Welcome learners

Today I'm going to take up a module for semester 6 Cost Accounting Major 5 paper Advanced Cost Accounting I. The name of my module is transport costing part 2 from Unit II Operating Costing. Myself Mrs. Rupali, Sangodkar, Assistant Professor of Commerce from Government College of Commerce and Economics, Borda Goa. In today's module I'm going to take up a problem on transport costing, a problem on Goods Transport Company.

Upon completion of this module, the student will be able to apply the components of operating cost sheet to calculate total operating cost. Calculate total miles, calculate total ton miles and calculate cost per ton miles. Let us understand transport costing with the help of an example which will be on Goods Transport Company. Let us read the problem.

This problem is on a goods transport company. Global Transport Company supplies the following details in respect of a truck of five ton capacity. One ton is equal to 1000 kilograms, so one truck has a capacity equal to five ton. The information that is given to us is with regards to the cost of the truck scrap value and estimated life. Now this information we are going to use in order to calculate depreciation. Further, we are given diesel and oil. Repairs, drivers' salary, cleaner salary, now these three are expenses. That is, repairs, drivers salary, cleaner salary are given per month. Further, insurance, tax and general supervision charges are also given, but these expenses are mentioned for a year, so accordingly we need to take the information in the solution. The truck carries goods to and from city covering a distance of 50 miles each way. Assuming that the truck runs on an average 25 days a month, calculate first Operating cost per ton mile. Second question is freight per mile the company should charge if profit of 50% on freight is to be earned.

First and foremost, as I had mentioned in my previous module, we need to know the cost unit. As you can read the cost, the operating cost per ton mile is to be calculated. So the cost unit is cost per ton mile. So let us solve the problem. First and foremost the formula that needs to be known in order to calculate cost per ton mile. The formula is total operating cost divided by total ton miles. As far as the numerator is concerned, total operating cost needs to be calculated on the basis of operating cost sheet.

So let us prepare the operating cost sheet. In operating cost sheet as you all are aware, the costs are classified into three categories, so the information that is given to us in the question needs to be classified in these three categories. The first are the fixed cost. Drivers' salary amounting to rupees 8000 is a fixed cost. Cleaner salary amounting to rupees 4000 is also fixed cost. Coming to the depreciation what I had said earlier it is considered as fixed if it is on the basis of time or if it is to be calculated by considering the cost, scrap value and the life. So here in this problem for calculating depreciation we're given cost we are given scrap value and we are given the life of the truck. So accordingly we need to calculate depreciation. So for that I have written a working note. The formula for calculating depreciation is cost minus scrap divided by life. So on substituting the information in the formula, the answer that is arrive late is rupees 85,500. Now we need to understand that this amount of 85,500 is per annum whereas the Operating cost sheet that we have prepared is for a month, so we need to find out basis this will be the depreciation per month. So 85,500 / 12 is the depreciation per month and the answer is 7125. So the depreciation that will be shown in the operating cost sheet is rupees 7125.

Moving further insurance, what is given in the question is again per annum and we have prepared our operating cost sheet for a month. So we need to find out insurance per month which will be 42,000 / 2 and the answer is rupees 3500.

Moving further towards tax, which also is a fixed cost. The tax which is given in the question is for a year or per annum. So we need to find out per month, so 24,000 / 2. Well what we get is 2000 per month is tax to be shown in the operating cost sheet. So here are the answers which we have arrived at as for the working notes 1, 2 and three. So the total that we get of the fixed cost in this problem is 24,625.

Moving further towards the maintenance cost. The maintenance cost that we have to take in this problem first is repairs, which is amounting to 5000. Second is a general supervision charges now as far as general supervision charges are concerned, general supervision charges are given per annum. We know our operating cost sheet is per month. So we need to calculate per month. So on calculating supervision charges per month as per the note or the answer is 4000, so the total maintenance cost is 5000 + 4000, that is 9000.

Moving towards the last type or the last classification. Of course that is operating cost, the only operating was given in this problem is diesel and oil, but you know as you can read in the question. A diesel and oil that is given is not for a month. What is given to us is ₹100, but this ₹100 is per trip each way is one way. Diesel cost is given for a trip and that is ₹100 so base is this information that is given. We need to find out or we need to calculate what will be the diesel cost per month. So for that I have the working note 5. As you can read here working note 5 is for calculating diesel and oil per month. What is given is ₹100 is the cost per trip one way, but we need to calculate for one trip that is going and coming back. So 100 * 2 that will be the cost of diesel per trip that is going and coming back. Operating cost sheet is for a month, so we need to calculate diesel and oil per month. So in the problem, what is given to us is there are 25 days. Now you know the truck is running so this it is 100 * 2 * 25 we get rupees 5000 so the diesel and oil cost for a month is rupees 5000. So the total operating cost is 5000 and the total operating

costs it is the total of fixed cost plus the total of maintenance cost and the total operating cost is 38,625. So with this we get the numerator for the formula.

We now need to move towards the denominator. Now the denominator is total ton miles because in this problem the cost unit is cost per ton mile. If the cost is cost per kilogram kilometers, then accordingly you need to change the denominator.

The formula for the denominator is number of vehicles (In this case, it is a number of trucks) Second is the distance (as mentioned earlier, distance per trip that is going and coming back). Trips, that is, the number of trips on a day. Capacity here we're talking about our truck, so capacity in terms of the quantity. Number of days the truck is running in a month in a month by because our operating cost sheet is for a month and the percentage occupied if it is given we have to take it otherwise we have to assume it is hundred percent. On substituting the information in the formula we get number of vehicles one as mentioned in the problem right at the beginning. A distance as said is distance for trip that is going and coming back. The distance between the two cities is 50 miles, so distance for trip will be 50 miles multiplied by two that is 100. Multiplied by trips, number of trips are not given in the problem, so we assume one trip or day. So multiplied by one capacity of the truck is given as 5 tons, so multiplied by 5. Number of days is 25 (25 days a month). So I've taken 25. Percentage occupied is not given so we will assume 100% on calculating we get an answer which is 12,500. So the total ton miles are 12,500.

Now we need to substitute the numerator and the later in the Formula One substituting the numerator and the denominator in the formula we get the answer which is rupees 3.09. So cost per ton mile is rupees zero point sorry it is a rupee 3.09. So we have answered the first question.

Moving towards the 2nd question we need to calculate the freight. Freight is what the customer will have to pay for the services rendered by the transport company. What is known to us is cost per ton mile that is rupees 3.09. That is what we have just now arrived at to that we need to add profit and that's how we will get the freight. But what is given to us in the problem is profit as a percentage of freight. We do not know the freight, but we have to calculate the profit. So for that I have written the working note 6 for calculating profit per ton mile. Now in this working note what we have assumed is we have assumed let freight be equal 100. We have assumed let freight be equal 100. If freight is 100, profit which is 50% on Freight is 50. 50 percent of 100 is equal to 50. So if freight is 100 and if profit is 50 cost will be equal to 50. That is freight minus profit. You will get the cost. Now if cost is. rupees 3.09 (now from where did I get 3.09 is from here what we have arrived in) so if cost is 3.09 how much would be the profit? So if you cross multiply the answer that you get is what I've written here. As you can see rupees 3.09. And then we know now the cost. We know now the profit the total will be the freight. Freight as I said, is the rate that will be charged by the transportation company to the customer for rendering the service. So with this I hope you have understood as to how to ascertain cost for a transportation company. These are some of the books which are have referred and you can refer for further problems. Thank you.