rupees is there.

Then we calculate now the closing stock, valuation of the closing stock is also now, on the basis of this variable cost, variable cost is how much? 17,60,000 plus 35,000 so this works out as 17,95,000 divided by the 1,60,000 units of the current production. Your value of closing is 2,24,375. Now you look at the value of the closing stock earlier this was 2,69,375 so this difference of how many thousands as come up? This difference of we can say 45,000 rupees.

So, now this difference has come up because now you are valuing both the stocks opening stocks also at the variable cost. So value of the opening stock has come down by 20,000 and value of the closing stock has come down by the 45,000 and now the variable cost of production we have ~~calculated is~~calculated is the 16,80,625 into this we are adding up four 1,50,000 rupees of the variable selling cost.

Because what is the selling cost here? Previously we have taken the selling cost total variable and fixed but now we are only taking the variable ~~cost 4~~cost 4,50,000 rupees adding this into this figure 16,80,625 plus 4,50,000 rupees this is the total amount is 21,30,625. Till this point we have not subtracted any fixed cost from the total value of sales we have only subtracted the variable cost and that is why now the difference here is called as Contribution.

How much contribution we haven now? 8,69,375 worth of rupees, now you will subtract now we have the contribution. contribution this contribution of 8,69,375 rupees is towards the meeting of your fixed cost, because there is sufficient contribution available for example this contribution is less than the fixed cost so we are in the state of loss, but here we are sufficient balance of the contribution available so it means now it is less fixed cost.

Fixed production cost was three 3,60,000 rupees right and then is the fixed selling cost is 2,70,000 rupees which is given to us. So finally this is the fixed cost 6,30,000 rupees so net profit is 8,69,375 minus 6,30,000, So this difference is net profit before tax and this is 2,39,375.

So you see, why means while by valuing the closing stock the difference of the valuation of the closing stock under marginal costing and absorption costing the difference is of 45,000 rupees.

But under the marginal costing you are valuing the closing stock lesser because you are valuing it only on the variable cost. So similarly you are valuing the opening stock also on the variable cost. So this difference of 45,000 has finally remain as 25,000 because we have ~~reduce~~reduced here 20,000 rupees. Earlier the value of the opening stock was 1,30,000 now it is 1,10,000 earlier the value of the closing stock was 2,69,375 now it is 2,24,375.

So this difference of 20,000 has reflected here so this is the 45 minus this 20,000 find under difference of the in the profit has been seen here is that is the 25,000 rupees. So net profit is lesser under the marginal costing because valuation of the closing stock creates the problem.

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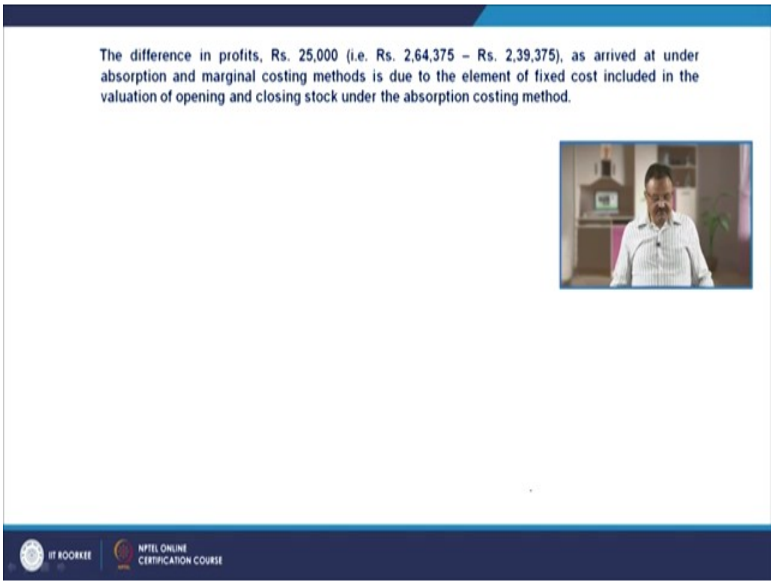

So finally you can see here the difference in profits rupees 25,000 that is 2,64,375 minus 2,3~~0~~9,375 has arrived at under absorption and the marginal costing method is due to the element of the fixed cost included in the valuation of the opening and the closing stock under the absorption costing system

So you can understand how we prepare the income statement under the marginal costing? How we prepare under the absorption costing? and what is a major difference, ~~So~~so here we give the importance to the variable cost first we segregate the total cost into variable and fixed and then we arrive at the profit in three steps, first is the selling price less variable cost we arrive at contribution less fixed Cost. And then we arrive at the profit where is in case of the absorption costing you have only two steps sales, total sales value minus total cost variable cost and fixed cost and the difference between the sales under total cost is the profit that is a net profit before tax.

So I think by now you have clearly understood the difference in the marginal costing and the absorption costing and marginal costing is how it is useful under the different or you can call it as difficult market situation. If there is a stiff competition in the market if there is very you can call it as the influx of a new very powerful plyer in the market the plyer is causing the competition and firms have to sustain in the anticipation that the situation will be overcome in that time to come the situation will improve and even the competitors also have to jack up the Price.

So in this case we have to means use the variable or the marginal costing for some period of time. And we have to make sure that we have are able to recover the variable cost at least and if the fixed cost is not recoverable forget for some time, and if there ~~is~~are no profits for gated of some time at least you are able to recover variable cost of production, that is the variable cost of production from the sales value so at least your operating cycle is continuing.

The variable cost is on account the material labor and the other direct overheads, ~~So~~so if you are able to recover that cross from the market you keep and producing and selling in the market considering the fixed cost as a sunk cost considering the profit as a means not currently possible to be earn but we will say make the situation we will turn the situation in the time to come when the situation in the market will change.

Now we will move to the next part and that next part is learning about the different concepts under the marginal costing and applying the technique of marginal costing for different management decisions in the form different management means, how it is useful? So in case of the standard costing as I told you we had to calculate different variances and for those variances we were given the set number of the formulas.

First you have to memorize the formula put the values in the formula and calculate the different variances, same is case here application of the marginal costing as a technique of costing very useful technique of a management decision making has to be applied here the different application which I told you that those different applications if you talk about.

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Here the application of marginal costing which we discussed in the previous class all this decision making process, fixation of selling price, buying or make or by decision, key or limiting factor, effect of the change in selling price. So and so forth. We will be now learning some basic concepts of the marginal costing which will be useful in taking the difference decisions in the different market situations.

So now we start with the first thing that marginal costing. As I told you begins or focuses upon the variable cost so first and for most important concept in the marginal costing is something called as Contribution. This is called as Contribution.

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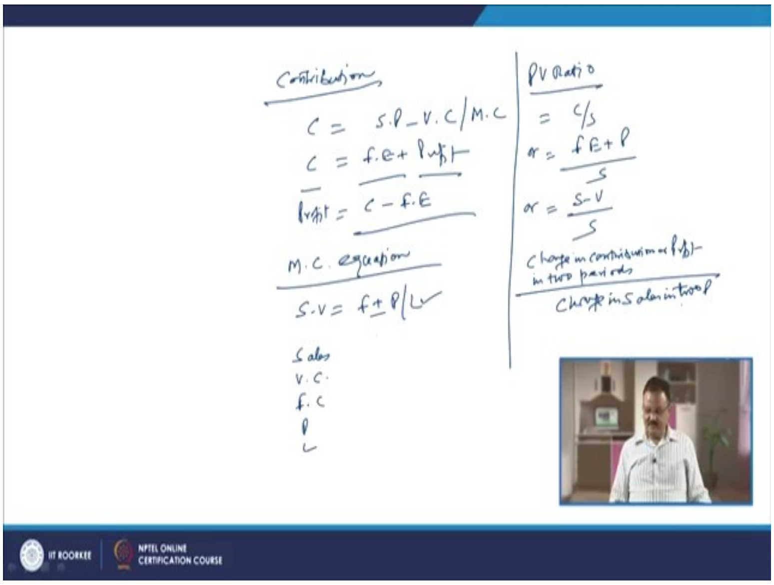

What is contributing now? I told you the contribution is basically that difference in the selling price minus the variable cost. So, how we calculate the contribution? Contribution is we signify a contribution with see and contribution you can calculate in the three different manners or two different manners and from the contribution you can arrive at the profit so since we do not jump to the profit straightway under the marginal costing.

So it is better to start with the contribution, so we should be learning about we should be clear about, how to calculate the contribution? So contribution is basically the difference between the selling price is minus variable cost or call it as obelic marginal cost. Selling price minus variable cost is called as contribution, or you can calculate the contribution as fixed expenses plus profit, fixed expenses plus profit this is also the contribution.

The difference between the sales and the marginal cost or the variable cost is the contribution and that contribution is towards meeting the fixed expenses plus earning some profits so if you have these three things you have the contribution, you have the fixed cost, you have the profits figure so, finally you can arrive at the profit also from the contribution and for arriving at the profit, what you have to do is you have to interchange this items and then you can say that is contribution minus fixed expense is the profit.

So, first important concept of the marginal costing is a contribution or learning about how to calculate the contribution? You can calculate the contribution simply by subtracting the variable cost from the selling price or (if it) this situation is not given any problem an if you are given the information about the profit and the fixed expense is that will also equal to the C, because that is equal to the difference of selling price minus variable cost.

Now after that, I will talk to you something about second concept is the marginal costing equation. This is very important equation, if this equation is known to you, you can solve many problems. You can means this equation involves four important things and if any three things are given to us we can easily calculate the fourth things.

So, what is this marginal costing equation? This is S minus V is equal to F plus minus P oblique loss, S minus V is equal to F plus minus P or L. What is S? S stand for sales, V stands for the variable cost, F stands for the fixed cost, profit P stands for the profits and L stands for the loss.

Alright so this is the marginal costing equation it is always help full to find out anything that if anyone out of this three for example you have the value of sales is fixed cost and the profit. You can easily find out the value of the variable cost. If you have the information about the sales variable and the fixed Cost. You can easily find out the profit whether is the profit or the lost depending upon that from the contribution that is sales minus variable cost if the fixed cost is higher as compare to the contribution then we are in the state of loss otherwise we are in the state of profit.

This is very very important equation and this equation is called as the marginal costing equation S minus V is equal to F plus F or F plus minus P oblique loss. So you always keep this equation in mind it will be very useful for us in the different say decision making processes under the marginal costing.

Now we will discuss one more very important concept and that concept is called as PV ratio means full name of this ratio is profit to volume ratio. This ratio is very very helpful, very very useful to take any decision or to implement any decision in the firm, what is this PV ratio. You can calculate under different situations on different methods PV ratio can be calculated as simple way to calculated by C divided by S, C is the contribution S is the sales value and this ratio is called as contribution divided by the sales is known as the PV ratio or you can calculate this as what is the contribution? Contribution is fixed expenses plus profit divided by sales this also the contribution.

And in this case other we around you can calcite here it is that is S minus V is equal to S. this is also the PV ratio. And forth is that you can calculated by change in contribution or profit in two periods, in two periods divide by the change in sales in two periods.

Change in contribution or profit in two periods and change in sales in two period divided by the change in sales in the two periods so if you have not given the clear cut information about the C or S. Or fixed expense or profit or variable cost and sales then you can calculate the PV ratio if you are given the information for two periods that is the information with the regard to contribution or profit.

Contribution in the period one-year contribution in the one year to sales in the year one or sales in the year two you can take the difference that is the change from year one to year two you take the difference in both the figures, that is in the contribution or profit and sales and then you can find the PV ratio also in this way or in this manner.

Now what is the meaning of it how it is useful in the different market situations or different competitive situations and what is the overall relevance of this PV ratio? I will discuss with you in the next class.