Management Accounting
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Lecture- 52
Cost Management System and activity based costing -1

Welcome students, so currently we are in the process of learning about the activity based costing system, learning about the implementation of this system. So, now after the initial discussion in the previous class that is the basic conseptional discussion in the previous class. Now I will take you systematically to the next level and then we will learn about what the cost management system is, what is the, what are the different type of costs are and how we can go up to reach up to the level of the implementation of system which is called as the activity based costing system.

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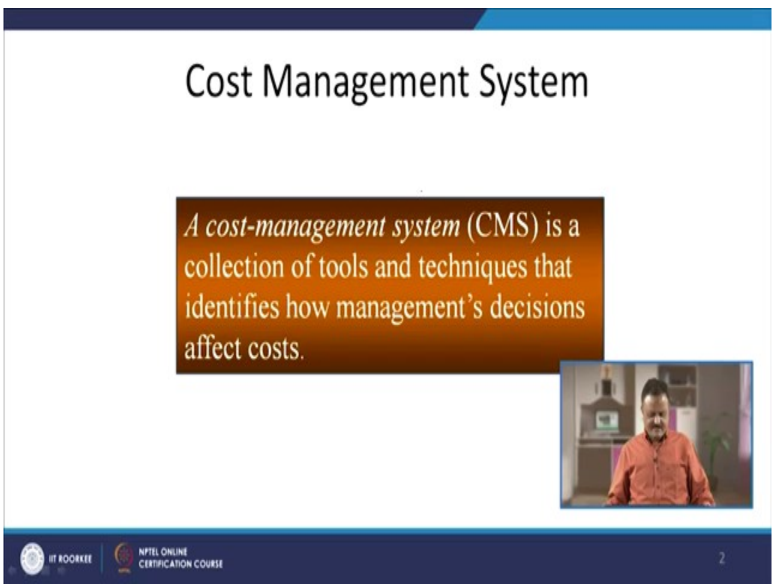

So let us try to understand what is the CMS - cost management system? Cost management system is a collection of tools and technique that identifies how management's decisions affect costs. Tools and techniques, is about to say collection of tools and techniques to identify how management's decision are affected and how management or the cost of production is calculated. How that is used for determining the selling price of the product and what the important components are taken into account for calculating the total cost of the production. How the variable cost is allocated, how the fixed cost is allocated?

This all when you study together in totality then that system is called as CMS or the cost management system. What is the cost accounting? Now, what is the role of the cost accounting in creating a efficient cost management system. Cost accounting is that part of accounting system that measures cost for the purpose of management decision making and financial reporting. I told you that management account does not have its anything of its own, it borrows different techniques from the two basic disciplines partly it borrows from financial accounting; partly it borrows from the cost accounting.

So, largely if we are talking about the cost management system so this technique borrows from say cost accounting largely, whatever the techniques we have talked till now whether it is a cost sheet, whether it is budgets, whether it is a standard costing, whether it is a marginal costing and now whether it is ABC they all belong to the cost accounting but we can not say that we have not made use of the financial accounting.

We have calculated the cost means prepared the coat sheet and at the same time we have prepared the income statement also and the balance sheets also. In the budgets, say we have calculated the cost of the different inputs and then the selling price after adding the margin into that but there we have used the budgeted means we have prepared the budgeted income statement, the budgeted balance sheet and the budgeted cash flow statement or the cash budgets.

So, if you do not know how to prepare the balance sheet, if you do not know how to prepare the income statement or you do not know how to prepare the cash budgets which are basically the subsets of financial accounting so you cannot implement the management accounting system. So partly the things are borrowed from the financial accounting, partly the things are borrowed from the cost accounting and then the third discipline has come up.

And largely the focus of this discipline is facilitating all kind of the management decisions. Whether it is with regard to the purchase of any input, whether it is with regard to the sale of the final product in the market l, whether its with regard to the say calculating the cost of production or selling price, fixing the selling price or anything. It all is based upon the basic two techniques or two branches of accounting, financial accounting and cost accounting.

Here we bring the information from those basic branches and then we put it here and try to establish the relationship and the interrelationship between the different variables and then try to find out that how the different or important decision with regard to the management of any organization are taken. So cost accounting, now we are talking about here because we are talking about activity based costing so we are talking about the cost accounting but in this technique also you will be making use of the financial accounting.

You will be making the use of financial accounting because on the basis of this cost accounting system we will be preparing the cost sheet and then the profit and loss account. Sometimes the balance sheet also. So, when you are converting your cost, per unit cost is changing, total production cost is changing then the income statement is also getting affected and to some extend the cash budgets are also getting affected. So, again these two branches, cost accounting and financial accounting both go hand in hand whatever the techniques you use in the management accounting.

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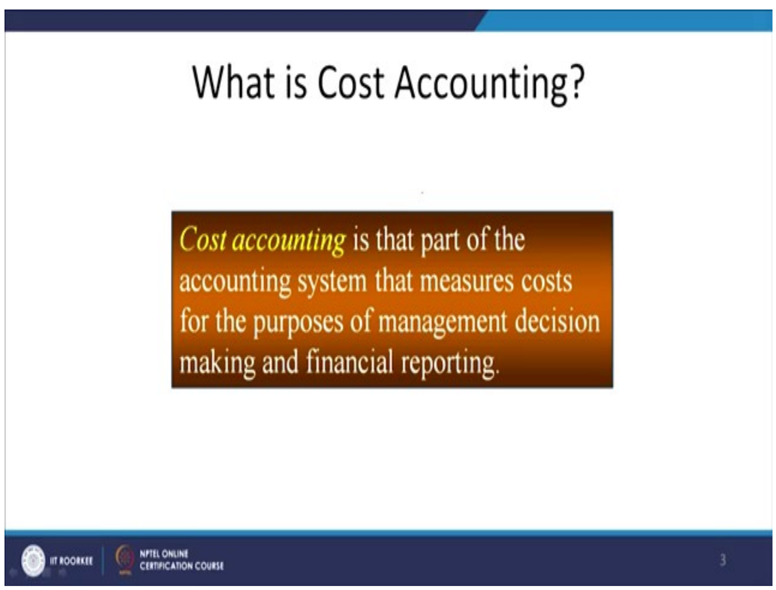

So cost accounting we talk about this is the part of the accounting system that measures costs for the purpose of management decision making and financial reporting because you can not prepare the income statement without the information of the cost. What is the material cost, what is the labour cost, what is the other overhead cost? You cannot prepare the income statement until or unless you prepare the proper estimate of the cost. Then we talk about the cost accounting system.

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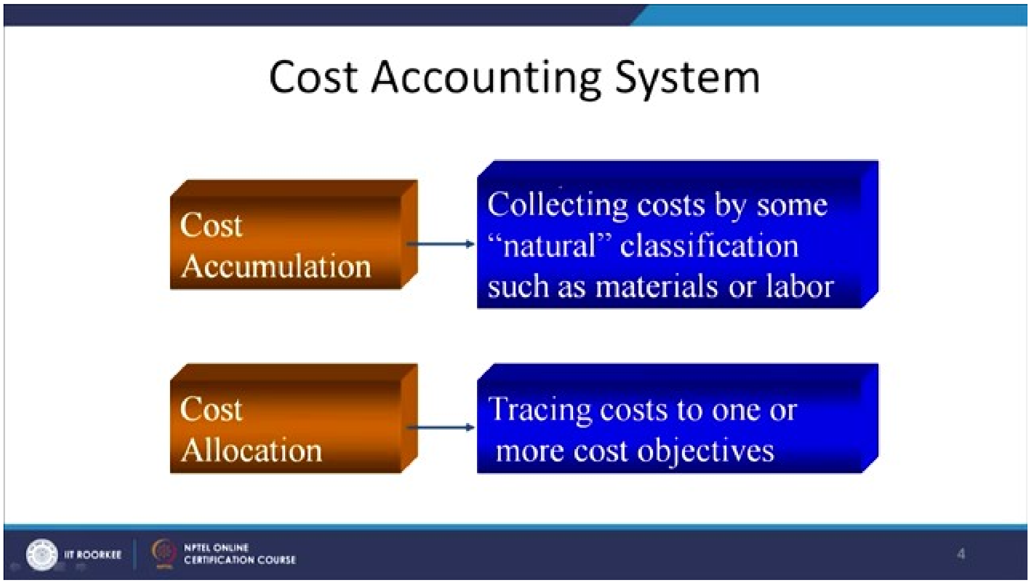

If we talk about this system, cost accounting system, what is happening here? We are now passing through the different steps. First thing is the cost accumulation. Cost accumulation means, collecting cost by some natural classification such as material or labour. We have to identify the different inputs which cause the total cost of production and what are those important elements. What are those different components and sub components those means sum total of that will become the cost of the production and that we have to accumulate the cost and that to different products in different way and then allocation.

Once we have identified that we are requiring 3 major things material, labour and other over heads for calculating the total cost of the production and you are manufacturing 4 different kind of the products, we know total material purchased is this much but how much is used by product A, B, C and D that is the next level job and then it is called as the cost allocation.

Total people working in the plant, workers working on the plant they are manufacturing all the 4 products but how much time of that labour is consumed by product A, B, C and D that has to be properly identified and that has to be found out. So tracing cost to 1 or more cost objectives is known as the cost allocation.

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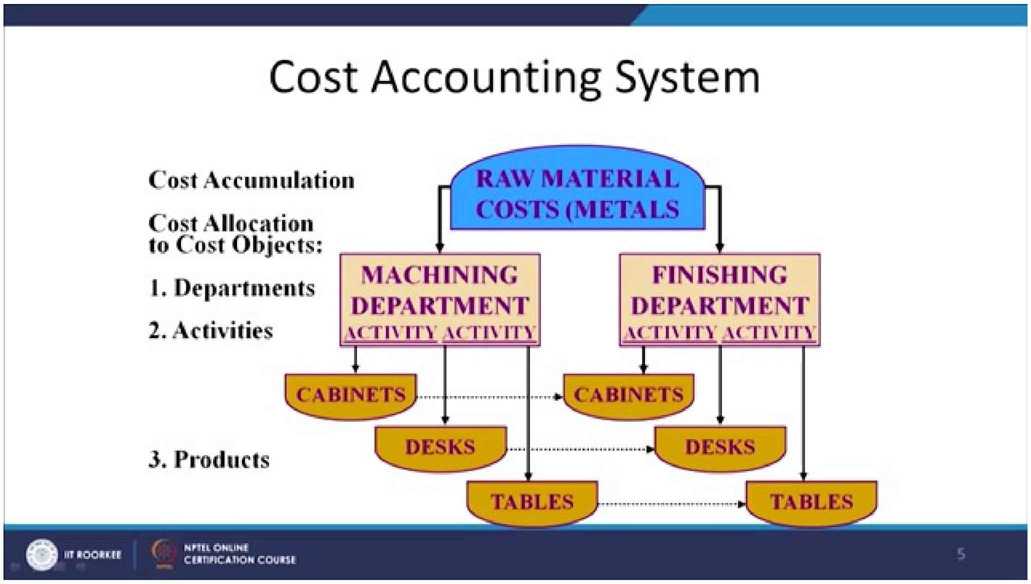

Now system, you talk about the normal cost accounting system is what, this is something like this. We deal with the system like this, cost accumulation. This is the cost accumulation process where you talk about the different type of the inputs. Material cost, labour cost and then is the direct overhead cost or may be the other costs. Then the cost allocation to the cost objects. Cost allocation to cost objects means different products. We are manufacturing A B C and D products and there how do we go ahead in apportioning there cost in apportionment of that cost by say starting from the 3 different sets. one is departments.

Different departments are there, purchase department is there, store department is there, manufacturing department is there within manufacturing department there is a whole process different department, process 1 department, process 2 department, process 3 department, process 4 department then is the warehouses another department then is the say transfer of the goods from the warehouse to the market is another department.

So different department we have to find out that are working in that organization and number 2 is the activities being performed in those departments. What are the different activities we are performing and then out of those total activities how many activities are consumed by the different products, proportionately, that is the next thing we have to do and then finally the departments activities and the allocation of these costs as per the different activities to the different products.

So here we are talking about cost accumulation in terms of raw material cost, labour cost and overhead cost. Then the departments are the machining department , finishing department then is the different activities, activities we are doing here is that is within a department we are doing different activities. In machining we are doing different activities, we are cutting the different iron sheets, steel sheets into smaller parts. We are making hole into that, we are giving are giving different shapes to those pieces and then they are going to the next step.

So, all those activities are being done in the different departments. Finishing department us doing the different type of the polishes, different types of the shining is given; different type of the polishing is done, different type of designing is done. So, different products, different designing, different cost, then is those all as per those departments and activities the cost is allocated to the products. The cost is allocated to the products and these products, for example, in this case we are having multiple of products.

Cabinets are there desks are there tables are there different types of products we are manufacturing, so this is how the normal costing system works. This is how the normal costing system works. It works in the same manner under absorption or the total costing system also, it works in the same manner under the ABC also activity based costing also. There is no difference in that but the difference comes up later on in the allocation of the fixed cost to the different products we are manufacturing.

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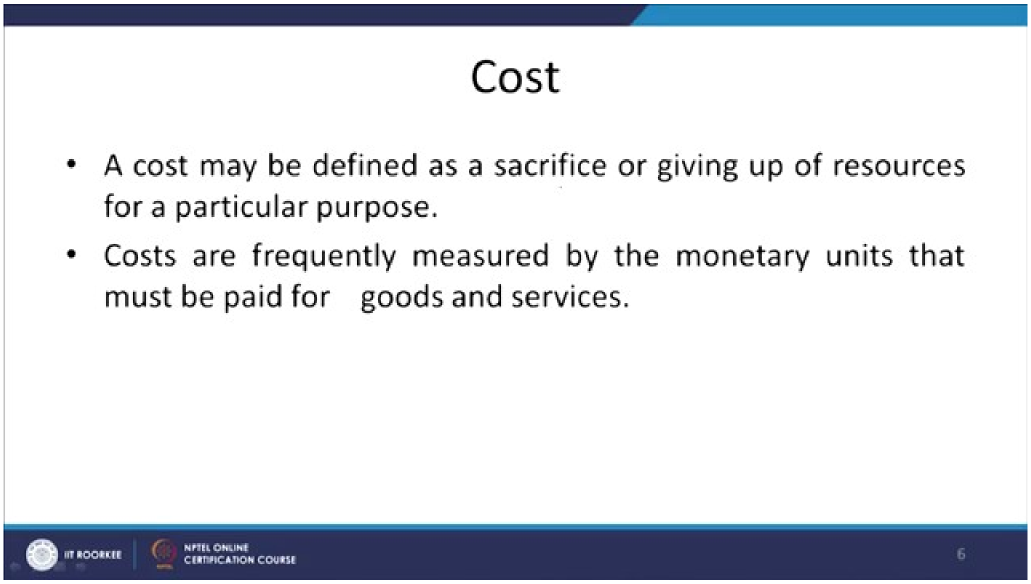

Now, the next thing is what is cost? Cost may be defined as a sacrifice or giving up of resources for a particular purpose. When you have resource, resource is funds, finance we used that resource, that resource went out, we got something in return to it and that is material. So, the material is the replacement of the cash and then that material will be moving to the different processes and that will be converted into the finished product.

So, conversion of that material into the finished product so, when you are getting the finished product you are sacrificing your material and when you are getting material you are sacrificing your cash so its just sacrifice or giving up of the resources for a particular purpose. Cash for the purpose of material we sacrifice, then when you talk about the material when you transfer it to the manufacturing process so material is sacrificed for converting that to the finished product.

So, this way the entire process goes on and the moment we keep on sacrificing the resources and adding up these total resources the output of this resources then it comes the cost. Costs are frequently measured by the monetary units that must be paid for goods and services. When you want to manufacture goods, you want to create different types of services; you have to incur the cost frequently. It is a regular activity, it is a continuous activity sacrifice of resources remains regular and then creation of the products remains as a regular activity and we keep on doing it as a regular normal process. Then is the cost objective, when we talk about the cost objective.

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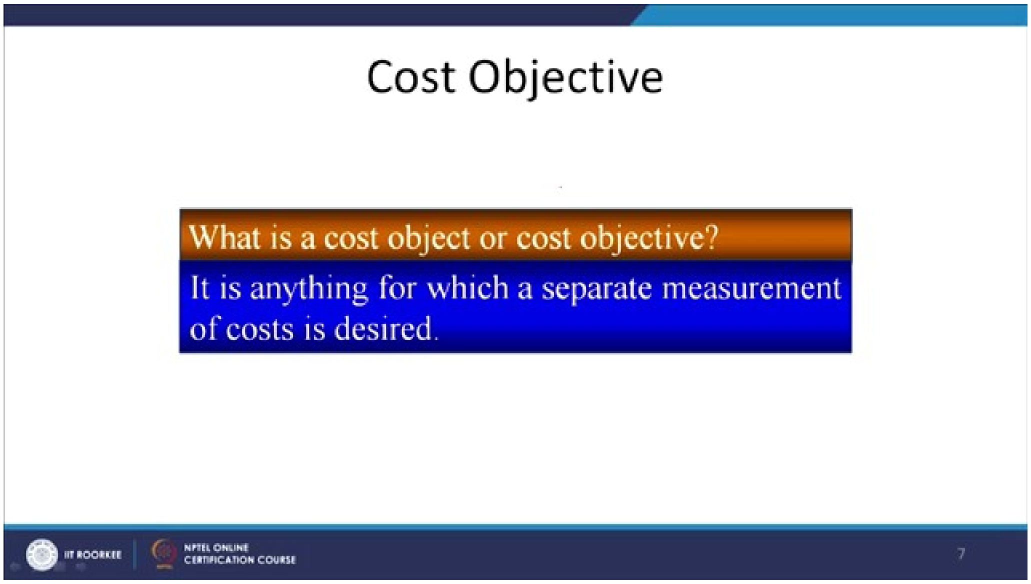

What is the cost objective or the object or the objective of the cost? Why do we calculate the cost? Why there is a need to work out that cost and find out that cost? It is anything for which separate measurement of cost is desired. You are manufacturing 4 different products. We are sacrificing different resources for these products. So, now we have to go for the separate measurement of the cost for these 4 products. For these 4 products separate cost we have to measure.

Separate cost we have to find out and separate cost we have to calculate because adding up of the resources, sacrifice of the resources for 4 different products is different. What is the direct cost? Now we talk into the cost is basically let us go back so the cost is basically when you talk about the cost means the object of the cost is to find out the total cost of the production and when you have to talk about the cost you largely we divide the cost into 2 parts.

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1 part is the direct cost and the other part is the indirect cost. You can call it as direct cost is the variable cost and indirect cost is the fixed cost. So what is a direct cost? Direct cost can be defined specifically and exclusively with a given cost objective in an economically feasible way. Direct cost can be identified specifically and exclusively with a given cost objective in an economically feasible way.

So, it means directly you can identify the sacrifice of some resource for one particular purpose. You want to manufacture, say this dice so you have to buy the wood, wooden material first of all, you have to buy the nails, you have to buy some polish and other kind of things so you are sacrificing the cash for that. So, you are sacrificing your finance for that. So it means finally we easily we are able to find out, if you want to manufacture this one dice you need the material that much.

If you want to manufacture 10 units of this dice you need the material that much, you need that much of the labour and you need that much of the over heads. So, it means you are able to identify directly the cost which is locatable, which is a proportional to one particular product and that cost is called as the direct cost. Then the another cost is called as the indirect cost, indirect cost is the another name of the indirect cost just I told you about that is the fixed cost.

This is not directly. You have, for example, water plant. You have created the plant capacity that entire unit, manufacturing unit is created and we have sell out say 1 million rupees 10 lakh rupees we have sell out and we have created the plant. Once that 10 lakh rupees are gone, plant is created you use that for manufacturing 1000 units or use that plant for manufacturing 10000 units provided the plant capacity is there, there is no affect at all.

That cost is not directly related to the cost of production, number of units. That cost is fixed 10 lakh rupees are gone and the life of the plant is 10 years, so it means per year the fixed cost is 1 lakh rupees, you have to recover that one lakh rupees cost. If you are able to manufacture 10000 units, per unit cost will come down if you are able to manufacture 1000 units, per unit cost will be behaving accordingly and will be going up.

So, indirect cost is not affected by the volume of production we are doing in any organization, in any unit, in any manufacturing unit, in any factory. That cost is which is not directly affecting the cost of the product is known as the indirect cost and largely it is the fixed cost. Buildings, depreciation of the buildings, electricity that power, office power, then your water charges may be in the office then rent of the building sometimes.

Then some other kind of the sane depreciation of the furniture, depreciation of the fixed assets then the salaries of the employees then the rent of the building, all these kind of the expenses are fixed expenses, now we have hired a building, there 1000 people can sit and only 100 are sitting, so it does not mean that your rent will come down according to 100 people. It will be according to 1000 people and you have no reason to think that this will be proportionately distributed.

It has to be distributed to the total number of units , total number of employees we are putting into it that is 1000 or 10000 or 100 or 1000 then the per unit cost will change but it will not happen as per the use of that particular asset or that particular property. No. Which happens in case of direct cost but no in case of the indirect cost. What distinguishes between the direct and indirect cost.

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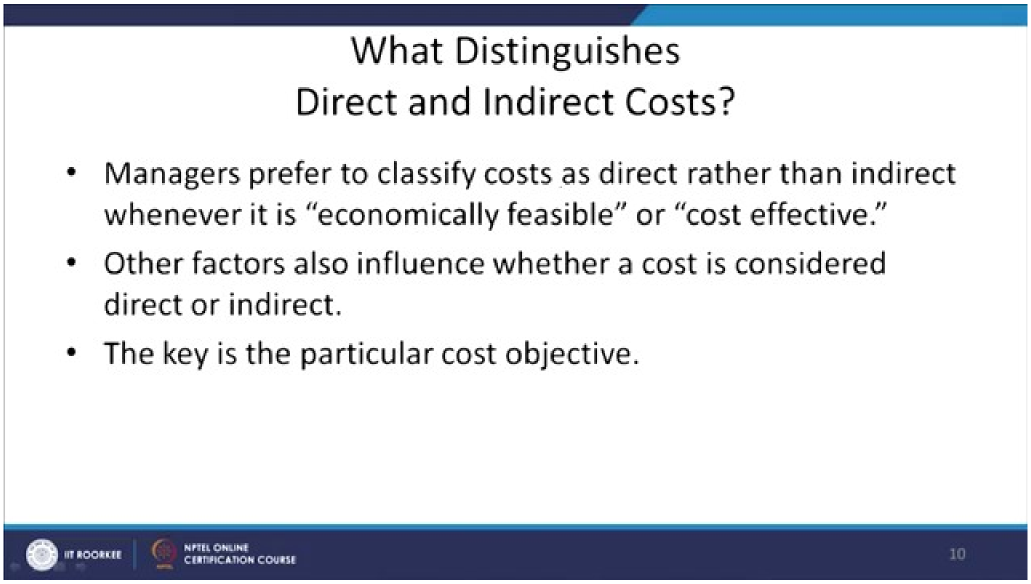

Managers prefer to classify costs as direct rather than indirect whenever it is economically feasible or cost efficient because very easy job, if you can easily find out how much one particular component of the cost can be attributed to one particular product. It is very good, it is very feasible way. It is very interesting; it is very-very easier way to calculate the total cost of the product. Other factors also influence whether the cost is considered direct or indirect and the key is a particular cost object.

What you want to do, what cost you are talking about that is the most important thing. So when you are talking about the resource, electricity in the office is indirect cost, electricity in the plant is the direct cost. Power in the plant is the direct cost, power in the office is an indirect cost because in the office that power is going on that energy is available in the office in that hall, big hall only 10 people are sitting or 100 people are sitting that is not going to make any difference.

But in the plant when you are using the power, if you are manufacturing 100 units you are using different amount of power when you are manufacturing 1000 units you are using different amount of the power. So that difference comes up that situation changes. So, it means depending on the cost subjective the direct cost and indirect cause can be different in both the cases it is power cost but power is direct in plant and power is indirect in the office so we have to distinguish, we should be able to distinguish that.

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Now, the categories of the manufacturing cost, categories of the manufacturing cost. So what are the different categories of manufacturing cost? Any raw material labour or other input used by any organization could in theory be identified as a direct or indirect cost depending on the cost objective. So you can say, for example, material, material cost is direct cost because it is easily identifiable as per the volume of production and labour also easily identifiable because in the plant people work labour work in the plant as labour, people work in the offices are called as the employees so both are temporary and fixed.

The people working in the office are fixed employees or permanent employees, working in the plant may be the temporary contract employees so that objective is different. When you talk about another input that is the power you are using in the factory, power you are using in the office they are the 2 different things. One is the direct cost and another is indirect cost. So identification and defining the cost depends upon the objective of the cost what we plan to do, what we are going to do.

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Now, categories of the manufacturing cost. Categories of the manufacturing cost are largely 4, so when you talk about cost here. First 3 costs, 1, 2, 3, these are indirect cost. In the cost sheet they make the prime cost, direct material, direct labour, direct over heads that becomes the prime cost. In the prime cost when you add the overheads, they may be variable may be fix both have to be added and then when you add the office overheads, administrative overheads both may be variable both may be fixed and then you add the cost over heads selling over heads, selling a distribution over hear which can be both partly variable partly fixed.

So, the variable part will become the direct cost and the fixed part will become the indirect cost. So largely you can say that is the direct material, direct labour, direct overheads are the direct cost plus the variable part of the other expenses that is known as the 4 direct cost and any part which is fixed cost, which is not getting affected by the volume of production that is known as which is the sum cost, once the cost is incurred it is incurred, you use it for the 10 units, you use it for the 20 units, you use it for the 2 lakh units that cost is incurred and that is the sunk cost.

If you use it for the maximum number of unit production per unit cost will be coming down but if production goes down then the fixed cost will be very high and accordingly it will be affecting your product, the cost of the product.

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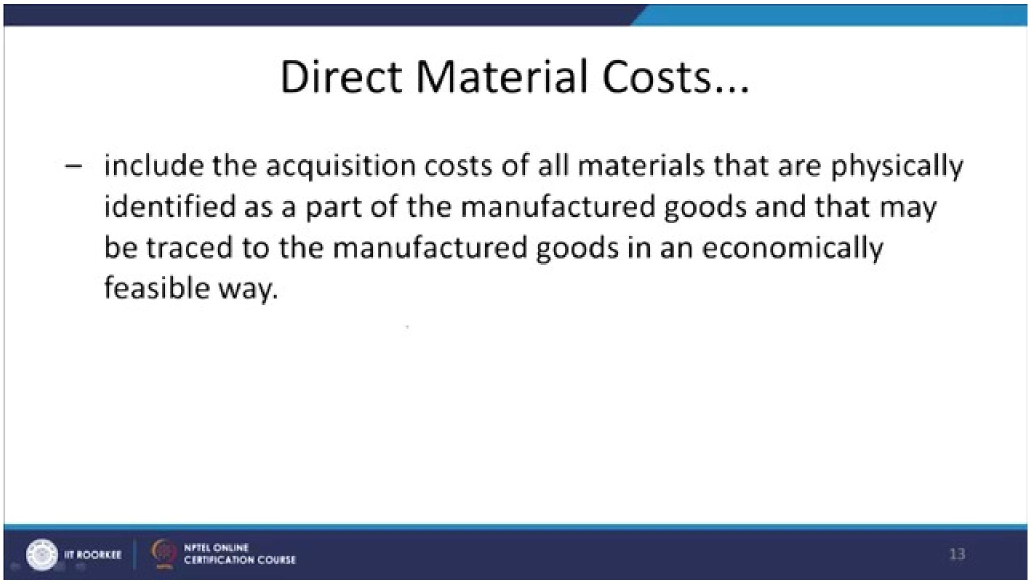

Direct material we know which is easily identifiable for the products.

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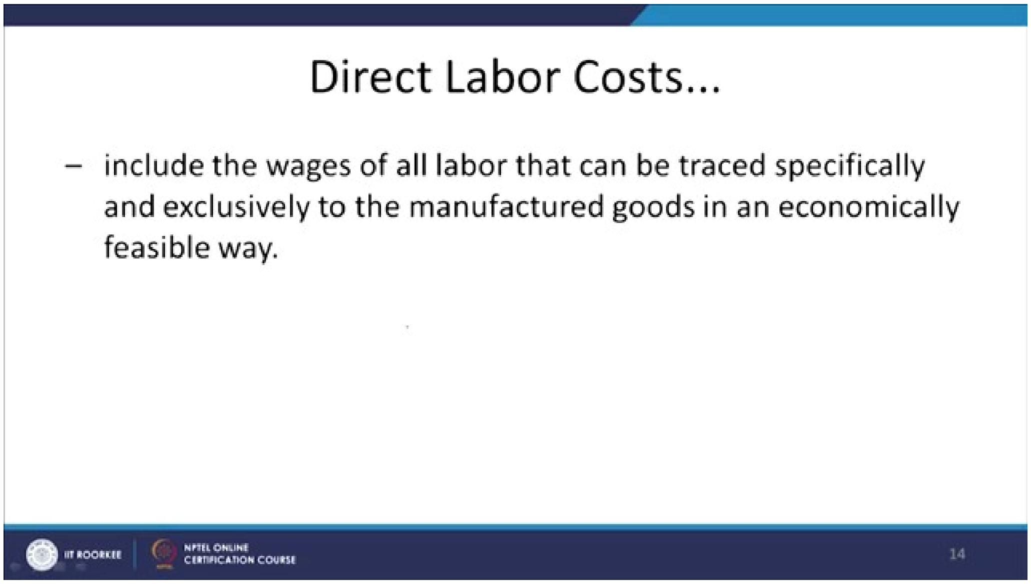

Direct labour we know which is easily identifiable specifically and exclusively to the manufactured good in any economically feasible way include the wages of all the labour that can be traced specifically and exclusively to the manufactured goods in an economically feasible way.

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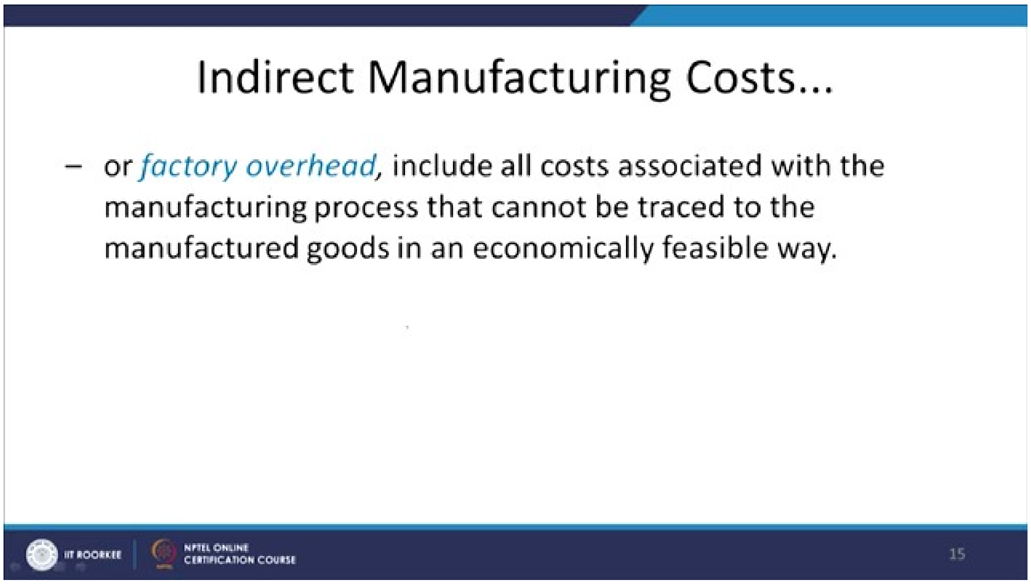

Then indirect manufacturing cost or manufacturing factory overheads include all costs associated with the manufacturing process that cannot be traced to the manufactured goods in an economically feasible way. It is not possible. 100 employees are working in the office, we are manufacturing 4 products and 100,000 units of those products are manufacturing in one month. So, in what proportion you are using those employees , services of 100 employees to manage those 4 products.1 lakh units of the 4 products, it's not very easy to find out.

It is not very easy to find out. Labour can be found out, that when we manufactured 1000 units of the blue pen, how much labour cost was there, it is very easy but people working in the office, how much time they gave to manage the affairs of the blue or red or purple pen that is not possible to be known. So, means it is possible but it is difficult. So, that resource which is not directly traceable is not, the cost which is not directly traceable which is not directly allocatable that cost is called as the indirect cost. And there comes a problem and we need the ABC activity based costing system which removes limitation of the absorption causing system and helps us to allocate the cost in a proper manner.

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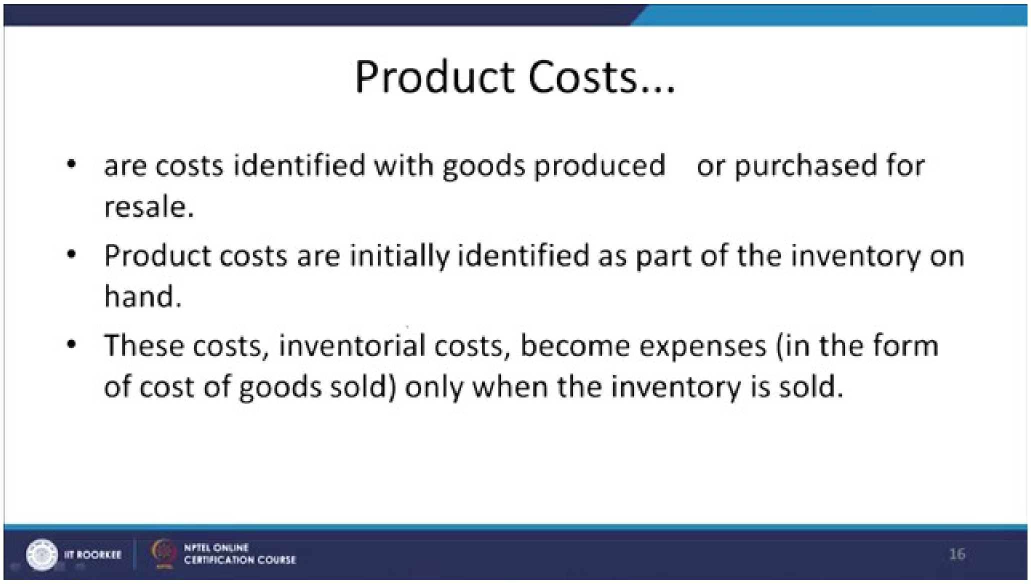

So then we talk about the product cost are cost identified with goods produced or purchased for resale. Product cost are initially identified as part of the inventory on hand and those costs, inventorial costs, become expense in the form of cost of goods sold only when the inventory are sold. And the period cost so it means largely that is very better way of defining the things. One is the product cost another is a period cost.

Direct cost is the product cost, variable cost is the product cost which is directly traceable to the product and fixed cost, indirect cost is the period cost. Your rent of the building for one month is fixed, that is a period cost. Now, use that building for manufacturing 1 lakh units or 1000 units that is up to you, that cost is period cost. We have to pay as per the period, for example, we bought a plant and we incurred say we sell out one million rupees for that plant and the life of that plant is 10 years.

It means now that cost is incurred for the next 10 years period of time. If you take the depreciation of that at the rate of 10 percent, it means 1 lakh rupees is the fixed cost and every year you have to add up to total cost of production of all the products depending upon their use and their quantity. So it means that cost is a period cost or the product cost.

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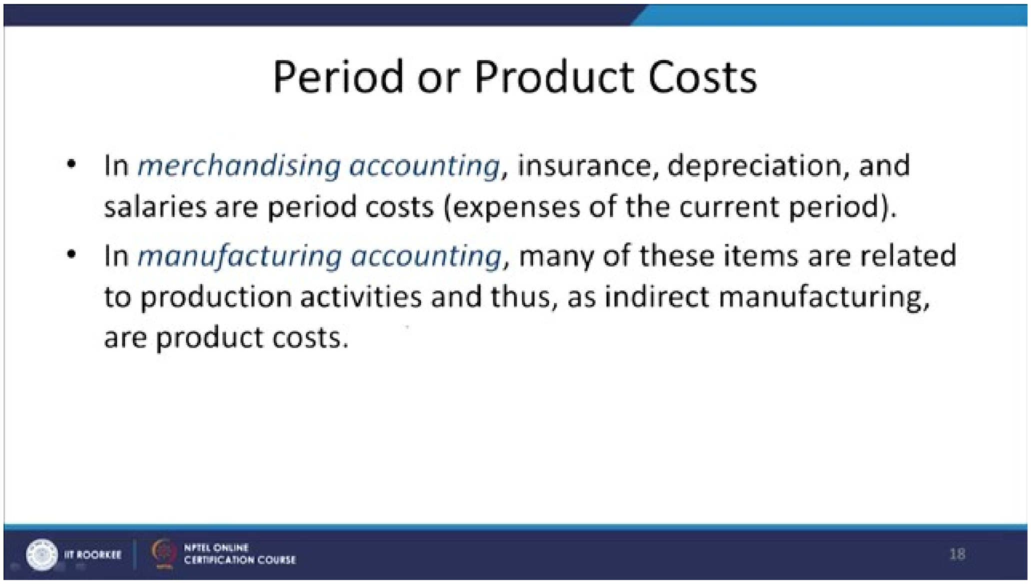

So it means in the merchandising accounting insurance, depreciation and salaries are considered as the period cost and in manufacturing accounting many of these items are related to the production activities and thus as indirect manufacturing are the product cost. So in both merchandising means trading organization which buy the readymade products and sell them in the market. Then the fixed cost is in terms of insurance, depreciation and salary.

In the manufacturing organizations it is something like that insurance there also we have depreciation there also we provide for plant building and machinery and salaries also with employees we pay there but insurance may be different because when we buy the ready made product so during that consignment on the way, on the transit we have to get it insured and in case of the raw material may be that much pf the precaution is not required. So cost may be little different but they are the period cost.

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Then you talk about the period cost merchandising and manufacturing. In both merchandising and manufacturing organization or the merchandising and manufacturing accounting, selling and general administrative cost are the period cost in both, means the administrative cost, come down to the lower part of the cost sheet, top is the prime cost, factory cost and then the administrative cost. Administrative cost is largely called as the fixed cost or the period cost.

You can say rent of the building, salaries of employees, depreciation of your different office equipment, depreciation of the building if it is owned by the company itself. So all these are the period cost whether you make use of these assets or you do not make use of those assets, you have to pay the cost so it does not make any difference. Now, we talk about the financial statements. I will show you the 2 different financial statements.

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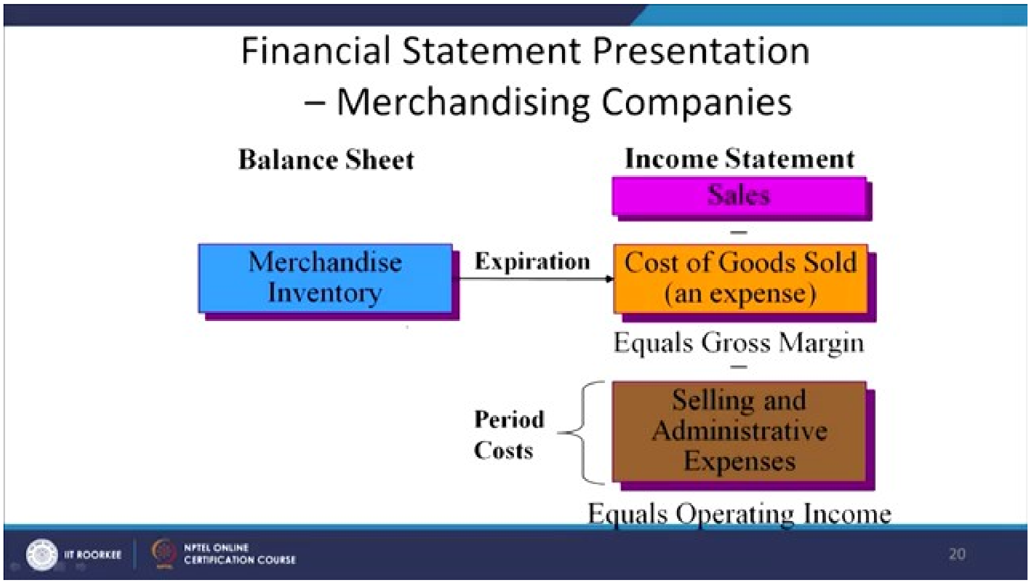

One statement is for the merchandising organization and the other statement is for the manufacturing organization. So you know it, this concept in the financial accounting you already know in the financial accounting or you must have read it somewhere earlier, you would have understood it somewhere earlier. So, it means you see; now I am able to explain you, what is the use of your financial accounting and the cost accounting.

Both the subjects are required here, both the techniques, both the branches of accounting are required here because when you are going for the merchandise inventory, merchandise means buying the readymade products from the market so this firm we are calling as a trading organization. They are not manufacturing organization, they are merchandising or the trading organization but they have to also prepare the income statement and how there income statement is, they put here there is nothing cost of goods manufacture or goods sold because they are not manufacturing anything, they are not creating anything, they are buying the readymade product from the market which is known as merchandise here.

So, this is the merchandising here, we have bought readymade material and then that readymade material goes to the next level which becomes the cost of the goods to be sold. Cost of the goods to be sold, it is not the cost of manufacturing. This is the cost of the goods to be sold which is the direct acquisition cost from the supplier. So, it means once merchandising material is with us that becomes the cost means input for selling that further in the market. So, we now come to this side, it is a vertical income statement.

On the top is the income statement, top of the income statement is, that is the sales we are putting on the top then we are subtracting the cost of goods sold means not manufactured but acquired and sold, so it becomes gross margin or the gross profit that is equals to gross margin means sales minus cost of goods sold is the gross margin or the gross profit and from this when you subtract the period cost, selling and administrative expenses finally it becomes the operating income before tax

And from this when you add the other non-operating incomes also, that becomes the total income minus tax, so that becomes net operating profit after tax. So, it means preparing this statement you need the knowledge of financial accounting and in this part to calculate the cost of goods to be acquired or to be manufactured you need the cost accounting. Now, let us take look at the balance sheet, this income statement of the manufacturing organizations.

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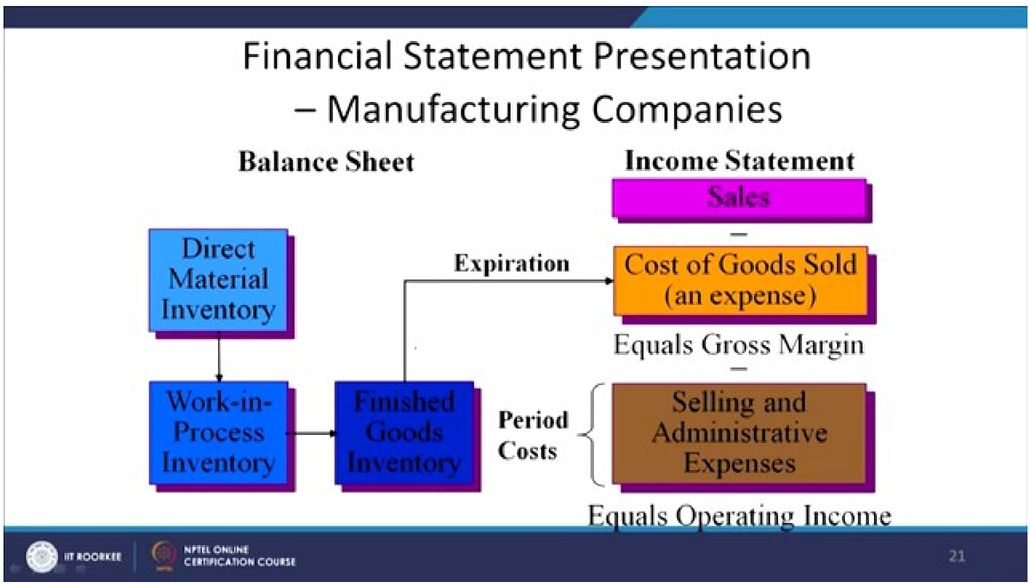

So, in this case we have this kind of the income statement of the manufacturing organization. Earlier what was this in this case here the point is merchandising inventory , merchandising cost but here we are going to manufacture the product ourselves now and when we are going to manufacture the products ourselves then we have these 3 cost. We have direct material inventory cost, then it moves to the manufacturing process becomes the working process.

Then it becomes the finished goods and then when we take the finished goods from the place of production to the place of sale then it becomes the COGS then its again the same sales minus sales of goods becomes equal to the gross margin minus selling and administrative overheads becomes the operating income and adding into this the non-operating income, total income minus taxes is the net operating profit after tax.

So, it means this side is different. The left hand side of the statement is different. In one statement you are manufacturing the product in the other statement you are buying the product from the market but ultimately we have to convert that into income statement so more detailed income statement is there in case of the manufacturing organization.

But in case of the merchandising organization the detail, that much of the details are not there because we are buying only manufactured material so one head of the goods sold is there not multiple heads because we have paid that amount acquired that material will be sold in the market and after subtracting all the costs and adding all non operating incomes it will become the total and after adjusting all the profit also it will become net operating profit after tax.

So, means both you need. Both the branches knowledge you need. You need the knowledge of cost accounting also, you need the knowledge of financial accounting also and then synchronizing the use of these 2 branches and taking the appropriate decisions with regard to the cost, pricing, sales, profit and loss distribution you can call it as management accounting. So, I will stop here for the moment and this is just beginning and just knowing about that what ABC is.

It is the premises of ABC we are building till now. I am not going up to the ABC means we are going to the ABC in the next class not now it is just premise I am building and after building these premises we will be moving to the next level and learn about that how from the total costing system we can move to the ABC system. These statements are based upon the total or the absorption costing system but we have to take it to the ABC. That further discussion on this

ABC, conceptual discussion on the ABC I will have with you in the next class. Thank you very much.