9 Profitability Analysis – Product Wise/ Segment Wise/ Customer Wise

Basic Concepts

Customer Profitability Analysis (CPA)	This is a relatively new technique that ABC makes possible because it creates cost pools for activities. Customers use some activities but not all, and different groups of customers have different 'activity profiles'. Different customers or categories of customers will each use different amounts of these activities and so customer profitability profiles can be built up, and customers can be charged according to the cost to serve them.
Categorisation of Indirect Costs for DPP	Categorisation of Indirect Cost for DPP is as follows: (i) Overhead cost (ii) Volume related cost (iii) Product batch cost (iv) Inventory financing costs
Direct Product Profitability (DPP)	DPP involves the attribution of both the purchase price and other indirect costs (for example distribution, warehousing and retailing) to each product line. Thus a net profit, as opposed to a gross profit, can be identified for each product. The cost attribution process utilizes a variety of measures (for example warehousing space and transport time) to reflect the resource consumption of individual products.
Market Driven Standard Costs	The allowable or target cost per unit is a market driven standard cost that has to be met if the desired profit are to be achieved.
The Balanced Scorecard	The Balanced Scorecard can be defined as 'an approach to the provision of information to management to assist strategic policy formulation and achievement'. It emphasizes

	the need to provide the user with a set of information, which addresses all relevant areas of performance in an objective and unbiased fashion.

SECTION - A

Profitability Analysis

Question-1

What do you mean by DPP? What are its benefits?

Answer

Direct Product Profitability (DPP) is 'Used primarily within the retail sector, and involves the attribution of both the purchase price and other indirect costs *such as distribution, warehousing, retailing* to each product line. Thus a net profit, as opposed to a gross profit, can be identified for each product. The cost attribution process utilises a variety of measures *such as warehousing space, transport time* to reflect the resource consumption of individual products.'

Benefits of Direct Product Profitability:

(i) Better Cost Analysis - Cost *per product* is analysed to know the profitability of a particular product.

(ii) Better Pricing Decision- It helps in price determination as desired margin can be added with the actual cost.

(iii) Better Management of Store and Warehouse Space- Space Cost and Benefit from a product can be analysed and it helps in management of store and warehouse in profitable way.

(iv) The Rationalisation of Product Ranges etc.

Question-2

Discuss the benefits of Customer Profitability Analysis.

Answer

Benefits of Customer Profitability Analysis

(i) It helps the supplier to identify which customers are eroding overall profitability and which customers are contributing to it.

(ii) It can help to provide a basis for constructive dialogue between buyer and seller to improve margins.

(iii) It enhances decision making related to customers.

(iv) It helps in effective cost reporting, communication and information.

(v) It helps to find out the value and profitability of each customer segment.

Balanced Scorecard

Question-3

What do you understand by a Balanced Scorecard? Give reasons why Balanced Scorecards sometimes fail to provide for the desired results. Do you think that such a scorecard is useful for external reporting purposes?

Answer

The Balanced Scorecard can be defined as 'an approach to the provision of information to management to assist strategic policy formulation and achievement. It emphasizes the need to provide the user with a set of information, which addresses all relevant areas of performance in an objective and unbiased fashion. The information provided may include both financial and non-financial elements, and cover areas such as profitability, customer satisfaction, internal efficiency and innovation'.

It is clear from the above definition that the central idea of the Balanced Scorecard is that managers should develop the measures on which they manage the business from four different perspectives:

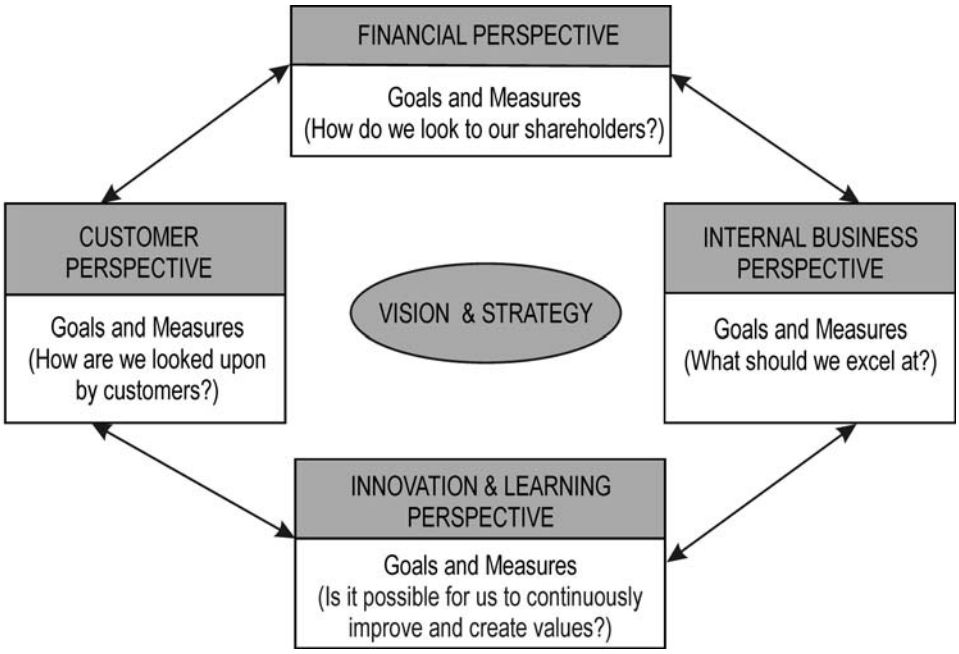
(i) Customer Perspective i.e. customer satisfaction.

(ii) Internal Business Perspective

(iii) Learning and growth prospective

(iv) Financial Perspective e.g., operating income by segments.

The following figure summarises the ideas of a Balanced Scorecard:



According to Kaplan and Norton, the ultimate result of using the Balanced Scorecard approach should be an improved long-term financial performance. Since the scorecard gives equal importance to the relevant non – financial measures, it should discourage the short term approach that leads to cuts in spending on new product development, human resource development etc which are ultimately detrimental for the future prospects of the company.

The responsibility to devise and implement a Balanced Scorecard should be that of the managers working with the business. Since every company is different, it shall need to work out for itself the various financial and non – financial measures, which need to be focused upon for its own development. Since the Balanced Scorecard is recommended as a management tool used both for internal and external reporting purposes, it is again the manager's responsibility to decide as to what information needs to be disclosed and how any problems of confidentiality can best be overcome.

The following are some reasons why Balanced Scorecards sometimes fail to provide for the desired results;

– The use of non- financial measures leads managers to think that they have a Balanced Scorecard already working for strategic purposes.

– Senior executives misguidedly delegate the responsibility of the Scorecard implementation to middle level managers.

– Companies try to copy measures and strategies used by the best companies rather than developing their own measures suited for the environment under which they function.

– There are times when Balanced Scorecards are thought to be meant for reporting purposes only. This notion does not allow a Business to use the Scorecard to manage Business in a new and more effective way.

It may be noted that the above-mentioned difficulties refer to the internal use of the Scorecard. It remains a matter of debate whether a Balanced Scorecard is applicable to external reporting. Critics argue that if the Scorecard is indeed a relevant driver of long term performance, shouldn't the information generated be of interest to the investment community? However, it has been noticed that the Scorecard does not translate easily to the investment community for the simple reason that it makes sense for individual business units and different individual projects rather than the company as a whole. Most companies have different divisions with their own mission and strategy and hence these individual scorecards cannot be aggregated into an overall corporate scorecard. However, in case the company somehow manages to overcome such a problem and indeed use its Scorecard for external reporting, it may end up passing sensitive information to its competitors which may end up being detrimental to the company in the long run. However, with changes in the thinking process of the investment community, such strategic reporting could well be accepted in the near future.

Question-4

Explain goals and performance measure for each perspective of Balanced Scorecard.

Answer

Goals and Performance Measures *for each perspective of* Balanced Scorecard

Customer Perspective

Goals	Performance Measures
Price	Competitive Price
Delivery	Number of on Time Delivery Lead Time from Receipt of Order to Delivery to Customer
Quality	Own Quality Relative to Industry Standards Number of Defects or Defect Level
Support	Response Time Customer Satisfaction Survey

Internal Business Perspective

Goals	Performance Measures
Efficiency of Manufacturing Process	Manufacturing Cycle Time
Sales Penetration	Sales Plan Increase in Number of Customer *in a unit of time*
New Product Introduction	Rate of New Product Introduction.

Innovation and Learning Perspective

Goals	Performance Measures
Technology Leadership	Performance of Product Use of Technology
Cost Leadership	Manufacture Overhead per Quarter
Market Leadership	Market Share in all Major Markets
Research and Development	Number of New Products Patents

Financial Perspective

Goals	Performance Measures
Sales	Revenue and Profit Growth
Cost of Sales	Extent in Remain Fixed or Decreased *each year*
Profitability	Return on Capital Employed
Prosperity	Cash Flows

Question-5

"In many organizations, initiatives to introduce Balanced Scorecard failed because efforts were made to negotiate targets rather than to build consensus." Elucidate the above statement.

Answer

Balanced Scorecard is a set of financial and non-financial measures relating to a company's critical success factors. It is an approach which provides information to management to assist in strategy implementation. Therefore, the components to be included in the Balanced

Scorecard must flow from strategy. The targets should be measurable and must flow from strategy and corporate plan of the company. It is necessary that managers should agree to the components and targets because in absence of a consensus, managers may not commit to the targets established by the top management. Moreover, the functions are interdependent and results in one functional area/ perspective (e.g. innovation and learning) have direct bearing on the results in other functional area / perspective (e.g. customer perspective). Therefore, it is not sufficient that individual managers agree to their targets. Successful implementation requires that the top management builds an overall consensus on the components and targets of the Balanced Scorecard. Negotiation undermines the fundamental principle that the components and targets should flow from strategy. As a result, an approach to establish targets through negotiation defeats the very purpose of Balanced Scorecard.

SECTION - B

Profitability Analysis- Product Wise/ Direct Product Profitability

Problem-1

A company produces and sells four types of dolls for children. It also produces and sells a set of dress kit for the dolls.

The company has worked out the following estimates for the next year:

Doll	Estimated Demand	Standard Material Cost (₹)	Standard Labour Cost (₹)	Estimated Sales Per Unit (₹)
A	50,000	20	15	60
B	40,000	25	15	80
C	35,000	32	18	100
D	30,000	50	20	120
Dress Kit	2,00,000	15	5	50

To encourage the sale of dress kits, a discount of 20% in its price is offered if it were to be purchased along with the doll. It is expected that the entire customer, buying dolls will also buy the dress kit.

The company's factory has effective capacity of 2,00,000 labour hours per annum on a single-shift basis and it produces all the products on that basis. The labour hour rate is ₹ 15 Overtime of labour has to be paid at double the normal rate.

Variable cost works out to 50% of direct labour cost. Fixed costs are ₹ 30 lakhs per annum.

There will be no inventory at the end of the year.

Required

Draw a conservative estimate of the year's profitability.

Solution

Statement Showing "Conservative Estimate of the Year's Profitability"

	Doll- A	Doll –B	Doll- C	Doll- D	Dress Kit
Estimated Demand (units)	50,000	40,000	35,000	30,000	2,00,000
	(₹)	(₹)	(₹)	(₹)	(₹)
Selling Price *per unit*	60.00	80.00	100.00	120.00	50.00
Less: Material Cost *per unit*	20.00	25.00	32.00	50.00	15.00
Less: Labour Cost	15.00	15.00	18.00	20.00	5.00
Less: Variable Cost (50% of Labour Cost)	7.50	7.50	9.00	10.00	2.50
Contribution *per unit*	17.50	32.50	41.00	40.00	27.50
Total Contribution on Estimated Demand	8,75,000 (50,000 × ₹17.50)	13,00,000 (40,000 × ₹33.50	14,35,000 (35,000 × ₹41)	12,00,000 (30,000 × ₹40)	55,00,000 (2,00,000 × ₹27.50)
Less: Discount (W.N.-2)	---	---	---	---	15,50,000
Net Contribution	8,75,000	13,00,000	14,35,000	12,00,000	39,50,000

	(₹)
Total Net Contribution	87,60,000
Less: Overtime Premium (38,000 hrs × ₹15) [W.N.]	(5,70,000)
Less: Fixed cost	(30,00,000)
Profit	51,90,000

Working Notes

1. **Total Labour Hours Required to Meet Estimated Demand of Four Types of Dolls and Dress Kit**

Doll (a)	Estimated Demand (units) (b)	*Standard Labour Time per Doll (c)	Total Labour Hours (d) = (b) × (c)
A	50,000	1.00 hr	50,000.00
B	40,000	1.00 hr	40,000.00

C	35,000	1.20 hrs	42,000.00
D	30,000	1.33 hrs	40,000.00
Dress Kit	2,00,000	0.33 hrs	66,000.00
Total Labour Hours *to meet estimated demand*			2,38,000.00

(*)

Standard Labour Time per Doll has been calculated by dividing Standard Labour Cost per Doll by ₹15.

Since the Total Available Hours are only 2,00,000 therefore 38,000 Hours will be utilised by employing the Labour on Overtime Basis.

2. Total Discount on the Sale of Dress Kit

Out of 2,00,000 Dress Kits, 1,55,000 were sold along with four type of Dolls. Each unit of Sale of Dress Kit along with a unit of Doll is entitled for a Discount of 20% on ₹50 i.e. ₹10. The Total Discount amount on the Sale of 1,55,000 Dress Kit comes to ₹15,50,000.

Problem-2

Jigyasa India Ltd. (JIL) has 30 retail stores of uniform sizes 'Fruity & Sweety Retails' across the country. Mainly three products namely 'Butter Jelly', 'Fruits & Nuts' and 'Icy Cool' are sold through these retail stores. JIL maintains stocks for all retail stores in a centralised warehouse. Goods are released from the warehouse to the retail stores as per requisition raised by the stores. Goods are transported to the stores through two types of vans i.e. normal and refrigerated. These vans are to be hired by the JIL.

Costs per month of JIL are as follows:

	(₹)
Warehouse Costs:	
Labour & Staff Costs	*27,000*
Refrigeration Costs	*1,52,000*
Material Handling Costs	*28,000*
Total	*2,07,000*
Head Office Cost:	
Salary & Wages to Head Office Staff	*50,000*
Office Administration Costs	*1,27,000*
Total	*1,77,000*

Retail Stores Costs:	
Labour Related Costs	*33,000*
Refrigeration Costs	*1,09,000*
Other Costs	*47,000*
Total	*1,89,000*

Average transportation cost of JIL per trip to any retail stores are as follows:

Normal Van	*₹3,200*
Refrigerated Van	*₹4,900*

The Chief Financial Manager asked his Finance managers to calculate profitability based on three products sold through Fruity & Sweety retail stores rather than traditional method of calculating profitability.

The following information regarding retail stores are gathered:

	Butter Jelly	***Fruits & Nuts***	***Icy Cool***
No. of Cartons per cubic metre (m^3)	*42*	*28*	*40*
No. of Items per cartons (units)	*300*	*144*	*72*
Sales per month (units)	*18,000*	*4,608*	*1,152*
Time in Warehouse (in months)	*1*	*1.5*	*0.5*
Time in Retail Stores (in months)	*1*	*2*	*1*
Selling Price per unit (₹)	*84*	*42*	*26*
Purchase Price per unit (₹)	*76*	*34*	*22*

Butter Jelly and Icy-Cool are required to be kept under refrigerated conditions.

Additional information:

Total Volume of All Goods Sold per month	*40,000 m^3*
Total Volume of Refrigerated Goods Sold per month	*25,000 m^3*
Carrying Volume of each van	*64 m^3*

Required

Calculate the Profit per unit using Direct Product Profitability (DPP) method.

Solution

Direct Product Profitability (DPP) Statement

(Amount in ₹)

	Butter Jelly	Fruits & Nuts	Icy Cool
Selling Price *per unit*	84.00	42.00	26.00
Less: Purchase Price *per unit*	76.00	34.00	22.00
Gross Profit ...(A)	8.00	8.00	4.00
Direct Product Costs:			
Warehouse Costs *per* m^3 [W.N.-1]	7.46	2.07	3.73
Retail Stores Costs *per* m^3 [W.N.-2]	6.36	4.00	6.36
Transportation Costs [W.N.-3]	76.56	50.00	76.56
Total DPP costs *per* m^3	90.38	56.07	86.65
Items *per* m^3 [W.N.-4]	12,600	4,032	2,880
Cost *per item* ...(B)	0.007	0.014	0.030
Direct Product Profit ...(A) - (B)	7.993	7.986	3.97

Working Notes

(1) Warehouse Related Costs

	General Costs (₹)	Cost Related with Refrigerated Goods (₹)
Labour & Staff Costs	27,000	---
Refrigeration Costs	---	1,52,000
Material Handling Costs	28,000	---
Total	55,000	1,52,000
Volume of Goods Sold	40,000 m^3	25,000 m^3
Cost *per* m^3 *per month*	1.38	6.08

Products	Time in Warehouse	Cost *per* m^3 *per month* (₹)	Total Cost (₹)
Butter Jelly	1 Month	7.46 (1.38 + 6.08)	7.46
Fruits & Nuts	1.5 Months	1.38	2.07

Icy-cool	0.5 Months	7.46 (1.38 + 6.08)	3.73

(2) Retail Stores Related Costs

	General Costs (₹)	Cost Related with Refrigerated Goods (₹)
Labour Related Costs	33,000	---
Refrigeration Costs	---	1,09,000
Other Costs	47,000	---
Total	80,000	1,09,000
Volume of Goods Sold	40,000 m^3	25,000 m^3
Cost *per* m^3 *per month*	2.00	4.36

Products	Time in Retail Stores	Cost *per* m^3 *per month*	Total Cost
Butter Jelly	1 Month	₹6.36 (₹2.00 + ₹4.36)	₹6.36
Fruits & Nuts	2 Months	₹2.00	₹4.00
Icy-Cool	1 Month	₹6.36 (₹2.00 + ₹4.36)	₹6.36

(3) Transportation Costs

	Normal Van Costs	Refrigerated Van Costs
Cost *per trip*	₹3,200	₹4,900
Volume of Van	64 m^3	64 m^3
Cost *per* m^3 *per trip*	₹50.00	₹76.56

(4) No. of Items *per* m^3

Products	No. of Cartons (m^3)	No. of Items *per Cartons* (units)	No. of Items *per* m^3
Butter Jelly	42	300	12,600 (42 × 300)
Fruits & Nuts	28	144	4,032 (28 × 144)
Icy - Cool	40	72	2,880 (40 × 72)

Profitability Analysis- Customer Wise/ Customer Profitability Analysis

Problem-3

A and B are two customers of XYZ Electronics Ltd., a manufacturer of audio players. Selling price per unit is ₹5,400. Its cost of production per unit is ₹4,420.

Additional costs are:

Order Processing Cost……..₹2,000 per order

Delivery Costs……₹3,500 per delivery

Details of customers A and B for the period are given below:

	Customer A	***Customer B***
Audio Players purchased(nos.)	*350*	*500*
No. of orders	*5 (each of 70 units)*	*10 (each of 50 units)*
No. of deliveries	*5*	*0*

The company's policy is to give a discount of 5% on the selling price on orders for 50 units or more, and to further give 8% discount on the undiscounted selling price if a customer uses his own transport of collect the order. Assume that production levels are not altered by these orders.

Required

(i) Analyse the profitability by comparing profit per unit for each customer.

(ii) Comment on the discount policy on delivery.

Solution

(i) **Customer's Profitability Statement**

Particulars	**Customer- A**	**Customer- B**
Sales (units)	**350**	**500**
	(₹)	(₹)
Selling Price *per unit*	5,400	5,400
Less: Discount (Quantity)	270 (₹5,400 × 5%)	270 (₹5,400 × 5%)
Less: Discount (Delivery)	---	432 (₹5,400 × 8%)
Selling Price (Net of Discounts) *per unit*	5,130	4,698
Less: Variable Cost *per unit*	4,420	4,420

Contribution *per unit*	710	278
Total Contribution	2,48,500 (₹710 × 350 units)	1,39,000 (₹278 × 500 units)
Less: Additional Overheads		
Delivery Cost	17,500 (5 × ₹3,500)	---
Order Processing Cost	10,000 (5 × ₹2,000)	20,000 (10 × ₹2,000)
Profit *per customer**	2,21,000	1,19,000
Profit *per customer per unit*	631.43	238.00

Analysis

Even though A has lower sales volume (30% lesser from B), it is contributing almost double profit that is being contributed by B as overall discount offered to customer A is quite less.

(ii) Comments on the "Discount Policy on Delivery"

Discount on delivery offered to customer B is ₹432 *per unit*. If transport for delivery is provided to customer B then the cost would have been ₹70 *per unit* (10 deliveries × ₹ 3,500 / 500 units), which is lesser by ₹362. It may also be noted that delivery cost in case of customer A is only ₹50 per unit (₹17,500 ÷ 350 units). Hence, company needs to review discount policy on delivery but significance of profitability of customer B should also be kept in mind while doing so.

Problem-4

Edward Ltd. manufactures weighing machines of standard size and sells its products to two industrial customers namely MT Ltd. and KG Ltd. and to a dealer MG Bros. having shops in different cities. The maximum retail price per unit of weighing machine is ₹11,000 and per unit average cost of production is ₹5,500 (40% is general fixed overhead cost).

The Finance Officer has been asked to undertake a customer profitability analysis and calculate and compare the profit margin per customer (before deducting general fixed overhead) to know about the real customer profitability.

Following are the additional overhead information:

Delivery Costs	*₹200 per Kilometer*
Emergency Delivery Cost (in addition to Delivery Cost)	*₹21,000 per Delivery*
Order Processing Cost	*₹6,000 per Order*
Specific Discount and Sales Commission	*As per Negotiation*
Product Advertisement Cost	*Actual Cost*

The following data are available for each customer:

Particulars	*MT Ltd.*	*KG Ltd.*	*MG Bros.*
Sales (in units)	*2,000*	*1,000*	*800*
Total Delivery Kilometer Travelled	*1,000*	*800*	*900*
No. of Emergency Delivery	*2*	*1*	*0*
No. of Orders Processed	*4*	*2*	*8*
Specific Discount (Percentage of Sales Revenue)	*25%*	*20%*	*15%*
Sales Commission (Percentage of Sales Revenue)	*15%*	*10%*	*5%*
Advertisement Costs (₹)	*8,75,000*	*6,15,000*	*4,30,000*

Required

Analyze the profitability for each customer, which customer is the most profitable.

Solution

Customer Profitability Statement

Particulars	**MT Ltd.**	**KG Ltd.**	**MG Bros.**
Sales (units)	2,000	1,000	800
	(₹)	**(₹)**	**(₹)**
Sales Revenue ...(A)	2,20,00,000	1,10,00,000	88,00,000
Less: Average Variable Cost ...(B) (₹5,500 × 60% = 3,300 p.u.)	66,00,000	33,00,000	26,40,000
Contribution [70% of Sales] ...(A) - (B)	1,54,00,000	77,00,000	61,60,000
Less: Additional Overheads			
Delivery Cost (No. of K.M. × ₹200)	2,00,000	1,60,000	1,80,000
Emergency Delivery Cost (No. of Emergency Delivery × ₹21,000)	42,000	21,000	----
Order Processing Cost (No. of Orders × ₹6,000)	24,000	12,000	48,000

Specific Discount	55,00,000	22,00,000	13,20,000
Sales Commission	33,00,000	11,00,000	4,40,000
Advertisement Cost	8,75,000	6,15,000	4,30,000
Profit *per customer**	54,59,000	35,92,000	37,42,000
Profit Margin *per customer** (%)	24.81%	32.65%	42.52%
Rank	III	II	I

** Before Deducting General Fixed Overhead Cost*

Analysis

The Contribution Margin is 70% for each Customer but when the other Overheads Costs *per customer* is included in the above Profitability Statement the Profitability of the three Customers become different. MG Bros. is the most Profitable Customer.

Problem-5

Oxford Medical Care Co. (OMCC) is a pharmaceutical firm, operating its entire business through its four customers Ox_1, Ox_2, Ox_3, and Ox_4. Ox_1 and Ox_2 are small pharmaceutical stores while Ox_3 and Ox_4 are large discount stores with attached pharmacies. OMCC uses discount pricing strategy and prices its products at variable cost plus 25%.

Item	***Small Pharmaceuticals***		***Large Pharmaceuticals***		***Activity Rate***
	Ox_1	***Ox_2***	***Ox_3***	***Ox_4***	
Number of Orders	*4*	*9*	*6*	*3*	*₹750*
Order Size	*₹40,000*	*₹20,000*	*₹4,25,000*	*₹4,00,000*	*n/a*
Average Discount	*4.50%*	*9.50%*	*17.50%*	*11.50%*	*n/a*
Regular Deliveries	*4*	*9*	*6*	*3*	*₹375*
Expedited Deliveries	*2*	*0*	*2*	*0*	*₹1,250*
General Administration Cost	*₹20,250*		*₹48,375*		

Required

(i) Prepare a 'Customer Profitability Statement' that shows the profit from each customer and each customer channel.

(ii) Recommend some points to improve OMCC's profit.

Solution

. **Statement Showing "Customer Profitability Analysis"**

Particulars	Ox_1	Ox_2	Channel Total	Ox_3	Ox_4	Channel Total
	Small Stores			Large Stores		
Revenue	1,60,000	1,80,000	3,40,000	25,50,000	12,00,000	37,50,000
Discount	7,200	17,100	24,300	4,46,250	1,38,000	5,84,250
Net Revenue	1,52,800	1,62,900	3,15,700	21,03,750	10,62,000	31,65,750
Variable Costs	1,28,000	1,44,000	2,72,000	20,40,000	9,60,000	30,00,000
Contribution Margin	24,800	18,900	43,700	63,750	1,02,000	1,65,750
Order Processing	3,000	6,750	9,750	4,500	2,250	6,750
Regular Deliveries	1,500	3,375	4,875	2,250	1,125	3,375
Expedited Deliveries	2,500	---	2,500	2,500	---	2,500
Customer Profit	17,800	8,775	26,575	54,500	98,625	1,53,125
Channel Cost			20,250			48,375
Channel Profit			6,325			1,04,750

Recommendations

Small Pharmaceuticals

Even though Ox_1 has lower sales volume (11% lesser from Ox_2), it is contributing around 67% of small store's profit as its order is for larger quantities and discount offered is very less.

OMCC is only just at breakeven point with small pharmaceuticals. To improve profit OMCC should:

(i) Coordinate with Ox_2 to *increase order size* and try to *negotiate a smaller discount*.

(ii) Try to work with Ox_1 to *reduce expedited deliveries*.

Large Pharmaceuticals

OMCC makes substantial profit from the large pharmaceuticals. Ox_4 alone contributing around 55% of total customer's profit and its order is for larger quantities. Therefore, Ox_4 is most favorable customer and may be given *little extra attention.* For Ox_3, OMCC may have *no options* but to treat it as less profitable customer as Ox_3 accounts more than 60% of sales.

Problem-6

PQR Ltd. specializes in the distribution of pharmaceutical products. It buys from pharmaceutical companies and resells to each of the three different markets:

(i) General Supermarket Chains

(ii) Drug Store Chains

(iii) Chemist Shops

The company plans to use activity based costing for analyzing the profitability of its distribution channels. The following data for the quarter ending March 2014 is given:

	General Supermarket Chains	Drug Store Chains	Chemist Shops
Average sales per delivery	₹ 96,500	₹ 32,450	₹ 6,225
Average cost of goods sold per delivery	₹ 94,650	₹ 31,800	₹ 5,950
Number of deliveries	960	2,470	8,570
Total number of orders	1,000	2,650	9,500
Average number of cartons shipped per delivery	250	75	12
Average number of hours of shelf stocking per delivery	2	0.5	0.1

The following information is available in respect of operating costs (other than cost of goods sold) for the quarter ending March 2014:

Activity Area	Cost Driver	Total Cost (₹)
Customer purchase order processing	Purchase order by customers	5,91,750
Customer store delivery	Number of deliveries	9,60,000
Cartons dispatched to customer stores	Number of Cartons dispatched to customer stores	7,92,135
Shelf stocking at customer store	Hours of shelf stocking	80,240

Required

Compute the operating income of each distribution channel for the quarter ending March 2014 using activity based costing.

Solution

Statement Showing "Operating Income of Distribution Channels of PQR Ltd."

Particulars	General Supermarket Chains (₹)	Drug Store Chains (₹)	Chemist Shops (₹)	Total (₹)
Sales (Number of Deliveries × Average Sales *per delivery*)	9,26,40,000 (960 × ₹96,500)	8,01,51,500 (2,470 × ₹32,450)	5,33,48,250 (8,570 × ₹6,225)	22,61,39,750
Less: Cost of Goods Sold (Number of Deliveries × Avg. COGS *per delivery*)	9,08,64,000 (960 × ₹94,650)	7,85,46,000 (2,470 × ₹31,800)	5,09,91,500 (8,570 × ₹5,950)	22,04,01,500
Gross Margin	17,76,000	16,05,500	23,56,750	57,38,250
Less: Operating Costs	5,20,200	6,19,425	12,84,500	24,24,125
Operating Income	12,55,800	9,86,075	10,72,250	33,14,125

Workings

Statement Showing "Operating Cost of Distribution Channels of PQR Ltd."

Particulars	General Supermarket Chains (₹)	Drug Store Chains (₹)	Chemist Shops (₹)	Total (₹)
Customer Purchase Order Processing	45,000 (₹45 × 1,000)	1,19,250 (₹45 × 2,650)	4,27,500 (₹45 × 9,500)	5,91,750
Customer Store Delivery	76,800 (₹80 × 960)	1,97,600 (₹80 × 2,470)	6,85,600 (₹80 × 8,570)	9,60,000
Cartons Dispatched to Customer Stores	3,60,000 (₹1.5 × 2,40,000)	2,77,875 (₹1.5 × 1,85,250)	1,54,260 (₹1.5 × 1,02,840)	7,92,135
Shelf Stocking at Customer Store	38,400 (₹20 × 1,920)	24,700 (₹20 × 1,235)	17,140 (₹20 × 875)	80,240
	5,20,200	6,19,425	12,84,500	24,24,125

Computation of Rate *per* Unit of Cost Allocation Base

Activity	Activity Cost [a] (₹)	Activity Driver	No. of Units of Activity Driver [b]	Cost Driver Rate [a] / [b] (₹)
Customer Purchase Order Processing	5,91,750	Purchase Order by Customers	13,150	45.00
Customer Store Delivery	9,60,000	Number of Deliveries	12,000	80.00
Cartons Dispatched to Customer Stores	7,92,135	Number of Cartons Dispatched to Customer Stores	5,28,090	1.50
Shelf Stocking at Customer Store	80,240	Hours of Shelf Stocking	4,012	20.00

No. of Units of Activity Driver→

Purchase Order by Customers = 1,000 + 2,650 + 9,500
= 13,150

Number of Deliveries = 960 + 2,470 + 8,570
= 12,000

Number of Cartons Dispatched to Customer Stores = Number of Deliveries × Average Number of Cartons Shipped *per delivery*
= (960 × 250) + (2,470 × 75) + (8,570 × 12)
= 2,40,000 + 1,85,250 + 1,02,840
= 5,28,090

Hours of Shelf Stocking = Number of Deliveries × Average Number of Hours of Shelf Stocking *per delivery*
= (960 × 2.0) + (2,470 × 0.5) + (8,570 × 0.1)
= 1,920 + 1,235 + 857
= 4,012

Profitability Analysis- Miscellaneous

Problem-7

Y Limited is a manufacturer of Cardboard boxes. An analysis of its operating income between 2012 and 2013 shows the following:

	Income Statement (amount in 2012)	*Revenue & Cost effect of Growth component in 2013*	*Revenue & Cost effect of Price recovery component in 2013*	*Cost effect of productivity component in 2013*	*Income Statement (amount in 2013)*
Revenue (₹)	*40,00,000*	*2,00,000(F)*	*4,20,000(F)*	*-*	*46,20,000*
Cost (₹)	*29,20,000*	*60,000 (A)*	*2,56,000(A)*	*58,000(F)*	*31,78,000*
Operating Income(₹)	*10,80,000*	*1,40,000(F)*	*1,64,000(F)*	*58,000(F)*	*14,42,000*

Y limited sold 4,00,000 boxes and 4,20,000 boxes in 2012 and 2013 respectively. During 2013 the market for cardboard boxes grew 3% in terms of number of units and all other changes are due to company's differentiation strategy and productivity.

Required

Compute how much of the change in operating income from 2012 to 2013 is due to the industry market size factor, productivity and product differentiation and also reconcile the profit of both years due to these factors.

Solution

Reconciliation of Operating Income

Particulars	Amount (₹)
Operating Income in 2012	10,80,000
Add: Change Due to Industry Market Size Factor (W.N.-1)	84,000
Changes Due to Productivity (W.N.-2)	58,000
Changes Due to Product Differentiation (W.N.-3)	2,20,000
Operating Income in 2013	14,42,000

Workings

Total Increase in Sale of Cardboard Boxes 20,000 Boxes (4,20,000 Boxes – 4,00,000 Boxes). Out of this increase in Sales of 20,000 Boxes,12,000 Boxes (3% of 4,00,000) is due to *growth in market size*, and the remaining 8,000 Boxes (20,000 Boxes – 12,000 Boxes) are due to an increase in *market share* .

W.N.1 Effect of the Industry Market Size Factor *on operating income*:

$$= \text{Revenue and Cost Effect of Growth Component in 2013} \times \frac{\text{Increase in Sales Unit Due to Market Growth}}{\text{Total Growth in Sales Unit (from 2012 to 2013)}}$$

$= ₹1,40,000 \times \frac{12,000 \text{Boxes}}{20,000 \text{Boxes}}$

= ₹84,000 (F)

W.N.2. Effect of Productivity *on operating income*:

= Cost Effect of Productivity Component in 2013

= ₹58,000 (F)

W.N.3 Effect of Product Differentiation *on operating income*:

Particulars	Amount (₹)
Increase in the Selling Price (Revenue Effect of the Price Recovery Component)	4,20,000 (F)
Increase in Prices of Inputs (Cost Effect of the Price Recovery Component)	2,56,000 (A)
Growth in Market Share Due to Product Differentiation* $\left(₹1,40,000 \times \frac{8,000 \text{ Boxes}}{20,000 \text{ Boxes}}\right)$	56,000 (F)
Total	2,20,000 (F)

* Revenue and Cost Effect of Growth Component in 2013 ×

$\frac{\text{Increase in Sales Unit Due to Product Differentiation}}{\text{Total Growth in Sales Unit (from 2012 to 2013)}}$

Problem-8

Aditya Decors Ltd. (ADL) is a leading manufacturer of luxury sanitary products and has divided its whole business into different product segments. At the Last year the management of ADL has decided to make some changes in its one of product-line 'AADee', the improved version was made available for sale from 1st of April 2014.

At the end of the financial year 2014-15, the finance and accounts department has extracted some relevant data for the product line 'AADee' to analyse the decision taken last year. The data related with AADee for the financial year 2013-14 and 2014-15 are as follows:

	2013-14	***2014-15***
No. of Units Sold	*4,00,000*	*4,30,000*
Selling Price per unit	*₹4,175*	*₹ 4,325*
Direct Materials Consumed	*24,00,000 kg.*	*25,10,000 kg.*
Cost per kg. of Direct Materials	*₹470*	*₹485*
Direct LabourUsed	*32,00,000 hrs.*	*34,80,000 hrs.*

Rate per labour hour	*₹30*	*₹ 31*
Fixed Costs	*₹1,60,00,000*	*₹ 1,76,00,000*

ADL has the capacity to produce 5,00,000 units of AADee a year.

Required

(i) Analyse the changes in the operating income from financial year 2013-14 to 2014-15 with respect to the following components:

(a) Growth, (b) Price- Recovery and (c) Productivity Components.

(ii) Reconciliation of Operating Profit from 2013-14 to 2014-15.

Solution

Analysis of Changes in the Operating Income from Financial Year 2013-14 to 2014-15

Growth Component→

Revenue Effect of Growth Component

$$= \left(\begin{array}{l}\text{Actual Units of Output}\\ \text{Sold in 2014-15}\end{array} - \begin{array}{l}\text{Actual Units of Output}\\ \text{Sold in 2013-14}\end{array}\right) \times \text{Selling Price in 2013-14}$$

$$= (4,30,000 \text{ units} - 4,00,000 \text{ units}) \times ₹\,4,175$$

$$= ₹12,52,50,000 \text{ (F)}$$

<u>Cost Effect of Growth Component (Variable Costs)</u>

Direct Materials

$$= \left(\begin{array}{l}\text{Direct Materials Required to}\\ \text{Produce 4,30,000 Units}\\ \text{in 2013-14}\end{array} - \begin{array}{l}\text{Direct Materials Used to}\\ \text{Produce 4,00,000 Units}\\ \text{in 2013-14}\end{array}\right) \times \text{Cost per Kg. in 2013-14}$$

$$= \left(\frac{24,00,000 \text{ Kg.}}{4,00,000 \text{ units}} \times 4,30,000 \text{ units} - 24,00,000 \text{ Kg.}\right) \times ₹\,470$$

$$= (25,80,000 \text{ Kg.} - 24,00,000 \text{ Kg.}) \times ₹\,470$$

$$= ₹8,46,00,000 \text{ (A)}$$

Direct Labour

$$= \left(\begin{array}{l}\text{Labour Hours Required to}\\ \text{Produce 4,30,000 Units}\\ \text{in 2013-14}\end{array} - \begin{array}{l}\text{Labour Hours Used to}\\ \text{Produce 4,00,000 Units}\\ \text{in 2013-14}\end{array}\right) \times \text{Rate per hr. in 2013-14}$$

$$= \left(\frac{32,00,000\text{ hrs.}}{4,00,000\text{ units}} \times 4,30,000\text{ units} - 32,00,000\text{ Kg.}\right) \times ₹30$$

$$= (34,40,000\text{ hrs.} - 32,00,000\text{ hrs.}) \times ₹30$$

= ₹72,00,000 (A)

Price-Recovery Component→

Revenue Effect of Price-Recovery Component

$$= \left(\begin{matrix}\text{Selling Price in}\\ \text{2014 - 15}\end{matrix} - \begin{matrix}\text{Selling Price in}\\ \text{2013 - 14}\end{matrix}\right) \times \begin{matrix}\text{Actual Units of Output Sold in}\\ \text{2014 - 15}\end{matrix}$$

= (₹4,325 – ₹4,175) × 4,30,000 units

= ₹6,45,00,000 (F)

Cost Effect of Price-Recovery Component (Variable Costs)

Direct Material

$$= \left(\begin{matrix}\text{Direct Material}\\ \text{Price in}\\ \text{2014 - 15}\end{matrix} - \begin{matrix}\text{Direct Material}\\ \text{Price in}\\ \text{2013 - 14}\end{matrix}\right) \times \left(\begin{matrix}\text{Direct Material Required to}\\ \text{Produce 4,30,000 Units in}\\ \text{2013 - 14}\end{matrix}\right)$$

= (₹485 – ₹470) × 25,80,000 kg.

= ₹3,87,00,000 (A)

Direct Labour

$$= \left(\begin{matrix}\text{Labour Hour Rate in}\\ \text{2014 – 15}\end{matrix} - \begin{matrix}\text{Labour Hour Rate in}\\ \text{2013 – 14}\end{matrix}\right) \times \begin{matrix}\text{Labour Hours Required to Produce}\\ \text{4,30,000 units in 2013 – 14}\end{matrix}$$

= (₹ 31 – ₹ 30) × 34,40,000 hrs.

= ₹34,40,000 (A)

Cost effect of Price-Recovery Component (Fixed Costs)

$$= \left(\begin{matrix}\text{Rate per Unit}\\ \text{in 2014 - 15}\end{matrix} - \begin{matrix}\text{Rate per Unit}\\ \text{in 2013 - 14}\end{matrix}\right) \times \begin{matrix}\text{Actual Units of Capacity in Last Year,}\\ \text{if Adequate to Produce Current Year's Output in Last Year}\end{matrix}$$

$$= \left(\frac{₹1,76,00,000}{5,00,000\text{ units}} - \frac{₹1,60,00,000}{5,00,000\text{ units}}\right) \times 5,00,000\text{ units}$$

= (₹35.2 – ₹32) × 5,00,000 units

= ₹16,00,000 (A)

Productivity Component→

Productivity Component (for Variable Costs)

Direct Material

$$= \left(\begin{array}{l}\text{Direct Materials Used}\\ \text{to Produce 4,30,000}\\ \text{units in 2014-15}\end{array} - \begin{array}{l}\text{Direct Materials Required}\\ \text{to Produce 4,30,000}\\ \text{units in 2013-14}\end{array}\right) \times \text{Cost per Kg. in 2014-15}$$

= (25,10,000kg. – 25,80,000 kg.) × ₹ 485

= ₹3,39,50,000 (F)

Direct Labour

$$= \left(\begin{array}{l}\text{Labour Hours Used}\\ \text{to Produce 4,30,000 Units}\\ \text{in 2014-15}\end{array} - \begin{array}{l}\text{Labour Hours Required}\\ \text{to Produce 4,30,000 Units}\\ \text{in 2013-14}\end{array}\right) \times \text{Rate per Hour in 2014-15}$$

= (34,80,000 hours – 34,40,000 hours) × ₹ 31

= ₹12,40,000 (A)

Reconciliation of Operating Profit from 2013-14 to 2014-15

	Amount (₹)	Amount (₹)
Operating Profit in 2013-14 (Refer to Working Note)		43,00,00,000
Add: Revenue effect of Growth Component	12,52,50,000	
Revenue effect of Price-Recovery	6,45,00,000	
Productivity Component (Direct Material)	3,39,50,000	22,37,00,000
Less: Cost effect of Growth Component (Direct Material)	8,46,00,000	
Cost effect of Growth Component (Direct Labour)	72,00,000	
Cost effect of Price-Recovery (Direct Material)	3,87,00,000	
Cost effect of Price-Recovery (Direct Labour)	34,40,000	
Cost effect of Price-Recovery (Fixed Cost)	16,00,000	
Productivity Component (Direct Labour)	12,40,000	13,67,80,000
		51,69,20,000

Working Note

Calculation of Operating Profit in 2013-14 and 2014-15

	2013-14 (₹)	2014-15 (₹)
Sales (₹ 4,175 × 4,00,000 units; ₹ 4,325 × 4,30,000)	167,00,00,000	185,97,50,000
Less: Costs		
Direct Materials (₹470 × 24,00,000 Kg.;₹485 × 25,10,000 Kg.)	112,80,00,000	121,73,50,000
Direct Labour (₹ 30 × 32,00,000 hrs.; ₹31 × 34,80,000 hrs.)	9,60,00,000	10,78,80,000
Fixed Cost	1,60,00,000	1,76,00,000
Operating Profit	43,00,00,000	51,69,20,000
Increase/ (Decrease) in Operating Profit	8,69,20,000	

SECTION - C

Balanced Scorecard- Resort

Problem-1

"Hard Rock Coconut" is an exclusive resort located in a famous Island of Pacific Ocean that vows to isolate its guests from the hustle and bustle of everyday life. Its leading principle is "all contemporary amenity wrapped in old-world charisma". Each of the resort's 18 villas has a separate theme like Castle, Majestic, Ambassador, Royal Chateau, Coconut, Lemon, Balinese etc and guests often ask for a specific villa when they make reservations. Villas are Ideal for families or friends travelling together and these villas feature luxurious accommodation spanning two floors. Since it is located within a 300-acre estate on white sand beach, the resort offers its guests a wide variety of outdoor activities such as horseback riding, hiking, diving, snorkeling, sailing, golf and so on. Guests could also while away the day relaxing in the pool and availing themselves of the resort's world-famous spa "Hard Coco Spa". The dining room, which only has three tables for the public, is acceptable proud of its 4-star rating.

Required

Develop a Balanced Scorecard for "Hard Rock Coconut". It is sufficient to give two measures in each of the four perspectives.

Solution

The following is a possible **Balanced Scorecard** for **"Hard Rock Coconut"**

Financial Perspective	Economic Value Added
	Revenue *per villa*
Customer Perspective	% repeat customers
	Number of customer complaints
Internal Business	Service rating of spa
	Staff hours *per guest*
	% cost spent for maintenance
	Travel guide rank for restaurant
Innovation and Learning	Employee retention
	Number of new services offered

Balanced Scorecard- Supermarket

Problem-2

ABC Ltd. has supermarkets located in most towns and cities. Over the last few years, profits have fallen. ABC Ltd. has recognized that customer care has been paid insufficient attention. ABC Ltd. has now realized the importance of the customer experience at its supermarkets.

ABC Ltd. has introduced a loyalty card scheme that rewards customers with discount vouchers based on their spend and buying patterns at supermarkets in an attempt to earn the loyalty of its customers.

The management of ABC Ltd. is considering the introduction of a Balanced Scorecard approach to manage the performance of its stores.

Required

Recommend an objective and a suitable performance measure for each of three non-financial perspectives of a Balanced Scorecard that ABC Ltd. could use to support its new strategy of improving the customer experience. You should state three perspectives, an objective and a performance measure for each one of the three perspectives.

Solution

Non- Financial Perspective	Objective	Performance Measure
Customer Perspective	Increase the customer loyalty. *Or* Retaining the existing customers.	Percentage of customers using loyalty cards. *Or* No. of discount vouchers redeemed.
Internal Business Perspectives	For customers to pay for goods in a reasonable time. *Or* Paying proper attention to the customers and their product enquiries. *Or* Provide necessary support to the existing loyal customers.	Time spent by customers in queuing to pay for products at a check out. *Or* Time spent by customers care executives in handling customers queries. *Or* No. of times home delivery made.

Learning & Growth Perspectives	To have qualified staffs able to meet the needs of the customer. *Or* Adding new products for new segments.	No. of staff training days. *Or* No. of schemes launched.

Balanced Scorecard- Banking Company

Problem-3

Classify the following measures under appropriate categories in a Balanced Scorecard for a banking company which excels in it s home loan products:

(i) A new product related to life insurance is being considered for a tie up with the successful housing loan disbursements.

e.g. every housing loan applicant to be advised to take a life policy or compelled to take a fire insurance policy.

(ii) How different sectors of housing loans with different interest rates have been sanctioned, their volumes of growth in the past 4 quarters.

(iii) How many days are taken to service a loan, how many loans have taken longer, what additional loans are to be released soon, etc.

Solution

(i)	New Product *tie up*	---	Innovation / Learning Perspective
(ii)	Growth of Volume	---	Financial Perspective
(iii)	Time for Loan / Fresh Products	---	Customer Perspective

Problem-4

Your Bank Ltd., was established on the 30th September, 1940 under the provisions of Co-operative Societies Act by the eminent professionals to encourage self-help, thrift, cooperation among members. Bank was issued Banking License under Banking Regulation Act, 1949 on October 25, 1986 to carry out the Banking Business within the national capital and since then the Bank has been growing continuously. At present, Bank has large number of membership of individuals from different sections. The Bank has 12 branches in the NCT of Delhi. Bank offers 'traditional counter service'. Opening hours are designed to coincide with local market days.

Board of Directors were worried from growing popularity of new style banks. These banks offer diverse range of services such as direct access to executive management, a single point of

contact to coordinate all banking needs, appointment banking to save time, free online banking services 24/7, free unlimited ATM access etc.

It has now been decided that the bank will focus on "What Customers Want" and will use a balanced scorecard to achieve this goal.

Required

Produce, for each of the three non-financial perspectives of a 'Balanced Scorecard', an objective and a performance measure that the bank could use with appropriate reason.

Solution

Internal Business Process Perspective

Objective: Cross-sell Products

Measure: Products Purchased *per customer*

Reason: Cross-selling, or encouragement customers to purchase additional products e.g. insurance, forex etc. is a *measure of customer satisfaction*. Only if a service is perceived as highly satisfactory the service would be repeated/ additional products or services would be accepted.

Learning and Growth Perspective

Objective: Increase the Number of New Products or Services Sold

Measure: Number of Customers Buying the New Products/ New Services

Reason: Long term financial success requires bank to create new products / services (e.g. internet banking, ATM access) that will meet emerging needs of current / future customers such as 24/7 banking.

Customer Perspective

Objective: Increase Customer Loyalty

Measure: Number of Accounts Closed or Closure Request Received

Reason: Customer loyalty describes the extent to which bank maintains durable relations to its customers. The share of existing customers should have a high importance as it indicates about image and reputation. Closure request is not a good sign for bank. Bank should investigate reasons for the same and take appropriate actions to improve services offered to retain customers.

Other **Objectives** and **Measures** are also possible but they must relate to the bank's **Goal**.

Balanced Scorecard- Credit Card Company

Problem-5

AEB Banking Corp. is the world's largest card issuer by purchase volume and having vision statement "to be leading provider of payment solutions in India".

Required

Suggest performance indicators to include in the Balanced Scorecard.

Solution

Balanced Scorecard 'Credit Card Company'.

Financial Indicators of Performance	Customers Indicators of Performance
Increase market share	Discourage businesses off cheques
Reduce debt	Focus on large spenders
Increase % fee	Issue more cards

Learning and Growth Indicators of Performance	Internal Processes Indicators of Performance
Outsource IT jobs	Increased marketing spend
Improve staff training levels	Achieve economies to scale
Acquire other companies	Offer more products

Balanced Scorecard- Telecom Company

Problem-6

Standard Telecom Ltd. is a leading cellular service provider having a global presence. It aims to be the most innovative and trusted telecom company in the world. To achieve this aim, it is constantly working on its overall functioning. It is trying to adopt best managements practices in the world. Following are some information related to the company's performance for a particular period:

Particulars	*Current Year*	*Base Year*	*Target*
Operating Ratio	*60%*	*54%*	*Reduce it to 50%*
Average Revenue per user	*₹225*	*₹210*	*Increase it to ₹250*

Unresolved Consumer Complaints	*27,500*	*25,000*	*Reduce it by 20%*
Customer Relationship Centres	*280*	*200*	*Take the total to 250*
Employee Coverage under Training Programme	*10%*	*8%*	*At least 15%*

Required

Evaluate the performance of the company using Balance Scorecard approach.

Solution

The balanced scorecard is a method which displays organisation's performance into four dimensions namely financial, customer, internal and innovation. The four dimensions acknowledge the interest of shareholders, customers and employees taking into account of both long-term and short-term goals. The detailed analysis of performance of the company using Balance Scorecard approach as follows:

(i) **Financial Perspective:** Operating ratio and average revenue will be covered in this prospective.

Company is unable to achieve its target of reducing operating ratio to 50% instead it has increased to 60%. Company is required to take appropriate steps to control and manage its operating expenses. Average revenue per user has increased from ₹ 210 to ₹ 225 but remains short of targeted ₹ 250. This is also one of the reasons of swelled operating ratio. Company can boost up its average revenue per user either by increasing the price of its services or by providing more paid value added services.

(ii) **Customer Perspective:** Service complaints will be covered under this perspective. The company had set a target of reducing unresolved complaints by 20% instead unresolved complaints have risen by 10%[(27,500-25,000)/(25,000) × 100]. It shows dissatisfaction is increasing among the consumers which would adversely impact the consumer's general perception about the company and company may lose its consumers in long run.

(iii) **Internal Business Perspective:** Establishing customer relationship centres will be covered under this perspective. Company has established 80 relationship centres in the current period exceeding its target of 50 (250-200) to cater to the needs of existing consumers as well as soliciting new consumers. This shows the seriousness of the company towards the consumer satisfaction and would help them in the long run.

(iv) **Learning and Growth Perspective:** Employee training programmes are covered under this perspective.

Company had set a target to cover at least 15% employee under its training programmes but covered only 10%. This could hurt capabilities of the employees which

are needed for long term growth of the organisation necessary to achieve the objectives set in the previous three perspectives. People or the human resource of the company is one of the three principle sources where organisational learning and growth comes.

Balanced Scorecard- Fitness Centre

Problem-7

Fitness Solution is a family owned fitness club, founded in 2010 by Peter and Albert with traditional style equipment. Club commenced operations in February 2011 within a shopping mall so that members after working out, can conveniently shop, dine, pick up their children from enrichment classes or go to the cinema.

Peter and Albert, the owners, pride themselves for providing a customized / tailored program by taking into account a person's medical history, present fitness level, fitness goals, fitness interests and offer many other small amenities that might be difficult to get in a larger Fitness Centre. They believe –

"Each individual is unique and requires a specialized program plan which should be customized and tailored to his/her needs."

They have a number of loyal members even though they offer the traditional style equipment.

Peter and Albert take care of most of the routine operations, along with a small permanent staff, and temporary staff.

Required

(i) Identify at least three 'Critical Success Factors' for Fitness Solution.

(ii) Construct a 'Balance Scorecard' for Fitness Solution. (2 measures for each of the 4 perspectives are sufficient)

Solution

(i) Fitness Solution's main **Critical Success Factors** are

(a) Developing and maintaining a high level of customer satisfaction.

(b) Offering facilities that are not much below that offered by competition.

(c) Keeping a tight cap on costs as there is considerable competitive pressure in this industry and entry barriers are not high.

(ii) The following is a possible **Balance Scorecard** for Fitness Solution

Financial Perspective	Operating expenses relative to budget
	Cash flow
	Total daily operating revenue

Customer Perspective	Turnover rate among members
	Customer satisfaction rate
Internal Perspective	Number of employee complaints
	Number of equipment not available on average day (due to maintenance)
Innovation and Learning	Number of new equipment put into service
	Number of staff participating in training courses

Balanced Scorecard- Miscellaneous

Problem-8

Identify Balance Scorecard Perspectives from the following potential measures observed in different business sectors (Healthcare/ Airlines/ Banking).

(i) Weekly Patient Complaints

(ii) Patient Satisfaction Survey

(iii) Flight Cancellation Rate

(iv) On-time Performance of an Airline

(v) Number of Grants Awarded to a Healthcare unit

(vi) Outstanding Loan Balances / Deposit Balances of a Banking Company

(vii) Employee Turnover Rate of a Healthcare unit

(viii) Patient Referral Rate

(ix) Non-interest Income of a Banking Company

(x) Lost of Bag Reports per 5,000 Passengers

Solution

Statement Showing "Balance Scorecard Perspectives for Different Business Sectors"

	Health Care	Airlines	Banking
Weekly Patient Complaints	Internal Operating Efficiency	---	---
Patient Satisfaction Survey	Customer Service & Satisfaction	---	---
Flight Cancellation Rate	---	Customer Service & Satisfaction	---
On-time Performance of an Airline	---	Internal Operating Efficiency	---

Number of Grants Awarded to a Healthcare unit	Learning and Growth	---	---
Outstanding Loan Balances / Deposit Balances of a Banking Company	---	---	Financial Strength
Employee Turnover Rate of a Healthcare unit	Learning and Growth	---	---
Patient Referral Rate	Customer Service & Satisfaction	---	---
Non-interest Income of a Banking Company	---	---	Financial Strength
Lost of Bag Reports per 5,000 Passengers	---	Customer Service & Satisfaction	---

Problem-9

In the context of a balanced scorecard, identify the perspectives of the following independent situations:

Sl. No.	*Organisation*	*Target Parameter*	*Perspective*
(i)	*Courier Company*	*100% on-time delivery of priority dispatches.*	
(ii)	*Tuition Centre*	*Set up class-on-internet facility for better reach of more number of students and absentees.*	
(iii)	*Computer Manufacturing Company*	*Set up service centres is all major cities for after sales support.*	
(iv)	*Government Taxation Department*	*Ensure Computer training to all officers above a certain rank to improve their capabilities.*	

Solution

Identification of Perspectives of Independent Situation - 'Balance Scorecard'

Sl. No.	**Organization**	**Perspective**
(i)	Courier Company	Customer Perspective
(ii)	Tuition Centre	Learning and Growth Perspective
(iii)	Computer Manufacturing Company	Internal Business Perspective
(iv)	Government Taxation Department	Learning and Growth Perspective

Problem-10

Classify the following under appropriate categories in Balanced Score Card:

(i) Research and development

(ii) New product introduction

(iii) Price

(iv) Cost leadership

(v) Sales penetration

(vi) Profitability

(vii) Sales

(viii) Quality

Solution

Classification of Items under Appropriate Categories in Balance Scorecard

S. No.	Items(Goals)	Categories in Balance Scorecard
(i)	Research and Development	Innovation and Learning Perspective
(ii)	New Product Introduction	Internal Business Perspective
(iii)	Price	Customer Perspective
(iv)	Cost Leadership	Innovation and Learning Perspective
(v)	Sales Penetration	Internal Business Perspective
(vi)	Profitability	Financial Perspective
(vii)	Sales	Financial Perspective
(viii)	Quality	Customer Perspective