Economics, Management and Entrepreneurship
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Lecture - 20
Exercises (Contd.)

Good morning, welcome to the 20th lecture on Economics, Management and Entrepreneurship. Today, we shall do a few exercises and revise whatever we had done in the last 5 to 6 lectures. To start with we shall take a simple but very realistic example of accounting, accounting principles how the ledger accounts are maintained and how the trial balance can be generated from the ledger accounts.

From there we shall calculate certain ratios that we had already discussed in our lectures in course of discussion on the financial statements and financial statement analysis. So the first question, the first question is like this.

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Exercise 18

An entrepreneur started a retail business in April. The following transactions took place in April. Write the T-accounts and Develop the Trial Balance.

1. Invested Rs 100,00 cash.
2. Purchased merchandise inventory for cash, Rs 35,000.
3. Purchased merchandise inventory on open account, Rs 25,000.
4. Merchandise carried in inventory at a cost of Rs 37,000 was sold for cash for Rs 25,000 and on open account for Rs 65,000.
5. Collect accounts receivable, Rs 15,000.
6. Pay accounts payable, Rs 18,000.
7. Special display fixtures were purchased for Rs 36,000, by making a down payment of Rs 12,000 and a promissory note for Rs 24,000. The fixtures had a useful life of 36 months with no scrap value at the end of the useful life.

An entrepreneur starts a retail business in April. The following transactions took place in April. Write the ledger accounts in the form of T-accounts and develop the Trial Balance. So the main question is that various transactions are given for the month of April and we have to write the T-accounts and from the T-accounts we have to develop the trial balance. The balance sheet basically.

Now, you will see that these are the different transactions. First is invested Rs. 100,000 that is invested here, 100,000 cash then from that amount he purchased merchandise inventory for cash 35,000 Rs. Again purchased some more merchandise inventory this time on credit which is also called open account on credit for Rs. 25,000 then he sold certain inventory and the inventory had a cost of Rs. 37,000 but was sold for a total of 90,000 of which cash was 25,000 and credit was 65,000 together 25 and 65 is 90,000.

However, the cost in the inventory was only 37,000. Later he collected accounts receivables because it was on credit from out of 65,000 he could collect 15,000 and then accounts payable he paid up to 18,000. Remember that he had purchased merchandise inventory on credit for 25,000, so he paid back out of that 25,000 18,000. Next he purchased certain fixtures for displaying the items for Rs. 36,000. He made a down payment of Rs. 12,000.

And he gave a promissory note for Rs. 24,000 the remaining amount. The fixtures had a useful life of 36 months with no scrap value at the end of the useful life. Meaning that this amount that he had invested for buying the fixtures will be depreciated in 36 months. Every month 1,000 Rs. so at the end of 36months there will not be any scrap value remaining for the fixtures.

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8. Paid Rs 6,000 as rental at a monthly rental of Rs 2,000 (as advance payment) towards rent for 3 months.
9. The rental agreement also called for a payment of 10 % of sales in addition to Rs 2,000 on the last day of the month. Such a payment was made on April 30.
10. Wages and salaries, amounting to Rs 40,000 were paid in cash.
11. Depreciation expense was recognized.
12. The expiration of the appropriate amount of prepaid rental services was recogonized.

Next he had rental, he paid Rs. 6,000 as advance payment. There is a mistake here. Paid Rs. 6,000 rental at a monthly rental of Rs. 2000 as advance payment, the total was advance payment towards the next 3 months, towards the rent. Towards rent for the present, towards

the rent for 3 months. The rental agreement also called for a payment of 10% of sales in addition to Rs. 2,000 on the last day of the month.

Such a payment was made on April 30th. You will see later in transaction 12 the expiration of the appropriate amount of pre-paid rental service was recognized. It means he paid an advance of Rs. 6,000 and at the end of the month of April the rental for April 2000 was recognized here as an expense 4,000 remained as advance payment for May and June.

In addition, in transaction 9, it says that the entrepreneur also has to pay in addition to Rs. 2,000 for April and for every month 10% of the total sales that he can make in that month. So, remember that he had made a sale of Rs. 90,000. 25,000 and 65,000, this was cash this was credit. So, of this Rs. 90,000 10% is Rs. 9,000 he pays also as in addition to the rental of 2,000 he pays 9,000.

Then wages and salaries amounting to Rs. 40,000 were paid in cash. Depreciation expense for the fixed as I was telling you 36,000 was the investment the purchase price and 36 months was the useful life of the fixed. So per month 1,000 Rs. depreciation was recognized and finally the rental of 2,000 Rs. for April was also recognized.

So these were the 12 transactions that took place for the entrepreneur in the month of April starting with its initial paid in capital amount of Rs. 100,000 all these transactions took place in the month of April. We are required to find out first of all make the entries in the corresponding ledger accounts in the form of T-accounts and then develop the trial balance. Transactions are we given only for the month of April.

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INVENTORY

Dr.	Cr.
2. 35,000	4. 37,000
3. 25,000	
23,000	

CASH

Dr.	Cr.
1. 1,00,000	2. 35,000
4. 25,000	6. 18,000
5. 15,000	7. 12,000
	8. 6,000
	9. 9,000
	10. 40,000
20,000	

FURNITURE

Dr.	Cr.
7. 36,000	11. 1,000
35,000	

PAID-IN CAPITAL

Dr.	Cr.
	1. 100,000
	100,000

PAYABLE

Dr.	Cr.
6. 18,000	3. 25,000
	7,000

RETAINED EARNINGS

Dr.	Cr.
	Month 1-end Bal 1,000
	4,000

EXPENSE & REVENUE

Dr.	Cr.
COGS Tr. 4: 37,000	Sales Tr. 4: 90,000
9: 9,000	
10: 40,000	
11: 1,000	
12: 2,000	
	1,000

NPTEL

Now, these are the entries. These numbers 1, 2, 3, 4, 5, etc. they are the transactions, transaction numbers. First transaction was that the entrepreneur out of his own money made an investment of Rs. 100,000. So, that was in the form of cash therefore 2 accounts have to be created. One is his own paid in capital and the other is the cash. Cash is an asset for the company whereas paid-in-capital is the owner security it is something like a liability but liability to the owner.

So it is owner security. So if you recall every T-account has 2 sides. The left hand side is debt the right hand side is credit, whether it is assets or liabilities. However, the interpretation of debit and credit would defer between if the account is an asset or if the account is a liability. In case the account is an asset such as the cash, the increase in cash would be entered, that transaction will be entered in the debt side on the left hand side.

Therefore, as cash increased the entries made on the left hand side of the account which is 100,000 in the debt side. Whereas the company is liable to the owner to the extent of 100,000 that is his investment. So, this is credit side. So, if a liability account increases the entry has to be made in the credit side. So, there are 2 entries this is the double entry book keeping system. The asset side or the debit side matches with the credit side, 2 entries and they are equal.

So this is the first transaction. Now, let us see second transaction. Second transaction says that he purchased merchandise inventory for cash at Rs. 35,000. So the 2 accounts involved are inventory and cash. Is cash depletes or decreases by an amount of Rs. 35,000 but his

inventory position increases. Both are assets. Inventory is also an asset; cash is also an asset. So, we saw inventory and cash as the 2 relevant accounts.

Now cash reduces by 35,000 for transaction number 2. So, transaction number 2 the entries 35,000. But by this amount the inventory position increases. Both are assets therefore when increases the entries made in the debit side. Whereas, the entry for cash is made in the credit side both again are equal. Asset side and the debit side and the credit side the entries equal. So this is 2, transaction number 2 35,000 inventory increases.

Transaction number 2 cash reduces by 35,000. These are the entries. Now, let us see transaction number 3. Transaction number 3 is purchased merchandise inventory on open account at Rs. 25000. So here inventory position increases. So the entry for 25,000 will be it will be this amount will be debited to inventory. Entry will be made in the left hand side. But since it is purchased on credit.

Therefore, we have to create a new liability account and that is accounts payable. Company has to make a payment later not in this month. So, that is accounts payable a new account has to be created. The old inventory account will be there. So, in that accounts payable account the entry has to be made in the credit side because the accounts payable increases and it is a liability. So payable and inventory, these are the 2 relevant accounts.

This is transaction number 3. Inventory increases by 25,000 but by the same amount the payable also increases. Payable being a liability any increase in liability the entry must be made in the right hand side meaning the credit side. So, once again the left hand side and the right hand side match. This is transaction number 3, 25,000 and 25,000. Now, we see the 4th transaction.

4th transaction is merchandise carried in inventory at a cost of Rs. 37,000 was sold. So, if the inventory of this amount is sold the inventory position reduces. The entry for 37,000 has to be made in the credit side of the inventory. This is the first thing. Then this amount which was purchased only for 37,000 could be sold for 90,000 in the market. So, remaining amount is the profit.

But this amount of 90,000 the cash could not be realized in the same month. He could get cash only up to 25,000 and the remaining was in credit. So, cash position increases so this amount will be debited to cash, cash being an asset. Open account means on credit but he is sailing therefore it is accounts receivable. He will receive this amount in the feature.

So he is the owner of this amount but not at the present at a later point of time he will get this amount of money. So, it is accounts receivable this also is an asset of the entrepreneur. So entry for this will also be made in the left hand side of the accounts receivable account that bring or this bring an asset account. Remember that there is a miss match. You will see this mismatch when I come to the accounts.

Look at this, inventory position reduces by 37,000 on account of transaction 4, this is sold. For how much? For a total of 90,000. So, we have to now create a sales account. This is expense and revenue account and this will be credited. Remember that sales are like a liability. So, this will be put in the credit side 90,000. Sales increases by 90,000. Cash increases by 25,000 because cash sales are only 25.

The remaining amount is accounts receivables it is shown in the next slide accounts receivable.

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A/C RECEIVABLE

Dr.	Cr.
4. 65,000	5. 15,000
50,000	

NOTES PAYABLE

Dr.	Cr.
	7. 24,000
	24,000

ADVANCE RENTAL

Dr.	Cr.
8. 6,000	12. 2,000
4,000	

On account of transaction 4 that also increases by an amount of 65,000. So, we have made debit side entries for accounts receivables and cash and that equals the credit side entry of 90,000. So these figures match. 25 + 65 that appear in the left hand side of assets equals

90,000 that appears in the right hand side of the expense and revenue account. But this 37,000 also comes here as cost of goods sold.

This is the amount by inventory decreased and that is nothing but goods sold. So, we have to show this as an expense. So this is a cost and this got transferred and cost of goods sold when the amount was actually sold. So, this amount comes on the debit side that is an expense on account of transaction 4. So, you see that this 37,000 appearing in the right hand side matches with 37,000 appearing in the debit side.

Whereas, this amount 25,000 inventory, I am sorry cash and 65,000 accounts receivable match with 90,000 sales. These are the entries. So, how many entries? One is inventory depletion, sorry inventory depletion here. Next is cash increases, next sales increases and then accounts receivable increases and COGS increases. So these are the various entries on account of transaction 4.

It is quite little complicated but I think there is a logic that I am sure you have follow-up. Next we come to transaction 5 this is to collect accounts receivable at Rs. 15,000. Accounts receivable this works this is an asset. So, if we collect this amount so accounts receivable will decrease and cash will increase because we are getting this amount in the form of cash.

So, we saw cash increases by 15,000 on account of transaction 5 and I am sorry accounts receivable reduces on account of transaction 5. So, reduces this will appear in the credit side. Accounts receivable being an asset. So, cash also is an asset it increases therefore it is the debit side entry and you can see that their debit side left hand side and right hand side match. Now we see number 6.

Pay accounts payable Rs. 18,000. So when we are making the payment cash position reduces by 18,000. Therefore, the entry must be made in the credit side cash being an asset. Accounts payable naturally also reduces. Accounts payable is a liability if you reduce the entry has to be made in the debit side. So, cash reduces by 18,000 this is transaction number 6 and accounts payable also reduces but the entries made in the debit side because payable is a liability account.

So, this again the left hand side and the right hand side are matching. So, this is transaction 6. Now, we see transaction 7. In transaction 7 we are showing, we are saying that the company, the entrepreneur he purchases special display fixtures for Rs. 36,000 of which 12,000 he makes down payment. So, 12,000 is the cash payment, so cash position reduces the entry will be made in the credit side and he gives a promissory note. This is called notes payable.

So he creates therefore an account called notes payable it is like accounts payable but separately written because he is giving a promissory note normally it was an entry. called notes payable accounts it is like a liability for 24,000 and this is something like a fixed asset. Fixtures or something like fixed assets, 36,000. So these are the 3 entries that we shall make.

Number 7, cash reduces by 12,000. This is cash and then not furniture, I am sorry this has to be fixture. Fixture this is an asset and it is a fixed asset 36,000 is the amount so the fixed asset position increases by 36,000 the entries in the debit side and they then payment is made for 12,000 the cash position reduces so, it is in the credit side of cash and we are creating notes payable as a separate account something like accounts payable.

But it is shown separately because the company has given a promissory note and this is the 7th transaction for 24,000. So, these are the 3 entries once again 24 for 12th 36,000 that appear in the right hand side match with 36,000 which is the fixed asset value appearing in the debit side of the accounts. Now, we look at transaction 8. Transactions 8, says paid a rental of Rs. 6,000.

Monthly rental is 2,000 but initially in the beginning of the month of April an amount of 6,000 Rs. was paid for 3 months including for April. So, we have to make the entry if the cash has been paid for 6,000 Rs. then naturally the cash position reduces. The entry will be in the credit side cash being an asset. Now, what is the corresponding entry? Corresponding entry that it is an advance payment is like an asset for the company and that increases therefore the entry will be made in the debit side.

So, cash reduces by 6,000 and there is an advance rental payment of 6,000 Rs. So, this is like a current asset any advance payment is an asset under say current asset this is 6,000 Rs. So, once again left hand side and right hand side entry for 8 match. Now, we go to transaction

number 9. Here the agreement calls for a payment of 10% of sales in addition to Rs. 2,000 on the last day of the month and such a payment was made on April 30th. So, that is number 9.

So, here the repayment was made that means cash position will come down and this entry for this will be shown somewhere in the rental, so as an expense. So, here we are showing this expense as Rs. 9,000 and cash position also comes down here. So, number 9 cash position comes down. So, credit side credited to cash and debited to expenses account. So, they matching and what is 9,000? It is 10% of 90,000 which is the sales.

10% of 90,000 is 9,000 the entries are here. So, that is transaction 9. Transaction 10 says wages and salaries for 40,000 paid. So, cash position comes down and wages and salaries is an expense account. So, wages and salaries 40,000 and cash position comes down by 40,000. So, here this is transaction 10, amount is credited to cash debited to expense account. Depreciation expense was recognized.

We call that the asset was purchased at a price of 36,000 Rs. and it was estimated that it will have a useful life of 36 months and assuming a straight line depreciation per month depreciation comes to 1,000 Rs. So, we saw depreciation as an expense, so that is here in the expense account 1,000 and by that amount it is not a cash payment. Therefore, we cannot put 1,000 Rs. here.

We instead saw the fixture originally was purchased for 36,000 Rs. Its value, book value reduces by 1,000. So, this 1,000 Rs. is the amount that we saw as an expense for to be accounted for in the calculation of profit. So, this is the amount by which the fixture value comes down. So, this is transaction number 11. And finally transaction number 12 says the rental service was recognized.

That means rental of 2,000 Rs. is now recognized because this is the end of the month. So, rental we saw as 2,000 Rs. already advanced payment was made. So, from the advanced payment 2,000 Rs. will be reduced. So, advanced payment we have written here. 6,000 Rs. we had given in advance. We recognize that 2,000 Rs. is now put as rental for the month of April. Therefore, advance remaining was 4,000 Rupees.

So, friends we have now created the accounts, the ledger accounts we have made the entries for all the transactions. Now, we have to find out the sum total for each transaction. That is what we have done here. For assets the left hand side will be always positive and for liabilities the right hand side will be always positive. So, we just put the sum here. For example, 35,000 + 25,000 is 60,000 – 37,000, so this is 23,000.

Similarly, the sum total has been calculated and cash position is 20,000 fixture is 35,000 paid-in capital is remains at 100,000. Payable still 7,000 payable is there and here there is something to see. There is a mistake here, this has to be 1,000. Now, from the expense and revenue account sales was 90,000 all the expenses including the cost of goods sold which was the inventory amount this is rental wages and salaries, depreciation, another rental all these adds up to 89,000.

So, when we subtract 89 from 90 our gross profit is 1,000 Rs. Here we are not considering interest and taxes therefore these goes as earning on 1,000 Rs. as retained earnings. So, this what we have done here. So, retained earnings 1,000, expense and revenue is 1,000 accounts receivable is this – this. We still have to get 50,000 Rs. We have paid an advance rental of 4,000 Rs.

But we have to yet to pay because we are giving a promissory note, notes payable 24,000 Rs. So, these are the sum total of its account. Now, what we normally have to do? Assets we have to all the assets we have to put in one place all the liabilities and owner security we have to put in another place and have the trial balance. And that is what we have done in this slide.

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TRIAL BALANCE

Assets		Liabilities & Owner's Equity	
Fixture	35,000		
Inventory	23,000	Paid-in Capital	1,00,000
Cash	20,000	Retained Earnings	1,000
A/C Receivable	50,000	Accounts Payable	7,000
Adv Rental	4,000	Notes Payable	24,000
	132,000		132,000

Assets, these are fixed assets the fixture 36,000 Rs. – 1,000, so the book value is 35,000. Inventory this, cash this, accounts receivables this and advance rental paid. Advance rental is also current account. All these 4 are current assets and this is fixed assets. And these 4 are our liabilities and owner's equity. Of this owner's equity are actually these 2. This is the amount that he had paid in the beginning of April.

And in April the return earning was 1,000 Rs. that for the owner's equity would be 100,000 + 1,000 and the current liabilities are this, accounts payable and notes payable. All together this is 132,000 and this also is 132,000. So, they are matching. This, therefore we have seen that balance it can be developed from the ledger accounts.

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Exercise 19

For the trial balance developed for the earlier problem, find the current ratio, quick-assets ratio, debt-equity ratio, inventory turnover ratio, and gross profit margin.

Current Ratio = 97,000/31,000

Quick-Assets Ratio = 74,000/31,000

Debt-Equity Ratio = 31,000/101,000 =

Inventory turnover ratio = 90,000/23,000 =

Gross profit margin = 1,000/90,000 =

Now we go to the next question. Next question is based on the data that had been provided in exercise 18. The question is for the trial balance developed for the earlier problem, find different ratios. These are the financial ratios, current ratio, quick-assets ratio, debt-equity ratio, inventory turnover ratio and gross profit margin ratio. I have not given the values. But the receivables can be calculated as this is current assets divided by current liabilities.

Current assets, these 4 are the current assets. Inventory, cash, accounts receivable and advanced rental. And the current liabilities are these 2, 7+24 31 and these add up to 97. So, this ratio whatever the value comes as 3 point something that is the current ratio. So, apparently the company is in a comfortable position as far as the liquidity is concerned. But I told you inventory is not as liquid as cash.

So, sometimes we go for quick assets ratio that does not consider inventory in the current assets. So, what we do? We take not inventory but the other 3. So, the other 3 are this + this +this, cash, accounts receivable and advance rental. That comes to 74,000 Rs. 50+, 20+50, 70+4, 74. 74/31 and that is 2 point something, 2.5 or so close to 2.5 which is also quite comfortable.

Therefore, the liquidity position is very good which means the company can very easily meet its certain obligations such as accounts payable, notes payable, etc. it can always pay from its own funds. Its cash position and its liquidity position is quite comfortable, quite good. Next is debt equity ratio. So, here the equity is the owner's equity. Owner's equity in this case is the paid in capital + the retained earnings.

Paid in capital was 100,000 retained earnings was 1,000, totally 101,000. That is the equity. And debt in our case of course, we have very simple situation normally one should have consider secured loans and secured loans all that but in our case fortunately we do not have so many loans we have only accounts payable and notes payable which is 31,000 only.

And in fact, as I told you last time, sometimes even accounts payable, notes payable they are current liabilities, they are not concerned because debt normally talks about the basically fixed our long term debts. So, in this particular case the company does not have any long term debt. So, if we go strictly by that debt equity ratio will be = 0. But if you consider even current liabilities as current debts then of course the value is 31,000/101,000.

Which is something like 0.3 which is quite less, is as good as saying that the main funds are sourced from equity only and not through debt. Next is inventory turnover ratio. Please recall that inventory turnover ratio is sales on an average how much inventory the company holds or the unit the organization holds vis-à-vis the sales that it is making. If it can sell more but hold less inventory it means the inventory management policy of the company is extremely good.

Whatever it is having it is almost selling at the same time. On the contrary, if inventory position is very high and sale is low it means that the company is not going very well. It is having lot of inventory and able to sell them. So, this is what we shown in inventory turnover ratio. We divide sales by inventory and suppose evaluates 5 it means that the inventory has turn 5 times. That is why the name turnover.

And normally if you recall, I told that inventory should be average inventory held and normally the average is calculated by finding out the beginning of the month inventory end of the month inventory both added and divided by 2. In our case unfortunately we have only the end inventory which is 23,000 and the sale is 90,000. Therefore, ratio comes to something like 3 point something which is not bad. 3.4, 3.5 is not very bad.

So, the company is doing well as far as its inventory turnover ratio is concerned. Next is gross profit margin. This is gross profit divided by sales. Gross profit in the month of April remember that this is only a monthly gross profit that we are considering, this of course is monthly sales this amount is not very good. It is 1/90. It is something like 1.2% which is not very high. Now this is how we calculate various ratios from the balance sheet and from the profit and loss statement.

By the by where is the profit and loss statement? Profit and loss statement is somewhere here, the expense and revenue account although we did not write complete things but at least we have written the revenue here and the various costs here. We have calculated gross profit. So, this is similar to a profit and loss statement.

So, these 2 exercises have given you enough idea enough revision on our whatever knowledge we had gained in the past on double entry book keeping system and on financial statements and on analysis of financial statements. Now let us consider some more exercises.

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Exercise 20

Selected data concerning the past fiscal year's operations of a manufacturing company are given below (in thousand rupees)

	Inventory		
	Beginning	Ending	
Raw materials	70	90	
WIP	75	35	
Finished goods	100	120	
Other data:			
Raw materials used			468
Total manufacturing costs charged to production (includes DM, DL, FOH applied at a rate of 80 % of DL cost)			864
COGS			900

Find the cost of raw material used, the direct-labour cost charged to production, cost of goods manufactured, and FOH.

This is an exercise on job costing. Now, this question is something like this. The selected data concerning the past fiscal year's operations of a manufacturing company are given below in 1,000 Rs. The beginning and the ending inventories for raw materials, work in process and finished goods are given. This is for a year. The beginning of the year raw material was 70,000 and 90,000, etc.

The other data are the raw materials used in this year is 468,000, total manufacturing costs charged to production was 864,000 and that included direct material, direct labor, factory overhead that was charged at a rate of 80% of the direct labor and cost of goods sold which is in 900,000. 3 things are asked for one, the cost of raw material used, the direct labor cost charge to production, cost of goods manufacture and factory overhead. These are the various things asked for in the question.

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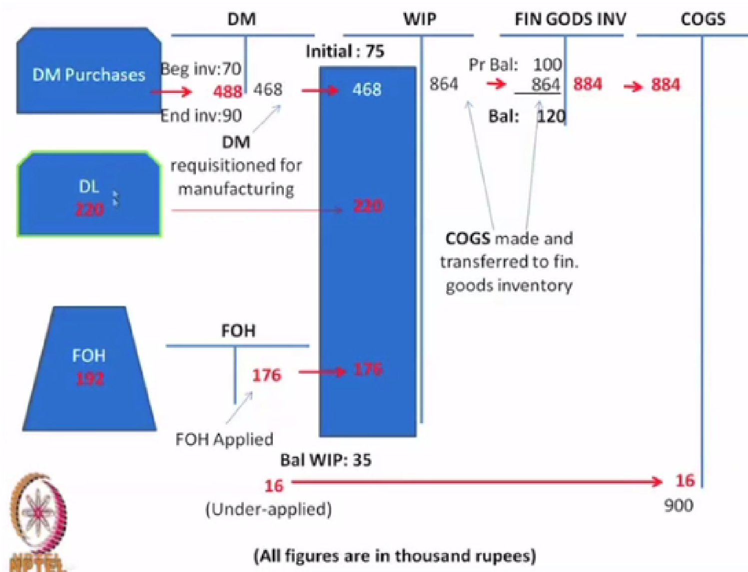

Now, we literally show this same thing, a similar diagram we had discussed when we discussed job costing. This is the fixed is a symbol for fixed resources, these are the symbols for variable resources. These are the accounts. Direct material, work in process, finished goods, cost of goods sold. Of course, also we have here the factory overhead expense.

Whatever is entered in black the values are actually give in the beginning inventory the end inventory. The initial value of WIP the final value, finished goods initial finish goods final these values are given and how much direct material was used was also given, okay. How much WIP now stands for finished goods that was also given. So, these are 900 was also given. So, whatever is given in the is in the black and white they are given.

We are calculating and the values asked for they are written in red. First is that if the initial material, the direct material was 70 and final is 90 and 468 was transferred to WIP what is this value? So, it is basically this + x – 468 should be = 90. 70+ something that we are getting called that x – something we are giving away that is 468 and the endings will be 90. If you solve this equation x will come as 488. So, that is the value of direct material purchased.

Transfer was 468 this value is given. Now, what is given direct labor is not given but instead what is given? It is the initial value, the final value and the amount that was transferred. So, again we apply the same principle 75+ 468+ DL, the value of DL is not known + this amount is 0.8 of DL. That is given. The factory overhead applied was 80% of the direct labor. So, if this is DL this will be 0.8 DL, so 1.8 DL. Therefore, 75 + 468+ 1.8 DL – 864 = 35.

Solve this for DL it came to 220. Therefore, 220 is the direct labor that was applied. 1.8 of that is factory overhead that is 176. So, we have found out these 2. This is given as 864. Once again the beginning inventory is known, final inventory is known and now we know this. So, what is this? So, it is this + this – y = 120. Solve this equation y will be obtained. y is obtained as 884 in this case. So, that was transferred as cost of goods sold.

What is given is as the total cost of goods sold is 900. Therefore, this amount must be under applied factory overhead. So, this is 16 under applied factory overhead. So, that comes here and when we add this and the one that under applied and finally applied to this COGS these 2 together give a value of factory overhead that is 192. So, for the problem given we have been able to find out different missing values. That is the job costing situation.

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Exercise 21

A company produces CD players in large number. It has two departments: (1) Assembly and (2) Testing. The manufacturing costs in the Assembly Department during February are as follows:

DM added		60,800
Conversion costs		
DL	50,000	
FOH	40,000	90,000
Assembly costs to account for		150,800

There was no beginning inventory or WIP. Suppose work on 19,000 CD players began in Assembly Dept. during February, but only 17,000 were fully completed. Only half the labour had been completed for each of he CD players still in process.

Compute the costs of units completed and transferred to Testing. Also compute the cost of ending WIP.

Now we take up an exercise on process costing. In this example we consider a company producing CD players in large number. So, it is large number therefore it is process costing. It has, it is a continuous production. It has 2 departments, assembly and testing. The manufacturing costs in the assembly department during February are as follows. Direct material added is this.

The conversion costs are direct labor and factory overhead they come to 90,000. Total assembly cost to account for is 150,800. The question has been simplified by saying that there is no beginning inventory for WIP. Suppose work on 19,000 CD players began in assembly department during February but only 17,000 were fully completed and further only half the labor had been completed for each of the CD players still in progress.

The sales that from assembly 19,000 CDs work started but 17,000 were full y completed this 17,000 consumed the full direct material and of the 2,000 remaining this 2,000 consumed also direct material but consumed only 50% of the conversion cost. Compute the cost of unit completed and transferred to testing. Also compute the cost of ending work in process. Is the question?

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Step 1: Summarize the flow of physical units.

Completed number: 17,000 units
Partially completed: 2,000 units
(receiving 50 % conversion resources)

Step 2: Calculate the output in terms of equivalent units.

Equivalent number of units completed
= 17,000 + (0.50)(2,000) = 17,000 + 1,000 = 18,000 units

Note:

- DM was received by all the 17,000 units.
- Conversion resources were received by 18,000 equivalent units.

Now, we once again follow the 5 steps that we had discussed in our previous class on process costing. Completed number is 17,000 partially completed 2,000 each receiving 50% conversion. Therefore, the equivalent number is 17,000 + 50% of 2,000 that came to 18,000 units. So, DM was received by all the 17,000 but conversion resources were received by 18,000 equivalent units.

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		Total Costs	Details	
			DM	Conversion Costs
Step 3	Costs to account for (Rs)	150,800	60,800	90,000
Step 4	Unit costs (Rs/unit)	8.20*	3.20	5.00
Step 5	Application of costs			
	To units completed and transferred to Fin Dept (17,000 units @ 8.20 Rs/unit)	139,400		
	To units not completed			
	DM 6,400		= 2,000	(2000)(0.50)
	Con Costs 5,000	11,400	(@3.20 Rs/unit)	= 1,000
	WIP, April 30			(@5.00 Rs/unit)
	Total Costs accounted for	150,800		

Now, this table gives us the other 3 steps. The direct material cost was 60,800 conversion cost was 90,000 totally 150,800 this was to account for. We have founded the equivalent costs. The conversion for the conversion cost the equivalent amount was 18,000 because 50% of 2,000 + 17,000 become 18,000. So, per unit it is 90,000/18,000 which is 5 Rs. Whereas, direct material was received by all the 19,000 CD players.

So 60,800/19,000 came to 3.20. That is the unit cost. Adding up this gives 8 Rupees 20 paisa. Now, we apply the costs first to completed and transferred to Finance Department 17,000 has been completed and the cost of that was 8 Rupees 20 paisa. So, multiply 17,000 * 8 Rupees 20 paisa the value is this. To unit not completed we know already 2,000 not completed and per unit 3 Rupees 20 paisa at this.

So this * this direct material is fully taken therefore it is 6,400 whereas equivalent unit is 1,000 at a rate of 5 Rs. that came to 1,000 * 5, 5,000 Rs. Totaling 11,400 Rs., total cost. So, when we add this we get 150,800. So, the units that are completed and transferred to the finishing department the cost is 139,400 Rs. and to those that are not completed it is 11,400 Rs.

So, friends we have taken up about 4 exercises on different aspects starting with double entry book keeping system, then financial statements and analysis of financial statements, then we talked of job costing and process costing and later we will, later in future class we shall take out some exercises on budgeting and other topics also. Thank you very much.