

Entrepreneurship Essentials
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Module - 07

Lecture - 38

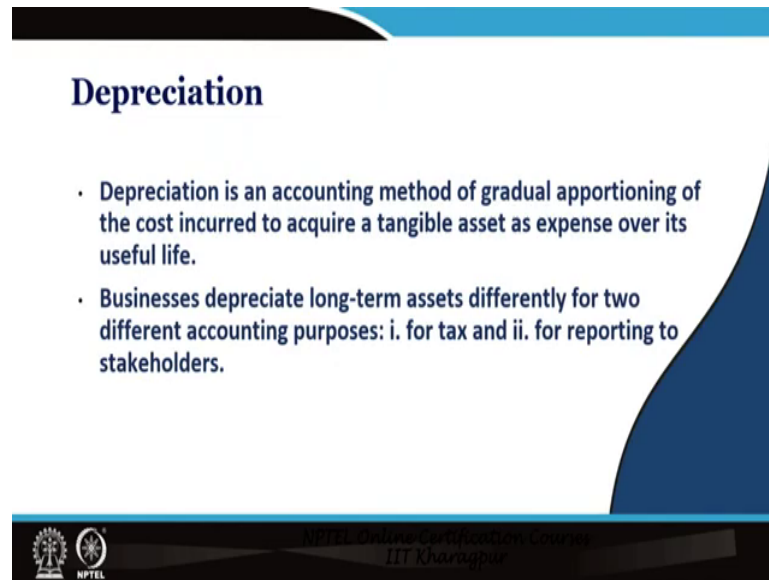
Depreciation and Amortization & Treatment of Capital Gain or Loss from Sale of Fixed Asset

Hello and welcome. So, we will continue our discussion on financial statements we have seen profit loss account balance sheet cash flow statements and we postpone the discussion on depreciation and how the sale of fixed asset proceeds is treated in profit loss account, balance sheet and cash flow statements. So, let us complete that discussion this session. So, the topic is depreciation and amortization and treatment of capital gain or loss from sale of fixed assets.

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Now, we will start with the definition of depreciation then methods of depreciation. (Refer Slide Time: 01:05)



Depreciation

- Depreciation is an accounting method of gradual apportioning of the cost incurred to acquire a tangible asset as expense over its useful life.
- Businesses depreciate long-term assets differently for two different accounting purposes: i. for tax and ii. for reporting to stakeholders.

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We will discuss about amortization and treatment of capital gains loss from sale of fixed assets. Depreciation is an accounting method of gradual apportioning of the cost incurred to acquire a tangible asset as expense over its useful life. Meaning that you buy a machine and you use the machine on a daily basis in your production manufacturing. So, when you estimate the cost of production you estimate the cost of raw material, salary, rent, transportation, power, fuel etcetera etcetera.

But then you may actually forget about the contribution of the machine because machine also contributes in the manufacturing of your finished goods. How do they do it? They get where they get worn out so they have some contribution to the manufacturing process.

How to account for that part you bought a machine for 1 crore rupees and maybe it has a useful life of say 5 years. So, in the at the end of 5 years you sell the machine you may not get anything except junk value. So, how do you recover that 1 crore rupees? This process of recovering the cost of the machine is depreciation.

Depreciation is imagined in different way one is depreciation is apportioning this cost over a period of time, second is to understand the contribution of the machine in manufacturing. So, when you make a costing you add depreciation cost as well, but then businesses is actually depreciate all long term asset in two different ways.

Before I move into that just know for a fact that every business prepare two sets of balance sheets profit loss account and cash flow statement. Particularly profit loss account and balance sheet.

They prepare one set for the income tax authority they prepare another set for submission to register of companies, banks and stock markets. Where, the these are there is external stakeholders income tax authority is another stakeholders, but then income tax authority has separate a specification for tax treatment that is why a separate set of financial statements are prepared for them why this difference and how this difference.

Number 1 why this difference this difference is because every country say if for example, India intense to promote investment in certain kinds of machine certain kinds of activities. For example, in the government of India wants that companies spend more money for pollution control; rather than emitting the pollution in the atmosphere government wants that companies should have the set of or the infrastructure to really capture the polluting substance, process it and then release in the benign format which is not so harmful.

Now, companies may not or companies may try to avoid doing that to encourage the companies to do that; government of India actually allows higher rate of depreciation on certain assets like say pollution control equipment, say cyclone precipitator for capturing fine dust from factory premises so that dust does not fly away it is captured in cyclone separator.

Similarly, if there is a polluting liquid that is emitting so there should be a water treatment plant for capturing that pollutant into and then dumping it in a manner that it does not pollute the water table or aquifer down the ground. So, to encourage this kind of things government actually allows different rate of higher rate of depreciation. So, companies are allowed to depreciate this kind of assets like say even gas cylinder is depreciated at 100 percent thinking that it has a life of 1 year because it may bust any time or so for safety purposes depreciation is allowed at the rate of 100 percent.

Now, why it is beneficial to the companies? Because you have notice that when you estimate taxable income or profit before tax you allowed depreciation as part of operating expense. So, you start with sales then you deduct cost of goods that was sold to acquire that sale, then you get gross profit by deducting cost of goods sold from sales you get gross profit. You deduct operating expenses from gross profit you get profit before tax no you get operating profit.

So, from operating profit you deduct interest to get profit before tax, but then true estimate profit before tax you are actually allowing depreciation as an expense. Whereas, depreciation in true sense of the term is not an expense because you are not making any payment to anybody. Payment has been made long back when the asset was first procured what all you were doing is you are making an entry in the book as if you are spending money as if this is an expense, but this is not an expense.

So, money remains with you money remains with you, but you allow that as an expense. So, your operating profit goes down. So, your taxable income goes down. So, you end up paying less tax; as an example suppose you have sold; suppose your sales is 1,00,000 rupees suppose your cost of goods is say 60,000 rupees. So, your gross profit is 1,00,000 minus 60,000 is 40,000 rupees.

Now, out of 40,000 rupees suppose your operating expenses including depreciation is say 9 is it for another 30,000. So, out of 40,000 of gross profit you deduct 30,000 you are left with 10,000 suppose you pay interest of say 10, 5 rupees or say 10 rupees then you deduct 10 rupees from the 10 rupees of operating profit you do not have to pay any tax.

Now suppose out of this 30 rupees of operating expense your depreciation is 20 rupees, now if you would not have deducted 20 rupees as depreciation your net profit or profit before tax would have been 20 rupees in this example.

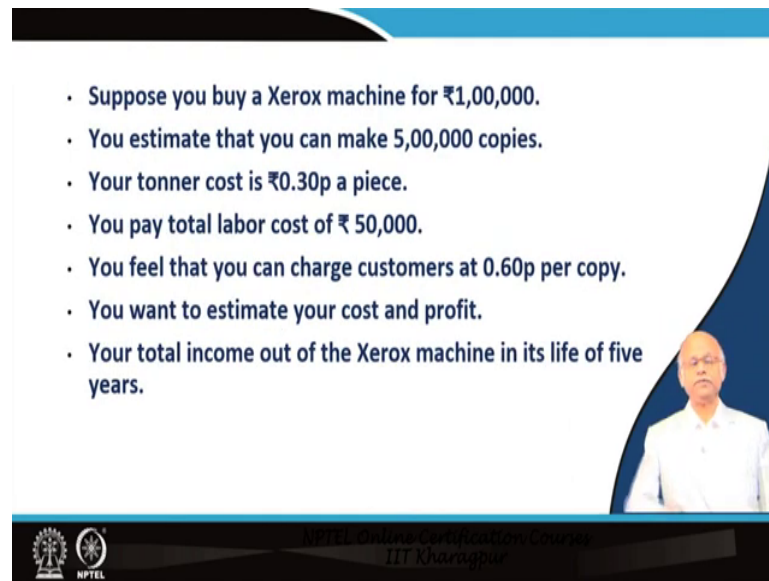
So, you have to pay a 30 percent tax on 20 rupees which is nothing, but 6 rupees. So, by allowing depreciation you have avoided payment of 6 rupees of tax and you who made a cash flow net cash flow of 20 rupees. You did not pay tax and your 20 rupees of profit is with you it is not going anywhere. So, that is why this is an incentive allowing higher tax is an incentive on the other hand there is a rule for by rule framed by institute of chartered accountant then CII FICCI etcetera.

Based on in based on regulations received from International Accounting Standard Board or other boards like International Standard Account Accounting Standard Board. So, they determine different rates of depreciation for different assets and you are encouraged to follow that you can either follow that or follow something as like the method that you adopt may be different for different companies, but then you have to follow a standard method meaning a uniform method across time you cannot keep on changing the rate.

So, suppose you are using computer and or say pollution control equipment suppose the value is 1 crore rupees. So, in a particular year government if you follow income tax rule then depreciation rate may be 33 percent. So, 33 lakh rupees will be allowed as expense where as for submitting to ROC and other places you may allow only 10 percent depreciation because the life is say expected life is 10 years.

Then you allow only 10 lakh rupees as depreciation. So, you report higher profit to stock market ROC etcetera etcetera. Even though you are paying less tax because to the tax authority you are showing higher depreciation expense and eventually less taxable income.

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- Suppose you buy a Xerox machine for ₹1,00,000.
- You estimate that you can make 5,00,000 copies.
- Your tonner cost is ₹0.30p a piece.
- You pay total labor cost of ₹ 50,000.
- You feel that you can charge customers at 0.60p per copy.
- You want to estimate your cost and profit.
- Your total income out of the Xerox machine in its life of five years.

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To understand depreciation imagine that you have bought a Xerox machine for 1,00,000 rupees. You estimate that you can make something like 5,00,000 copies in a year, your tonner cost is suppose 30 paise a piece you pay total labor cost of say 60,000. You feel that you can charge customer at the rate of 60 paise per copy then you make some profitability analysis and you feel that this is wonderful.

I can or say you think that I can even charge the customer less than 60 paise because you estimated that at the end of the period your profit is something like 30,000 or say 50,000 rupees of profit.

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	@ 0.60 per page		@ 0.50 per page	
Total income	5,00,000 X ₹0.60	₹ 3,00,000	₹ 5,00,000 X 0.50	₹ 2,50,000
Toner cost	5,00,000 X ₹0.20	₹ 1,00,000	₹ 5,00,000 X 0.20	₹ 1,00,000
Paper cost	5,00,000 X ₹0.10	₹ 50,000	₹ 5,00,000 X 0.10	₹ 50,000
Labor cost		₹ 60,000		₹ 60,000
Electricity cost		₹ 6,000		₹ 6,000
Rent		₹ 24,000		₹ 24,000
Maintenance		₹ 10,000		₹ 10,000
Total cost		₹ 2,50,000		₹ 2,50,000
Profit	3,00,000 – (1,50,000 + 50,000)	₹ 50,000		0.00
Suppose you want to sell the Xerox machine after the first year of operation. You may receive		₹ 70,000		₹ 70,000
Loss of value of the machine		₹ 30,000		₹ 30,000
Actual profit		₹ 20,000		(-) ₹ 30,000

So, your total income is 3,00,000 and here on the left hand side you have assumed that you are selling or you are charging the customer as 60 paisa on the right side you are charging the customer at 50 paisa. All other expenses remaining the same look at the costing and look at the distinction that depreciation makes on the 2 sides.

So, considering that your labor cost is 60,000 and electricity cost is 6 these are all (Refer Time: 11:38) lump sum figure. So, total cost becomes 2,50,000 in both the cases in one case sales is 3,00,000 on the other case sales is 2,50,000.

So, in this case when your cells is 3,00,000 then your profit is 50,000. Now, look at that and try to understand that depreciation has not been allowed here. So, still you without depreciation your profit is 50,000. Now suppose you allow depreciation if you do not allow

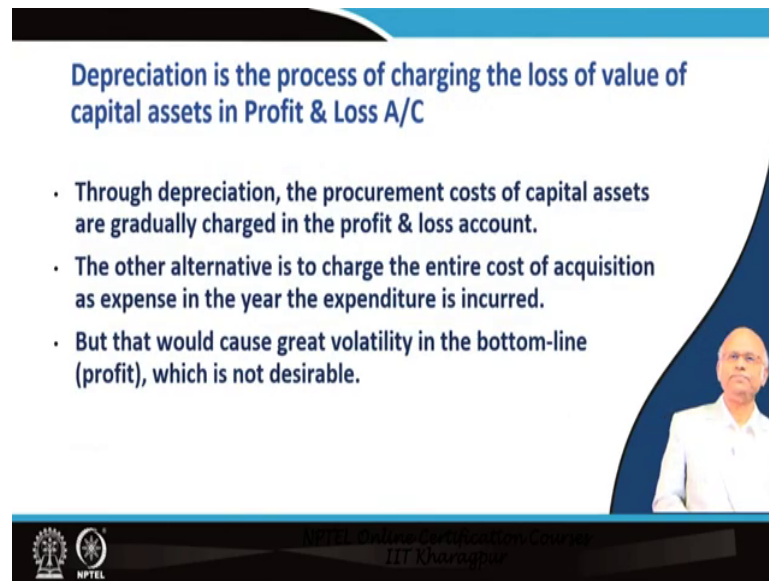
depreciation say you want to sell this machine after a year say 1st year of operation you do not want to remain in the business you want to start another business.

So, you want to sell the machine you found that the machine can be sold only at 70,000 rupees now you may think that I made a profit of 50,000 rupees I am selling the machine at 70,000. So, I am actually making enormous amount of profit 50,000 rupees on an investment of 1,00,000 makes 50 percent profit, but then you have not considered the depletion of value after 1 year during 1 year of operation. So, you realize that when you try to sell the machine in the market place people are not willing to give you 1,00,000 rupees they are ready to give you 70,000 that is the value depletion because of wear and tear because of use of the machine.

So, you realize it ok. So, I have to settle with 70,000. So, value depletion is 30,000 now, that value depletion the depletion is nothing, but depreciation. So, now you allow depreciation you make a profit of 20,000, but suppose you did not understand do not realize this whole thinks after 1 year that is going to manifest. Suppose, the beginning of the year you think that if I sell at 60 paisa a copy then I end up making 50,000 rupees profit.

So, even if I sell it for 50 paisa to some people I can acquire more customer I do not incur loss, but look at this you actually incur 30,000 rupees loss if you allow depreciation as an expense. That is what is depreciation and that is that gives you the formula not to commit this mistake; commit the mistake of not apportioning the cost of the machine that is being used in the business.

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A presentation slide with a blue and white background. The title is "Depreciation is the process of charging the loss of value of capital assets in Profit & Loss A/C". Below the title are three bullet points. On the right side of the slide, there is a portrait of a man in a white shirt. At the bottom left, there are logos for NPTEL and IIT Kharagpur.

Depreciation is the process of charging the loss of value of capital assets in Profit & Loss A/C

- Through depreciation, the procurement costs of capital assets are gradually charged in the profit & loss account.
- The other alternative is to charge the entire cost of acquisition as expense in the year the expenditure is incurred.
- But that would cause great volatility in the bottom-line (profit), which is not desirable.

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Depreciation is a process of charging the profit loss account the loss of value that happens because of use wear and tear. So, understand what is charging what does charging means charging means you have profit loss account that is the only cash inflow. So, money is coming through sales. So, you sell something over the year throughout the year whatever you sell you get some sales value.

Now, from sales you charge all the expenses and then whatever remains is the profit. So, you charge salary on sales, you charge rent on sales, you charge all other transportation all other expenses after charging if everything whatever is left that is the profit. So, you just depreciation also because you are losing value of the machine in the process of manufacturing then you get the real profit.

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Methods of Depreciation

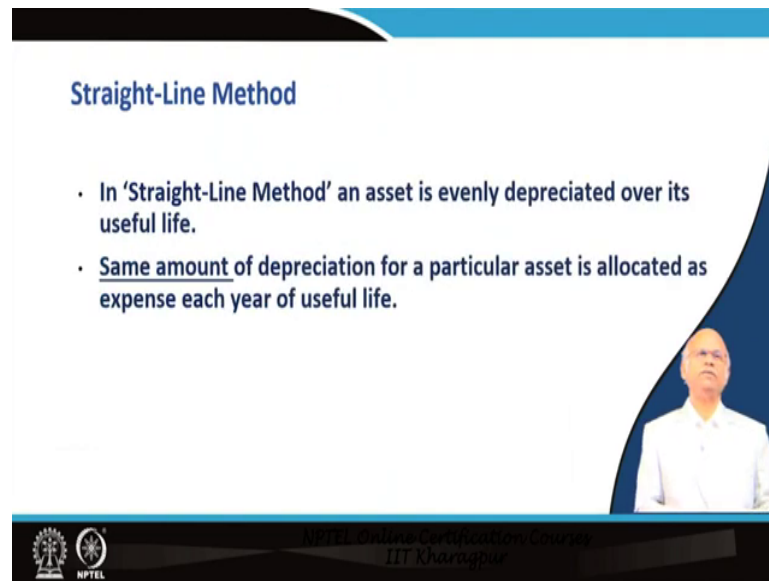
- Straight-line method
- Declining balance method
- Sum of years digits
- Units of production

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There are many methods of depreciation we will discuss only two even though I am mentioning four straight line method, declining balance method is also called declining value method, some of years digit method. Suppose you think that life will be 10 years. So, you add 1 plus 2 plus 3 plus 4 up to 10 and that becomes a sum some of the digit and then for 1st year it will be; it will be total value into 1 by the sum 2 by the sum 3 by the sum etcetera.

So, that way you gradually reduce the amount of depreciation moving forward even declining value method the depreciation is a more at the beginning gradually it becomes less.

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Straight-Line Method

- In 'Straight-Line Method' an asset is evenly depreciated over its useful life.
- Same amount of depreciation for a particular asset is allocated as expense each year of useful life.

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Let us see with examples first is straight line method in a straight line method you allow same depreciation every year; same depreciation every year, but fact is that you deduct from the procurement cost the salvage value here you assume that there will be a useful life something like say 5 years or 10 years. So, once you procure the assets suppose it is a computer; if you think that the computer will remain relevant and I have to dispose it off after 3 years.

So, 3 years becomes useful life suppose after 3 years you predict that this computer will be sold suppose you buy the computer for 50,000 and you predict that this computer is going to be sold for 10,000. So, if 20,000 rupees 20,000 rupees you are going to sell the computer for 20,000. So, this 20,000 is a salvage value or the terminal value that you will you are supposed to recover after 3 years of useful life.

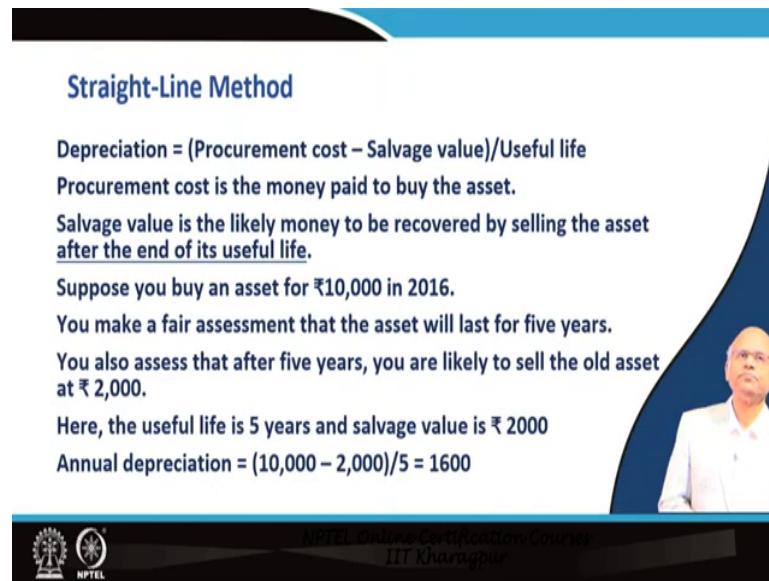
So, 50,000 rupees is the procurement cost you have to deduct the salvage value upfront in the beginning. So, 50,000 minus 20,000. So, you are left with 30,000 now this 30,000 rupees will be allowed as depreciation not the entire 50,000 because 20,000 will come by selling the computer the end of the life. So, this 30,000 rupees will be distributed across 3 years. So, 30,000 divided by 3, 3 years is a useful life that becomes 10.

So, every year you deduct 10,000 from 50,000 not from 30,000 because 50,000 is the procurement cost procurement cost minus same depreciation every year. So, that becomes 50,000 minus 10,000. So, at the end of the 1st year the machines value becomes 40,000 and that becomes a book value end of the year whatever was the book value in the previous year you deduct the depreciation during the year and you get new book value as on the end of the business day or end of the financial year.

So, financial year is normally started on 1st of April and ends on 31st of March next year. So, as on 31st of March next year the book value of a particular asset is equal to the book value that was there in the previous year minus depreciation during the year. So, book in the in when you procured us 50,000 depreciation during the year is 10,000.

So, book value becomes at the end of the year becomes 40,000 next year again you allowed 10,000 as depreciation; for next year the original book value is 40,000 and you allow 10,000. So, book value as on this end of 2nd year it becomes 40 minus 10 is 30,000 rupees and like and the like.

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Straight-Line Method

Depreciation = (Procurement cost – Salvage value)/Useful life

Procurement cost is the money paid to buy the asset.

Salvage value is the likely money to be recovered by selling the asset after the end of its useful life.

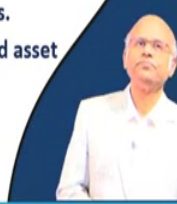
Suppose you buy an asset for ₹10,000 in 2016.

You make a fair assessment that the asset will last for five years.

You also assess that after five years, you are likely to sell the old asset at ₹ 2,000.

Here, the useful life is 5 years and salvage value is ₹ 2000

Annual depreciation = $(10,000 - 2,000)/5 = 1600$



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So, here is the example its very simple example, you bought a machine suppose the asset value is 10,000 and salvage value or terminal value is suppose 2,000. So, the value becomes 8,000. Now, suppose you presume that the life of the asset will be say 5 years. So, 8,000 divided by 5 and you allow depreciates it is not 80,000. So, you allow depreciation meaning that you divide the 8,000 with 5,000 it becomes 16,000.

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Straight-Line Method ... cont'd

Year	1	2	3	4	5
Book value as at the beginning of the year	10000	8400	6800	5200	3600
Depreciation	1600	1600	1600	1600	1600
Book value as at the end of the year	8400	6800	5200	3600	2000

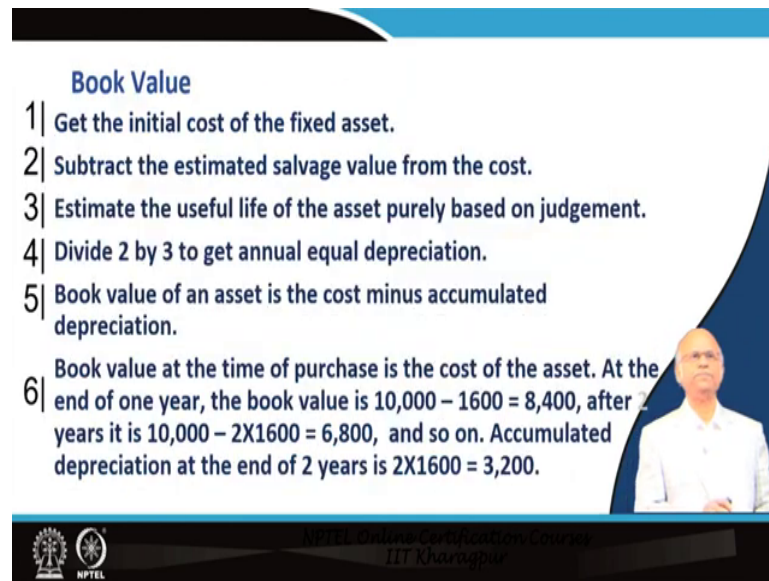
Notice that depreciation is the same in all the years of useful life



So, every year you allow 16,000 rupees, 16,000 rupees as depreciation and the you get the book value 1st year original value is 10,000 deduct depreciation your book value becomes 8,400.

Next year your original book value is 8,400 you allow depreciation. So, final book value as in the close of the business becomes 6,800. Similarly, 6,800 becomes the opening value in the next year depreciation remains the same deduct depreciation from opening book value you get actual book value as on the close the business.

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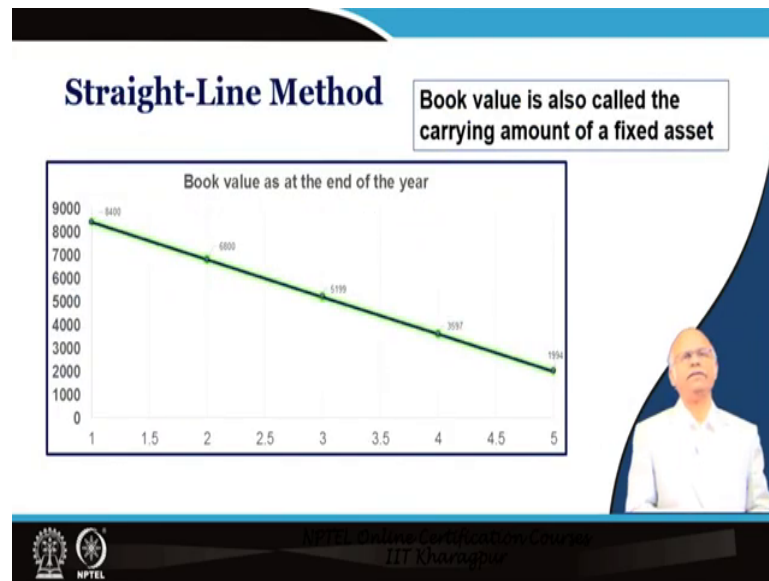
Book Value

- 1| Get the initial cost of the fixed asset.
- 2| Subtract the estimated salvage value from the cost.
- 3| Estimate the useful life of the asset purely based on judgement.
- 4| Divide 2 by 3 to get annual equal depreciation.
- 5| Book value of an asset is the cost minus accumulated depreciation.
- 6| Book value at the time of purchase is the cost of the asset. At the end of one year, the book value is $10,000 - 1600 = 8,400$, after 2 years it is $10,000 - 2 \times 1600 = 6,800$, and so on. Accumulated depreciation at the end of 2 years is $2 \times 1600 = 3,200$.

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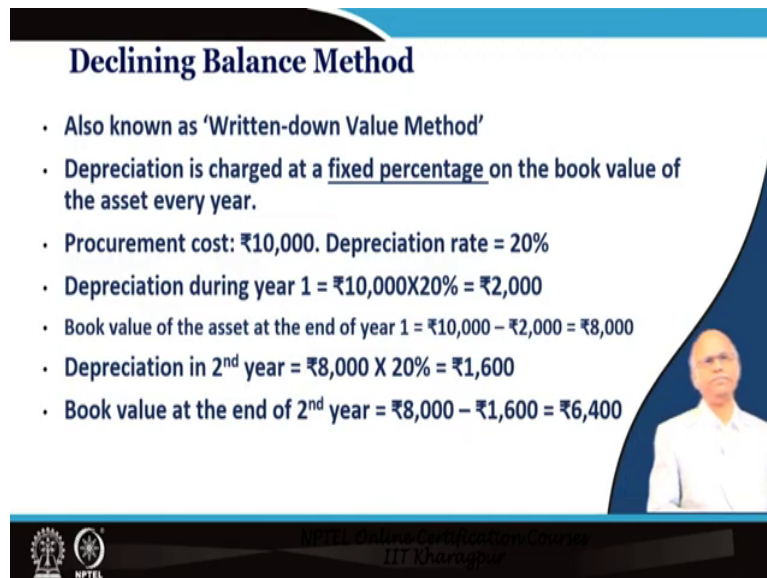
Now, we have already discussed about book value and book value in any particular year will be this value minus accumulated depreciation over that period. Suppose you are considering book value after 3 years. So, original value minus 3 years of total depreciation total depreciation in 3 years is 4,800. So, 10,000 minus 4,800 will become 5,200. So, this becomes a book value.

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After deducting accumulated depreciation this explain a step by step as to how to estimate the book value after 1 year, 2 year, 3 years and the like.

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Declining Balance Method

- Also known as 'Written-down Value Method'
- Depreciation is charged at a fixed percentage on the book value of the asset every year.
- Procurement cost: ₹10,000. Depreciation rate = 20%
- Depreciation during year 1 = ₹10,000 X 20% = ₹2,000
- Book value of the asset at the end of year 1 = ₹10,000 - ₹2,000 = ₹8,000
- Depreciation in 2nd year = ₹8,000 X 20% = ₹1,600
- Book value at the end of 2nd year = ₹8,000 - ₹1,600 = ₹6,400

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So, a straight line method the name came because the book value actually move down in a straight line. Declining balance method this is also known as declining value method or written down value method; here depreciation is charged at a fixed percentage in a straight line depreciation it was same depreciation was charged every year.

Same means same value whereas, here it is same percentage of the book value starting book value same percentage of the starting book value. If you are using 10 percent then every year you charge at the rate of 10 percent of that year's opening book value then you get depreciation deduct the depreciation you get the closing book value. In any year if we refer to book value we refer to the closing book value not really the opening book value.

So, here the same formula, but there are distinction like there is no salvage value concept remember this for declining value method there is no salvage value concept. So, you do not

try to estimate the salvage value you just take the data of procurement cost in the 1st year, you charge were at whatever rate you depreciate. Suppose, your depreciation rate is 20 percent. So, 10,000 rupees is the procurement cost 20 thou 20 percent of 10,000 is 2,000 that is a depreciation deduct.

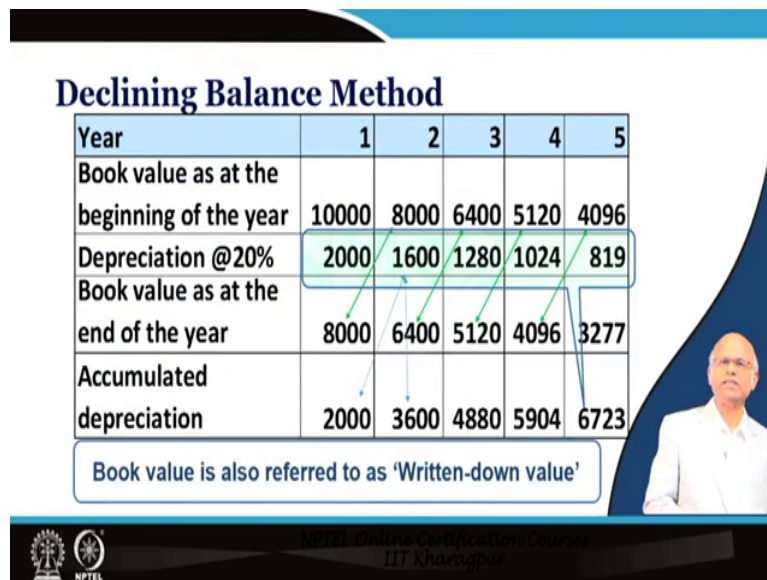
2 2,000 from 10,000 whatever you get you get 8,000 that is the book value as at the end of the year. Next year you do not depreciate at 10,000 you depreciate 8,000 because that becomes the new book value. So, 8,000 into 20 percent is 16,000.

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Declining Balance Method

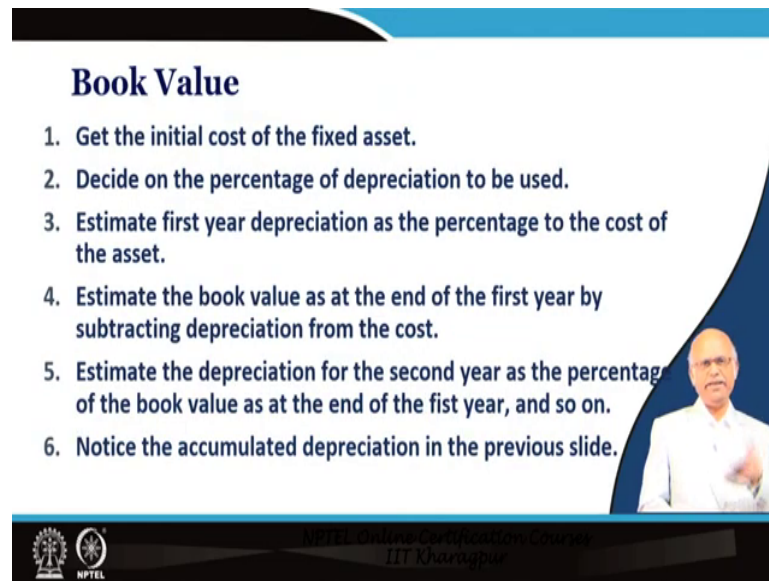
Year	1	2	3	4	5
Book value as at the beginning of the year	10000	8000	6400	5120	4096
Depreciation @20%	2000	1600	1280	1024	819
Book value as at the end of the year	8000	6400	5120	4096	3277
Accumulated depreciation	2000	3600	4880	5904	6723

Book value is also referred to as 'Written-down value'



So, you deduct 16,000 from 8,000 you get new book value of 6,400 and the life here is the total estimate and if you think of this accumulated depreciation you have to add them 1st year, 2nd year, 3rd year, 4th year; whenever you are estimating you have to do it that way and then you get book value at the end of every year.

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Book Value

1. Get the initial cost of the fixed asset.
2. Decide on the percentage of depreciation to be used.
3. Estimate first year depreciation as the percentage to the cost of the asset.
4. Estimate the book value as at the end of the first year by subtracting depreciation from the cost.
5. Estimate the depreciation for the second year as the percentage of the book value as at the end of the first year, and so on.
6. Notice the accumulated depreciation in the previous slide.


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Here is step by step method as to how you actually estimate depreciation.

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The Distinctions Between the Two

Straight-Line Method	Fixed AMOUNT of depreciation is allocated as expense every year	Have to determine useful life of the asset	Salvage is estimated and is deducted from the cost.
Declining Balance Method	Fixed PERCENTAGE of depreciation is allocated as expense each year.	The asset is considered to have perpetual life.	No salvage value concept.

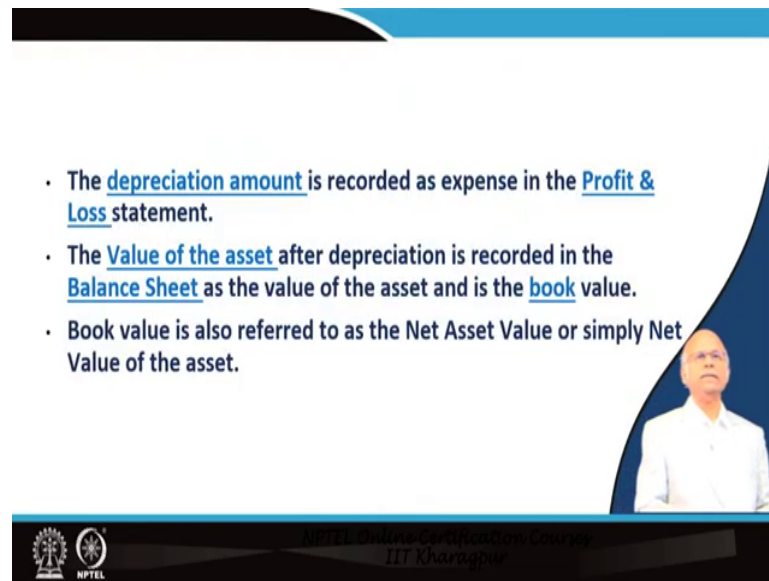


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Distinction is already very clear one is that there is no salvage value in case of declining value method whereas, there is a salvage value concept in case of a straight line method. In case of salvage value method sorry in case of a straight line method there is a useful life concept whereas, in case of declining value method there is no useful life. In fact, life will remain till perpetuity because it will never become 0 if you deduct a percentage from the opening value then the value will never become 0.

So, assets will have perpetual life as per declining value method and then the third difference or the first difference is that, only fixed amount is dep amount is dep depreciated whereas, in declining value method a percentage only is depreciated.

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The slide features a white background with a blue header and footer. A video inset of a man in a white shirt is positioned in the bottom right corner. The main content consists of three bullet points:

- The depreciation amount is recorded as expense in the Profit & Loss statement.
- The Value of the asset after depreciation is recorded in the Balance Sheet as the value of the asset and is the book value.
- Book value is also referred to as the Net Asset Value or simply Net Value of the asset.

The footer contains the NPTEL logo on the left and the text "NPTEL National Institute of Technology Karnataka" on the right.

The depreciation is recorded as expense see the difference between cost and expense cost is cost that you incurred to procure an asset; when you consume the asset that becomes expense meaning that is what is used up. So, you bought a machine you have used up only a small part of the machine in a year that is what is depreciation. So, that becomes an expense that use charge to the profit loss account. So, depreciation also is charged in the profit loss account and you get you estimate profit before tax and whatever is whatever remains that becomes your book value of the asset.

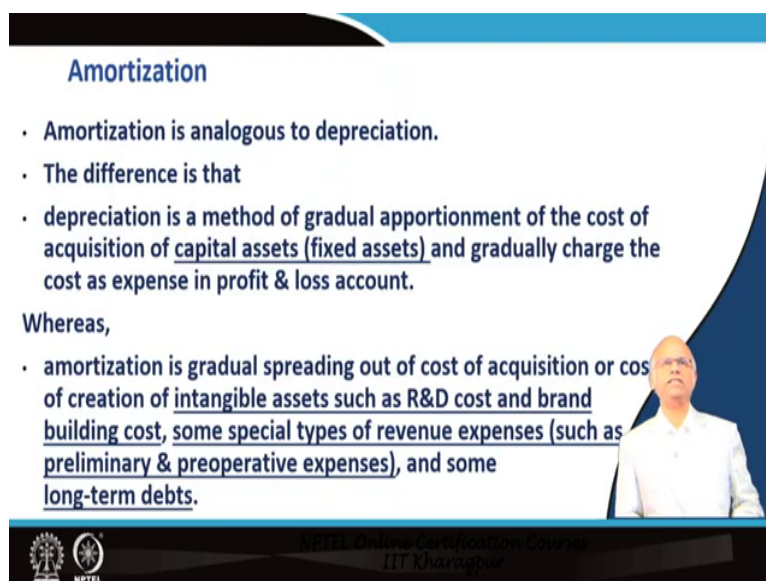
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Part of P&L Statement		Balance sheet as on 31.03.2018		Part of Balance Sheet Account	
	₹	Assets	₹		
Gross profit (GP)	255,000	Current assets/ Short-term assets			
Operating expenses for our Trading Business		Cash	45,645		
Salary	60,000	Accounts receivable	15,000		
Rent	12,000	Inventory	10,000		
Transportation	5,000	Fixed assets/ Long-term assets			
Telephone	3,000	Furniture/Fixture (BV)	1,350	Purchased for 1500 minus depreciation of 150	Depreciation
Electricity	6,000	Machinery (Book Value)	9,000	Purchased for 10000 minus depreciation of 1000	
Trade license	5,000	Total Fixed Assets	10,350		
Depreciation	1,150	Total of Assets:	80,995		
Total operating expenses	92,150	Liabilities			
Operating Profit (OP)	162,850	Current liabilities/ Short-term liabilities			
Interest	0	Accounts payable	12000		
Profit Before Tax (PBT)	162,850	Short-term Bank loan	0		
Income tax @0%	48,855	Long-term liabilities			
Net Profit	113,995	Long-term Bank loan	0		
Dividend	50,000	Other loan	2000		
Retained profit or earning	63,995	Owners' equity:			
		Equity capital	3000		
		Retained profit/earnings	63995		
		Total of Liabilities and owners' equity	80,995		

How it is treated in profit loss account it is just added to operating expenses you have salary, rent, transportation, telephone, electricity and others depreciation also is almost like another part of it. In balance sheet, you take the earlier balance sheet data and deduct the current years depreciation whatever, you get that becomes the book value only that is represented in the balance sheet. For example, furniture fixture previous year value was 15,000 rupees you deduct 10 percent depreciation which is 100.

And 50 you get 1,350 similarly for machinery your earlier value was 10,000 you depreciated the machine at 10 percent. So, depreciation becomes 1,000. So, your machinery value new value; new book value becomes 9000 total becomes 10,350.

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Amortization

- Amortization is analogous to depreciation.
- The difference is that
- depreciation is a method of gradual apportionment of the cost of acquisition of capital assets (fixed assets) and gradually charge the cost as expense in profit & loss account.

Whereas,

- amortization is gradual spreading out of cost of acquisition or cost of creation of intangible assets such as R&D cost and brand building cost, some special types of revenue expenses (such as preliminary & preoperative expenses), and some long-term debts.

The slide features a speaker in a white shirt on the right side. At the bottom, there are logos for NPTEL and IIT Kharagpur.

That is how it is treated amortization. Amortization is almost like analogous to depreciation with some difference see depreciation is created depreciation is kind of a capital asset that is supposed to remain with you over a long period of time. There are other kinds of assets that also effect of which remains for a long time they are intangible asset they are not visible asset.

So, these assets the impact of these assets also remain with you for a long time. So, they are also kind of treated as capital asset and then the are not depreciated they are amortized suppose you have invested say I have 10 crore rupees in research and development in a particular year and you got a new product and you went to market and you are doing wonderful business maybe over 10 years of time.

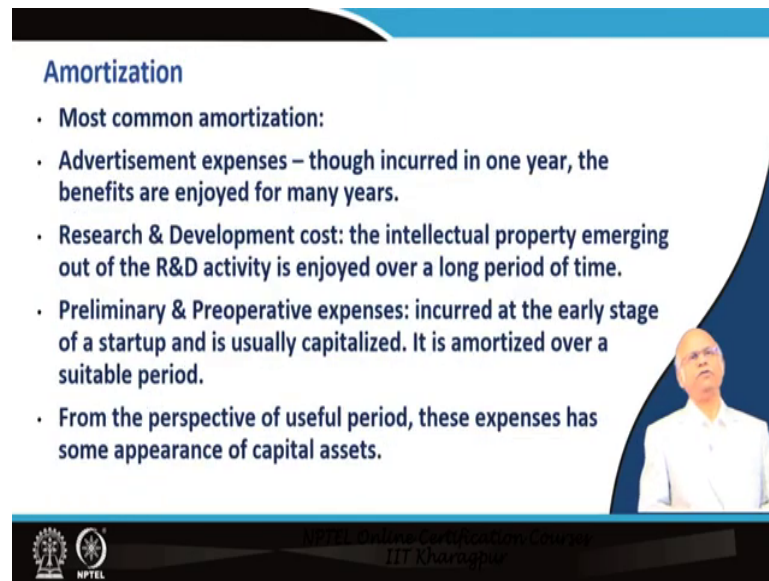
So, this 10 crore rupees that you have incurred in a particular year you do not want to charge the entire 10 crore rupees in profit loss account if you incur only say 5,00,000 rupees you may depending on your balance sheet size profit loss account size you may allow that as an expense, but when you incur a significantly large amount for creating this kind of an asset like say creating a brand you invest heavily in advertisement or promotion etcetera.

Or you do research and development or at the beginning of starting a company you incur quite a lot of expenses to create infrastructure to put everything in place to register your companies benefit of which remains for a long time. All these this last part is regarded as preliminary and preoperative expenses all these three items and many more are not charged immediately to the profit loss account.

They are charged in a staggered manner, every year like say 10 crore rupees investment in research and development you may decide that I will amortize that over a period of 10 years. I will amortize 1 crore every year and over at period of 10 year you can amortize 2 crore and 2 crore in the first two years then 1 crore, 1 crore, 1 crore in the next years as you like, but there should be a policy that we are going to follow this way that is.

What is amortization? Every year you apportion some portion of this part of this investment for which the effect will remain over a long term period that becomes amortization.

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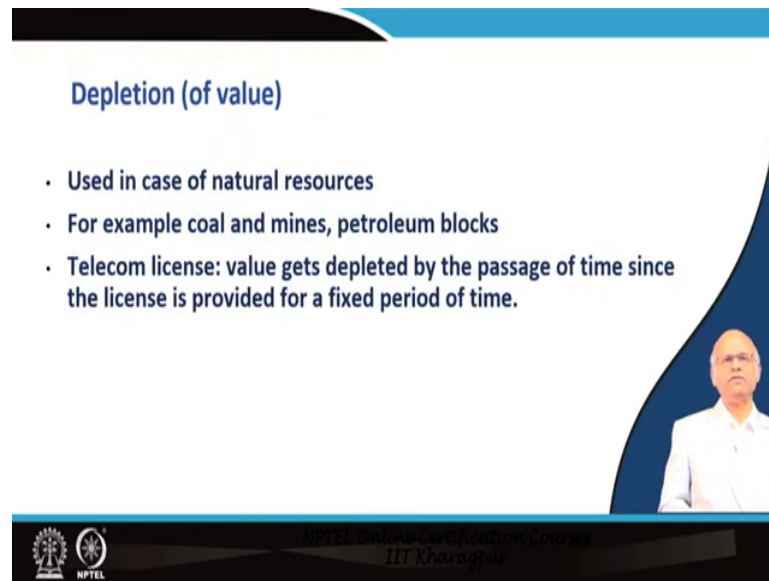
Amortization

- Most common amortization:
- Advertisement expenses – though incurred in one year, the benefits are enjoyed for many years.
- Research & Development cost: the intellectual property emerging out of the R&D activity is enjoyed over a long period of time.
- Preliminary & Preoperative expenses: incurred at the early stage of a startup and is usually capitalized. It is amortized over a suitable period.
- From the perspective of useful period, these expenses has some appearance of capital assets.

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You charge this amount on profit loss account. Most commerce common amortization is advertisement, research and development, preliminary preoperative expenses from the perspective of useful period like say you create a brand or R and D these expenses has some appearance of capital assets some flavor of capital asset as if you are you have bought a machine and the machine is giving you service over a long period of time.

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Depletion (of value)

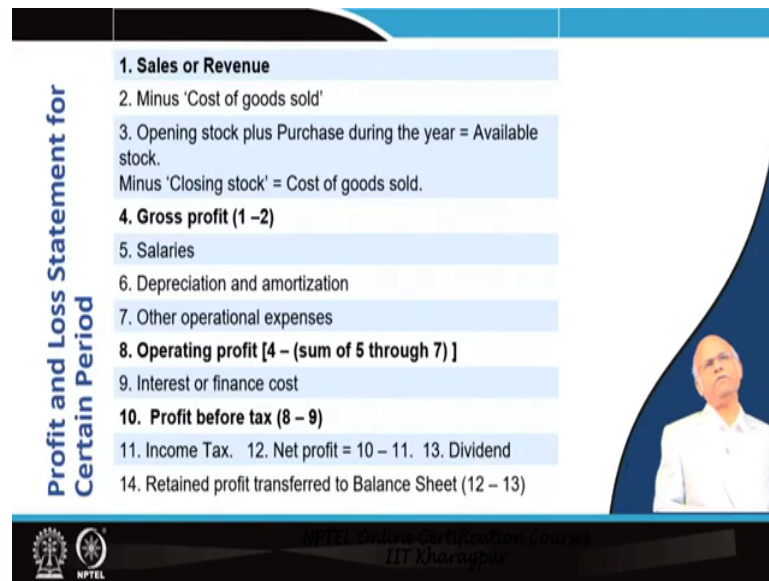
- Used in case of natural resources
- For example coal and mines, petroleum blocks
- Telecom license: value gets depleted by the passage of time since the license is provided for a fixed period of time.

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So, this is regarded as depletion of value like used in case of natural resource like depletion of value is another form of depreciation like amortization. Suppose you have iron ore mine every year you are digging iron ore. So, the total reserve actually is going down.

So, there may be value depletion that is how some of the natural resources like say petrol like many things. So, you have a telecom license for 20 years. Now every year the value of the license is getting down you have a pattern for 20 years you have a everything is has a life.

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Profit and Loss Statement for Certain Period

1. Sales or Revenue
2. Minus 'Cost of goods sold'
3. Opening stock plus Purchase during the year = Available stock.
Minus 'Closing stock' = Cost of goods sold.
4. Gross profit (1 - 2)
5. Salaries
6. Depreciation and amortization
7. Other operational expenses
8. Operating profit [4 - (sum of 5 through 7)]
9. Interest or finance cost
10. Profit before tax (8 - 9)
11. Income Tax. 12. Net profit = 10 - 11. 13. Dividend
14. Retained profit transferred to Balance Sheet (12 - 13)

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So, every year value depletes that is how you account them for. This is how profit loss account statements they are not going to discuss that in a big way. Now we have very little time to discuss.

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Owners' Capital

- Initial and subsequent investment made by the owners in the business.
- Part of the net profit generated by the business in each year that has been reinvested in the form of retained earnings or reserves & surplus.
- Funds raised through various rounds of investment by Business Angel and Venture Capitalists also form part of equity capital.

Balance Sheet	
Equity & Liabilities	
Equity capital	
Authorized capital	15,00,000
Paid-up capital	10,00,000
Reserves & Surplus	12,15,243
Net worth	22,15,243

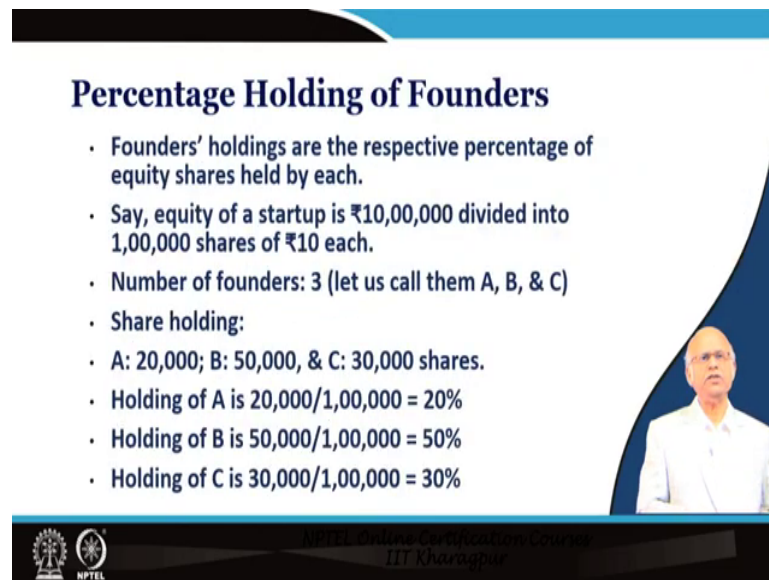
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But this is another item that is important and you should understand that. Owners capital; owners capital has two items; one is paid of capital and other is reserves and surplus. See when you start a company you go to resistor of companies you request through an application that please give us permission to start this company with an authorized capital of 15,00,000. So, ROC will give you a certificate that your authorized capital is 15,00,000, meaning you can you are authorized to raise capital up to 15,00,000.

But the founders cofounders may not decide may decide not to raise 15,00,000 at one go they may think that let us pull 10,00,000 rupees and then gradually will whenever necessary will increase our authorized capital you may have some reserves and surplus over the period meaning that accumulated profit gets accumulated and then you make you add them up you

keep that rather than paying dividend you keep that in the balance sheet in the company that gets; that is grow grows to in the form of reserves and surplus.

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Percentage Holding of Founders

- Founders' holdings are the respective percentage of equity shares held by each.
- Say, equity of a startup is ₹10,00,000 divided into 1,00,000 shares of ₹10 each.
- Number of founders: 3 (let us call them A, B, & C)
- Share holding:
 - A: 20,000; B: 50,000, & C: 30,000 shares.
 - Holding of A is $20,000/1,00,000 = 20\%$
 - Holding of B is $50,000/1,00,000 = 50\%$
 - Holding of C is $30,000/1,00,000 = 30\%$

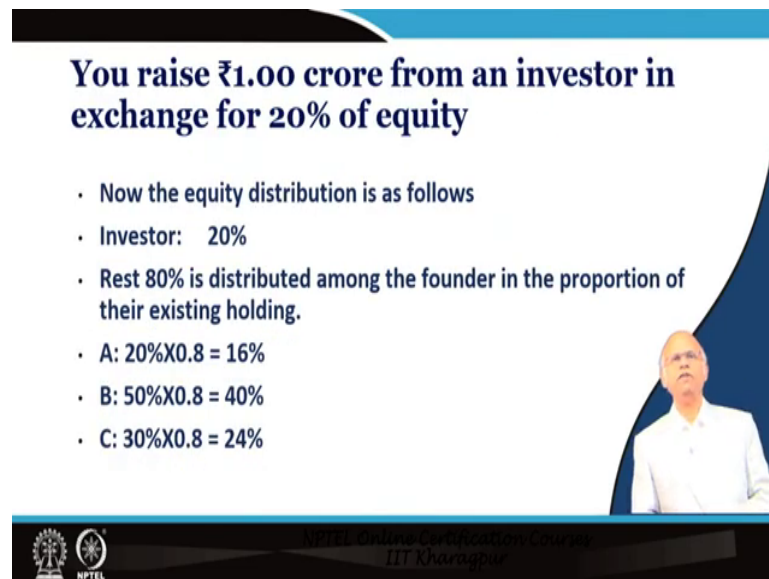
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Now, suppose after a while you have already build a product and you need more money or before that let us talk about the percentage holding. See if this authorized capital and paid up capital they have a par value concept or a face value concept meaning if individually suppose you have 3 cofounders. Now suppose ABC as a 3 cofounders now A has brought in say 2,00,000 rupees, B has brought in 5,00,000 rupees, C has brought in 3,00,000 rupees total 10,00,000 rupees.

Now, it is not just money that they will account; they will count; they will count number of shares. So, each share everybody will be allotted some shares each share has a face value if a share has a face value of rupees 10 for 20,00,000 rupees that A has invested he will get

20,000 shares, B will receive 50,000 shares, C will received 30,000 share. 50,000 into 10 becomes 10 5,00,000, 30,000 into 10 becomes 3,00,000. So, their percentage holding will be determined based on the money they invest or the number of shares the hold now they have invested whatever is that A holds 20 percent, B holds 50 percent, C holds 30 percent.

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You raise ₹1.00 crore from an investor in exchange for 20% of equity

- Now the equity distribution is as follows
- Investor: 20%
- Rest 80% is distributed among the founder in the proportion of their existing holding.
- A: $20\% \times 0.8 = 16\%$
- B: $50\% \times 0.8 = 40\%$
- C: $30\% \times 0.8 = 24\%$

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Now, suppose after the while you invite somebody to invest some money in your company say 1 crore rupees and that guy wants 20 percent equity in your company. So, you have to now allowed some shares to this guy you may have to really increase your authorized capital or you have to allocate within this 15,00,000 authorized share capital by allocating shares from your own share to the new guy.


Because he is demanding 20 percent. So, he will have to give 20 percent you three will apportion among yourselves the rest of the thing in proportion to your holding. So, A holds

20 percent of equity he will get 20 percent into 80 percent, B will get 50 percent into 80 percent, C will get 30 percent into 80 percent. So, 16. So, investor gets 20, A get 16, B get 40, C gets 20 percent total it becomes 100 percent.

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Treatment of Capital Gain or Loss on Sale of Fixed Assets in Profit & Loss A/C

Operational data for the year 2018-19 and some balance sheet data as on 31.3.2019		Operational data for the year 2018-19 and some balance sheet data as on 31.3.2019		Profit & Loss Statement	
Payment of rent	6,000	Payment of rent	6,000	Operating expenses	52,857
Advertisement expense	3,000	Advertisement expense	3,000	Operating profit (OP)	13,343
Purchase of equipment	12,000	Purchase of equipment	12,000	Operating profit margin (OP/Sales)X100	8.90%
Salary	36,000	Salary	36,000	Add profit from sale of fixed assets	400
Closing stock	15,400	Closing stock	15,400	Subtract Interest	1,020
Transportation expense	3,000	Transportation expense	3,000	Add other income (Truck hiring charge)	300
Maintenance	2,500	Maintenance	2,500	Profit before tax	13,023
Legal expense	500	Legal expense	500		
Purchase of goods	85,000	Purchase of goods	85,000		
Construction of factory shed	300	Construction of factory shed	300		
Purchase of truck	2,500	Purchase of truck	2,500		
Truck hiring charge received	300	Truck hiring charge received	300		
Amortization of Prelem. & prep.	200	Amortization of Prelem. & prep.	200		
Repayment of bank loan	1,600	Repayment of bank loan	1,600		
Trade Receivables	8,100	Trade Receivables	8,100		
Telephone bill payment	350	Telephone bill payment	350		
Purchase of telephone	20	Purchase of telephone	20		
Electricity bill payment	1,250	Electricity bill payment	1,250		
Sale of old machine (book value: 2400)	2,400	Sale of old machine (book value: 2000)	2,400		



Now, how to allocate or how to treat the loss and gains arising out of sale of a fixed asset? Is a topic very important and everywhere some treatment is there. I thought without that the discussion is not complete, I will take 2 minutes to complete that suppose you buy a machine for 2,400 this is an example that I gave in while I showed profit loss account balance sheet etcetera.

Now if the book value means that depreciated value is 2,000 rupees that you sold for 2,400 before that if we sell at book value 2,400 is the book value you sold 2,400 no treatment necessary in profit loss account because you have not made any profit or gain. But in balance

sheet you have to eliminate that asset from your balance sheet you have to deduct 2,400 from total asset you do not have to depreciate anything anymore. So, that is when you make no profit.

Suppose you make some suppose you sell this asset at 2,400 whose book value actually was 2,000 book value is 2,000; you sell at 2,400 you are actually making a profit it is called capital gain. So, you are making a capital gain of 400 this 400 is to be added with operating profit to get actual operating profit. So, while you estimate operating profit at the end when you deduct interest you add this income and then you estimate the taxable income because you have to pay tax on this amount.

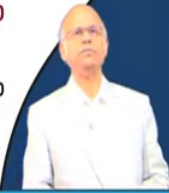
And that is why it has to be char even has to be credited to your profit loss account. So, you add 400 in the profit loss account as if you have earned this money your taxable income goes up, your income tax goes up. If you incur loss suppose the book value was actually 2,500 you sold the machine for 2,400. So, you have made a profit of 100 sorry you have made a loss of 100.

Now, you are allowed to deduct this amount from your profit. So, that your income tax liability goes down because it is a loss. So, you add that in the operating expenses or you deduct that after estimating operating profit. So, that is deducted so taxable income goes down.

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Treatment in cash flow statement

From operating activities		From investment activities	
Net profit	8836.1	Change in land	0
Depreciation & amortization	2157	Change building	-300
Change in inventory/ stock	-1200	Machinery	-14,520
Change in accounts receivable	1000		
Change in account payable	957		
Add loss on sale of equipment	+	Sold machine	2,400
Subtract gain on sale of equipment	-	Sub total	-12,420
	11750.		
Sub total	1		



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In the balance sheet at whatever, was the book value whatever was the book value that should be reduced from the total value suppose your machinery value was something so, you deduct the entire 2,400 from previous years balance sheet then you add subtract all other transaction that you have made and then estimate the net value.

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Non-current assets/ Fixed assets	31.3.2018	31.3.2019
Land	500	500
Building	1000	1,235
Plant & Machinery	6800	17,028
Preliminary & Preoperative exp. To the extent not amortized	500	300
Total non-current assets	8800	19063
Total assets	34040	51,703

Now, when you make some profit or gain how do you your balance sheet does not actually matter all that you do is what whatever was the book value that will be deducted from total asset value; your asset value was 6,800 it will be deducted from that then you buy some new asset and then you depreciate etcetera etcetera those things will come automatically.

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Complete treatments

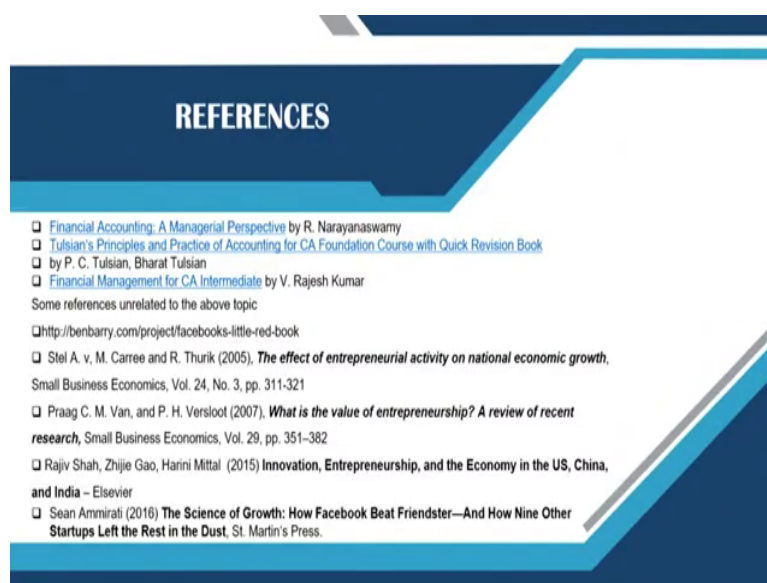
- P&L A/C: only the difference is either added or subtracted
- Balance sheet: Book value is deducted
- Cash Flow statement:
 - i. Loss is added in 'Cash flow from operating activities'
 - ii. Profit is deducted from 'Cash flow from operating activities'
- i. The exact cash receipt is added in Cash Flow from investment activities

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Now the complete thing at one place, as I said when you gain or lose money for selling a fixed asset treatment will be made in profit loss account balance sheet and cash flow statement suppose you make profit in profit loss account a statement it is to be added as profit, if you incur loss it will be deducted from profit before payment of income tax full stop.

In balance sheet only book value is affected book value was something you deduct the book value of the current asset that you are selling from the original value or a previous book value you get the data. In cash flow statement in cash flow statement cash flow from operating activity will be affected cash flow from investment activity also will get affected two things will get affected. One is if you are losing money in the cash flow from operating activity it is to be added because you have already shown a loss.

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REFERENCES

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- ❑ [Tulsian's Principles and Practice of Accounting for CA Foundation Course with Quick Revision Book](#)
- ❑ by P. C. Tulsian, Bharat Tulsian
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Some references unrelated to the above topic

- ❑ <http://benbarry.com/project/facebooks-little-red-book>
- ❑ Stel A. v. M. Carree and R. Thurik (2005), *The effect of entrepreneurial activity on national economic growth*, Small Business Economics, Vol. 24, No. 3, pp. 311-321
- ❑ Praag C. M. Van, and P. H. Versloot (2007), *What is the value of entrepreneurship? A review of recent research*, Small Business Economics, Vol. 29, pp. 351-382
- ❑ Rajiv Shah, Zhijie Gao, Harini Mittal (2015) *Innovation, Entrepreneurship, and the Economy in the US, China, and India* – Elsevier
- ❑ Sean Ammirati (2016) *The Science of Growth: How Facebook Beat Friendster—And How Nine Other Startups Left the Rest in the Dust*, St. Martin's Press.

Now, again you are showing it adding it as positive cash flow so, that they get neutralized. If you make a profit by selling a fixed asset you have to deduct that in operating cash flow statement. In the cash flow in investment activity whatever money you received you just add that in the cash flow from investment activities because cash flow investment is concerned about buying and selling machine. You buy something that becomes a negative cash flow you sell something that whatever you receive becomes a positive cash flow and that is everything that I have today.

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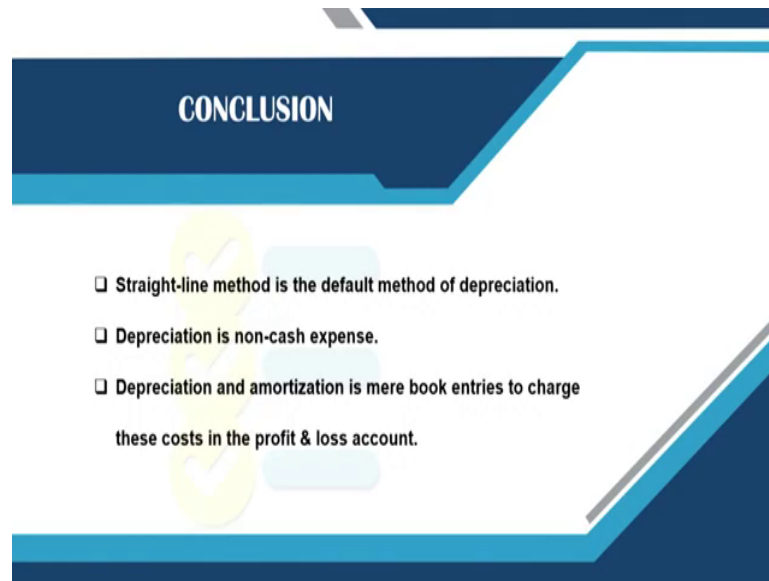
Good Video Lectures and Reading Materials

- <http://startupclass.samaltman.com/>
- http://darwine.nl/weblog/files/Stanford-How_to_Start_a_Startup.pdf

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And some references which are related book references and some references are not related to this topic per se is related to entrepreneurship nevertheless.

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CONCLUSION

- ❑ Straight-line method is the default method of depreciation.
- ❑ Depreciation is non-cash expense.
- ❑ Depreciation and amortization is mere book entries to charge these costs in the profit & loss account.

And there is some reference on good video that you can see it is by Samaltman by Stanford University so I am concluding comment and then.

Thank you very much.