CHAPTER V

FOOD COSTING

Learning Objectives : At the end of this unit learners would be able to :

(i) state the importance of Food Cost

(ii) list the element of Cost (Food Cost, Labour Cost, Over heads)

(iii) calculate Food Cost

(iv) calculate Labour Cost

(v) calculate Over heads

(vi) calculate kitchen Profit/Gross Profit, after wage profit and net profit.

(vii) explain each element as percentage of sales.

I. INTRODUCTION

In Hotel Industry, cost is classified into materials (food cost) cost, labour cost and over head cost. It is very important to have a close watch on these costs as a little variation can badly affect the sale/profit of a hotel. In case the actual food cost is more than estimated food cost then the profit of the restaurant/food and beverage department will reduce. If the actual food cost is less than estimated cost then the guest feels cheated as either he has been served substandard food or the portion served to him is smaller than that of standard portion size. One must know how to calculate the material cost, labour cost and over heads before seeing its relation to sales.

a) Material Cost (Food Cost)

In material cost (food cost) one has to take into account the opening stock, fresh store receipts, closing stock and the food consumed by staff or served as complementary to guests. Usually spoilage of food is also included as material cost. From the following example, it will be clear, that how material cost is calculated.

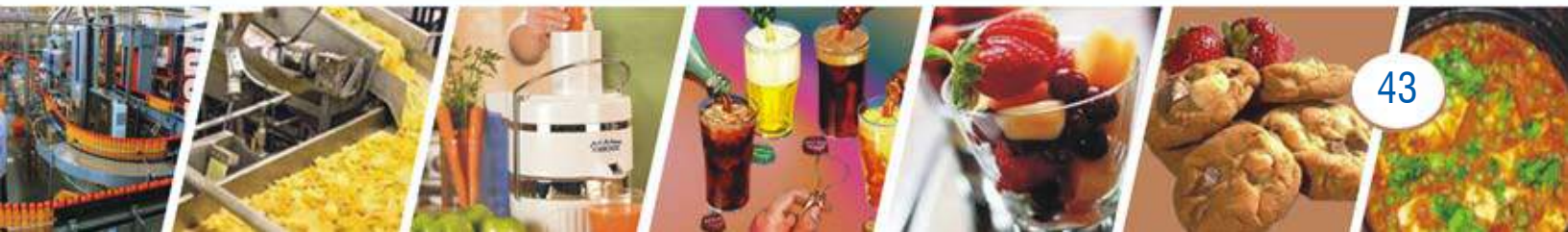


Illustration 1 : Ascertain the Total Material (Food) Cost and its percentage to Net Sales from the following information:

Total Sale	₹ 57,500
Opening Stock	₹ 1,000
Fresh Indents/Purchases	₹ 12,000
Closing Stock	₹ 500
Food Consumed by Staff	₹ 600
Food Served to Guests (as Complementary)	₹ 400

Solution : Total Material/Food Cost:

	Amount ₹
Opening Stock	1,000
Add Fresh Indents/Purchases	12,000
	13,000
Less Closing Stock	500
	12,500
Less Food Served to Staff and Guests (Free of Cost) *	1.000
Total Material/Food Cost	11,500

To ascertain the material cost percentage to Net Sales the formula is:

$$= \frac{\text{Total Material Cost X 100}}{\text{Total Sale}} = \frac{11.500 \text{ X } 100}{57,500} = 20\%$$

The Material Cost Percentage to Net Sale is 20%

Working Notes

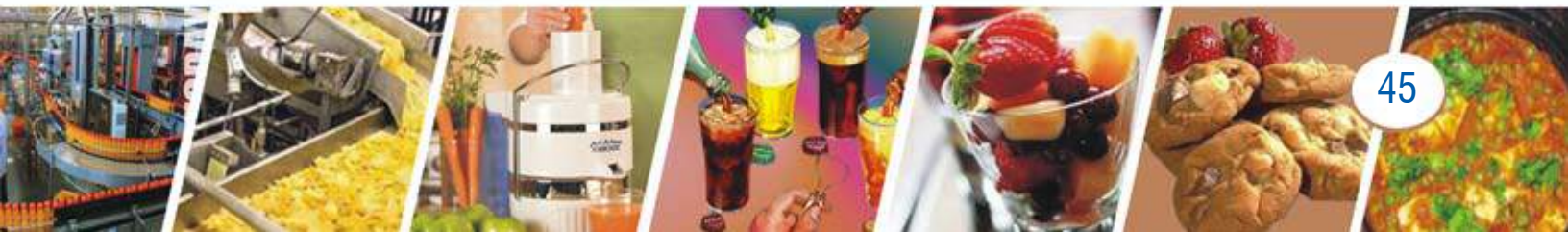
* Food Consumed by staff	₹ 600
Food served to guests (as complementary)	₹ 400
Total	₹ 1,000

b) Labour Cost

To ascertain the labour cost one must include, apart from wages and salaries, all other expenditure incurred on staff or on its welfare like Medical Reimbursement, Leave Travel Concession (LT.C.)/Contribution towards Employee's Provident Fund (E.P.F.), Free Food, Uniform, Accomodation, Interest Subsidy on Loan, Telephone, etc.

Illustration 2 : Ascertain the Total Labour Cost and its percentage to Net Sale from the following information:

	Amount (₹)
Total Sale	1,14,000
Wages and Salary	7,000
Contribution towards E.P.F.	700
Medical Re-imbursement	500
LT.C.	1,200
Uniform and Washing Allowance	500
Accommodation worth Rs. 600, charged at	200
Interest Subsidy	200
Free Telephone at Home	500
Food, Charged from Employees	200



Solution 2: *Total Labour Cost*

	Amount (₹)
Wages and Salaries	7,000
E.P.F.	700
Medical Re-imbursement	-500
L.T.C.	1,200
Uniform and Washing Allowance	500
Rent for Accommodation	600
Less Charged from Employees ₹ 200	400
Interest Subsidy	200
Free Telephone at Home	500
Food for Employees	4.00
Food Money Charged ₹ 200	200
Total Labour Cost	11,200

To ascertain the Labour Cost Percentage to Net Sale, the formula is:

$$= \frac{\text{Total Labour Cost X 100}}{\text{Total Sale}} = \frac{11.200 \text{ X } 100}{1,14,00} = 9.82\%$$

The Labour Cost Percentage to Net Sale is 9,82%

c) Over Heads

All other costs like office expenses, rent, interest, light and power, commission, water, gas and fuel, cooking coke and wood, advertisement and marketing expenses, miscellaneous expenses, etc. are included under this head.

Illustration 3 : Ascertain the Over heads and its percentage to Net Sales from the following data:

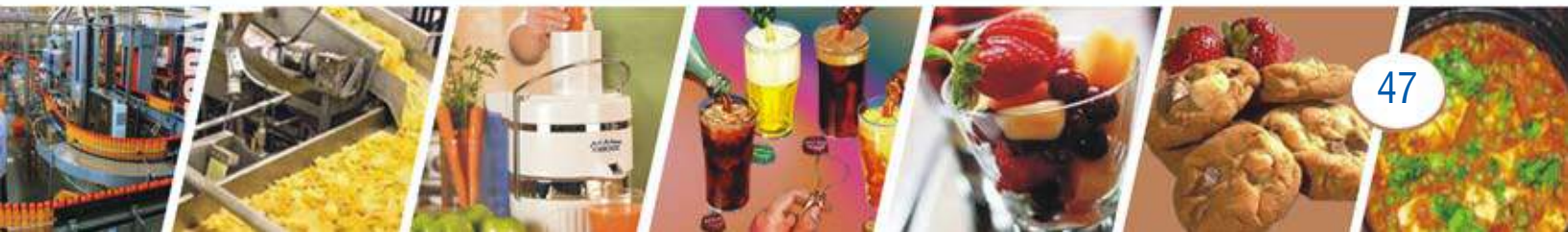
	Amount (₹)
Total Sale	27,900
Rent	4,000
Interest	1,000
Commission	500
Depreciation	1,000
Advertisement	700
Gas and Fuel	200
Electricity and Power	500
Water	100
Miscellaneous Expenses	1,000
Laundry	300

Solution:

Total Over heads

	Amount (₹)
Rent	4,000
Interest	1,000
Commission	500
Depreciation	1,000
Advertisement	700
Gas and Fuel	200
Electricity and Power	500
Water	100
Miscellaneous Expenses	1,000
Laundry	300
Total Over heads	9.300

Note: The laundry charges can be apportioned into two (i) Over heads, (ii) Labour Cost. This allocation will be done if the staff uniform is washed by hotel free of cost.



To ascertain the Over heads percentage to Net Sale the formula is:

$$= \frac{\text{Total Over heads X 100}}{\text{Total Sale}}$$

$$= \frac{9.300 \text{ X } 100}{27{,}900} \quad 33.33\%$$

The Over heads Percentage to Net Sale is 33.33%

Illustration 4

From the following information ascertain the Food Cost, Labour Cost and Over heads and also find out Percentage to Total Sale of each cost. Also find out Gross Profit/Loss and Net Profit/Loss and its percentage to Total Sale.

		Amount (₹)
Sale	Food Beverage	20,000 15,000
Opening Stock	Food Beverage	700 800
Purchases	Food Beverage	8,500 6,800
Closing Stock	Food Beverage	300 400
Restaurant Rent		14,000
Fuel Expenses		800
Office Expenses		2,000
Miscellaneous Expenses		1,200
Travelling Allowance		500
Contribution towards E.P.F.		1,500
Wages and Salary		10,000
Furniture Purchased		4,000
Depreciation.		300
Telephone		200
Repair		200

The total food debited to staff canteen from main kitchen was ₹ 1,200 but ₹ 200 was charged from staff towards meal. Hotel paid ₹ 1,000 as rent for staff

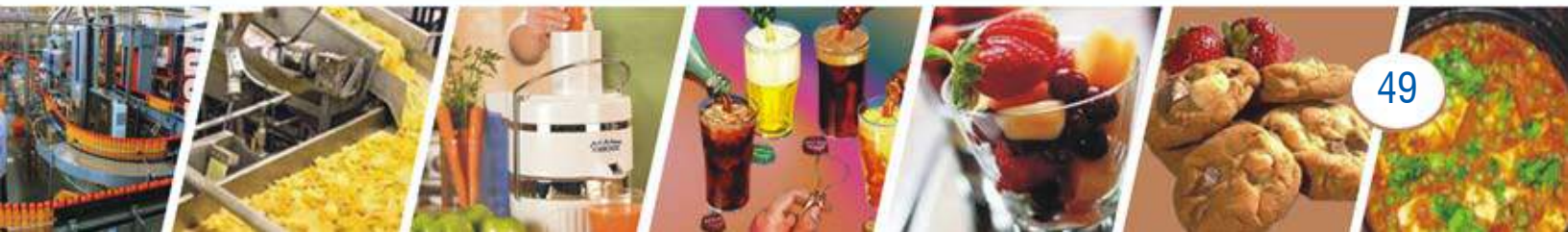
accommodation but staff was charged ₹ 300 only. The hotel served free food to some guests worth ₹ 1,100.

Solution 4: ***Total Food Cost***

		Amount (₹)
Opening Stock	Food ₹ 700 Beverage ₹ 800	1,500
Add Purchases	Food ₹ 8,500 Beverage ₹ 6.800	15.300
		16,800
Less Closing Stock	Food ₹ 300 Beverage ₹ 400	700
		16,100
Less Staff Meal * (1200 - 200)		1.000
		15,100
Less Free Food served to Guests		1,100

Total Labour Cost

	Amount (₹)
Staff Meal	1,000
Wages and Salary	10,000
Travelling Allowance	500
Contribution towards E.P.F.	1,500
Medical Re-imbursement	500
Rent **	700
Total Labour Cost	14,200



Total Over heads

	Amount (₹)
Restaurant Rent	14,000
Fuel Expenses	800
Office Expenses	2,000
Miscellaneous Expenses	1,200
Electricity and Power	400
Free Food Served to Guests	1,100
Water Charges	300
Depreciation	300
Telephone	200
Repair.	200
Total Over heads	20,500

Total Sale

		Amount(₹)
Food	₹ 20,000	
Beverage	₹ 15.000	35,000

Food and Beverage Cost Percentage

$$= \frac{\text{Total Food and Beverage Cost X 100}}{\text{Total Sale}} = \frac{14.000 \text{ X } 100}{35,000} = 40\%$$

Labour Cost Percentage:

$$= \frac{\text{Total Labour Cost X 100}}{\text{Total Sale}} = \frac{14.200 \text{ X } 100}{35,000} = 40.57\%$$

Over heads Percentage:

$$= \frac{\text{Total Over heads X 100}}{\text{Total Sale}} = \frac{20.500 \text{ X } 100}{35,000} = 58.57\%$$

Net Loss = Total Cost - Total Sale

Net Profit = Total Sale - Total Cost

Total Cost = Total Food Cost + Total Labour Cost + Total Over heads

= 14,000 + 14,200 + 20,500 = ₹ 48,700

Net Loss = 48,700 - 35,000 = ₹ 13,700

Gross Profit = Total Sale -Total Food Cost (Variable Cost)

= 35,000 - 14,000 = ₹ 21,000

$$\text{Gross Profit Percentage} = \frac{\text{Gross Profit X 100}}{\text{Total Sale}}$$

$$= \frac{21.000 \text{ X } 100}{35,000} = 60\%$$

$$\text{Net Loss Percentage} = \frac{\text{Net Loss X 100}}{\text{Total Sale}}$$

$$= \frac{13.700 \text{ X } 100}{35,000} = 39.14\%$$

Working Notes:

Total Food Send to Staff Canteen	₹ 1,200
Less Money Charged from Staff for Meals	200
Net Amount Spend on Staff Meal*	1,000
Total Rent Paid by Hotel for Staff Accommodation	1,000
Less Rent Charged from Staff for Accommodation	300
Net Amount Paid by Hotel for Staff Accommodation **	1,000

Note: The amount of ₹ 4,000 spent on purchase of furniture is a capital expenditure, hence will not be shown in revenue expenses.

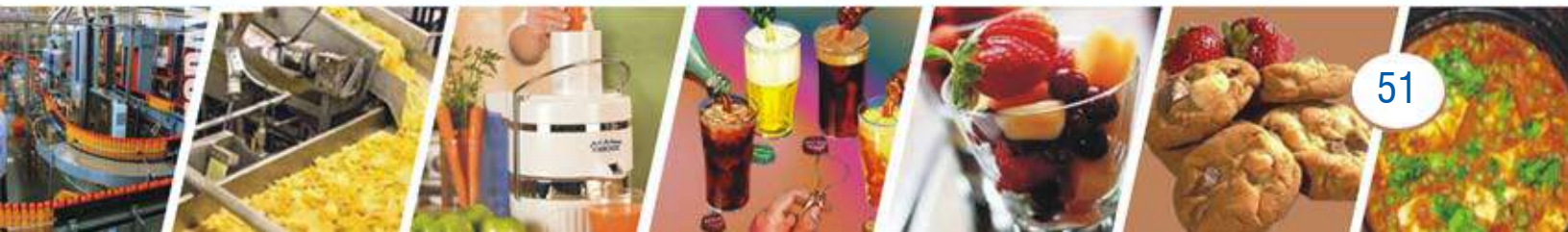


Illustration 5 : From the following data available ascertain the Food Cost, Labour Cost and Over heads and also find out Gross Profit/Gross Loss and Net Profit/Net Loss and their percentage to Total Sale.

		Amount (₹)
Sale	Food	2,00,000
	Beverage	1,60,000
	Others	24,000
Opening Stock	Food	10,000
	Beverage	2,000
Purchased	Food	60,000
	Beverage	40,000
Closing Stock	Food	8,000
	Beverage	4,000
Wages and Salary		40,000
Contribution towards E.P.F.		5,000
Medical Re-imbursement		4,000
Laundry		2,000
Telephone Bills		1,000
Rent for Restaurant		12,000
Repair and Maintenance		2,000
Electricity and Power		1,500
Water Charges		500
Gas and Fuel		2,000
Miscellaneous Expenses		800
Office Expenses		5,000
Printing and Stationery		1,000
L.T.C. Paid to Staff		1,200
Depreciation		1,000

(i) Out of ₹ 2,000 spend on Laundry; ₹ 500 was spend on Washing Staff Uniform

(ii) Staff was served free food ₹ 2,000

(iii) Staff was given accommodation for ₹ 500, where as hotel paid ₹ 2,000 for the same.

(iv) Staff was given interest subsidy of ₹ 500

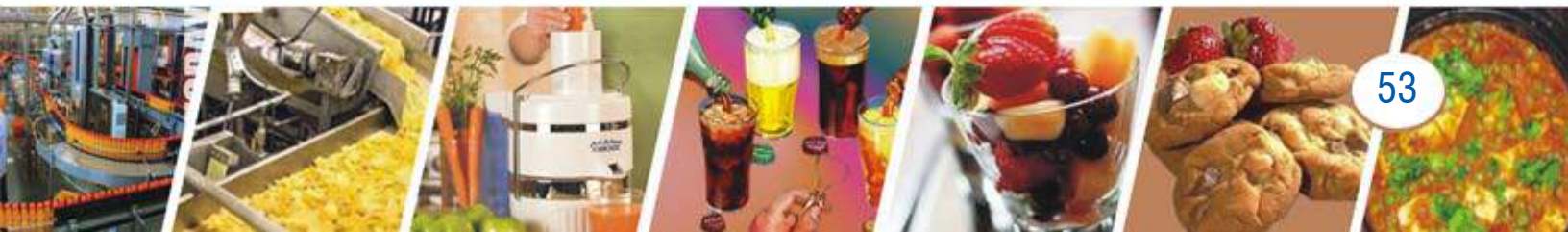
(v) Complementary food served to guests for ₹ 2,000.

Solution 5 : ***Total Food Cost***

	Amount(₹)	Amount(₹)
Opening Stock Food	10,000	
Beverage	2.000	12,000
Add Purchases Food	60,000	
Beverage	40,000	1,00,000
		1,12,000
Less Closing Stock Food	8,000	
Beverage	4,000	12,000
		1,00,000
Less Staff Meal	2,000	
		98,000
Less Free Food Served to Guests	2,000	
Total Food Cost		*96,000*

Total Labour Cost

	Amount(₹)
Wages and Salary	40,000
Contribution towards E.P.F.	5,000
Medical Re-imbursement	4,000
Laundry	500
L.T.C. paid to Staff	1,200
Staff Meal	2,000
Staff Accommodation (₹ 2,000 - ₹ 500)	1,500
Interest Subsidy	500
Total Labour Cost	54,700



Total Over heads

Laundry (₹ 2,000 - ₹ 500)	1,500
Telephone Bills	1,000
Rent for Restaurant	12,000
Repair and Maintenance	2,000
Electricity and Power	1,500
Water Charges	500
Gas and Fuel	2,000
Miscellaneous Expenses	800
Office Expenses	5,000
Printing and Stationery	1,000
Depreciation	1,000
Complementary Food Served to Guests	2.000
Total Over heads	30,000

TOTAL SALES	Amount(₹)	**Amount(₹)**
Food	2,00,000	
Beverage	1,60,000	
Others	24,000	3,84,000

$$\textit{Food Cost Percentage} = \frac{\text{Total Food Cost}}{\text{Total Sale}} \times 100$$

$$= \frac{96{,}000}{3{,}84{,}000} \times 100 = 25\%$$

$$\textit{Labour Cost Percentage} = \frac{\text{Total Labour Cost}}{\text{Total Sale}} \times 100$$

$$= \frac{54{,}700}{3{,}84{,}000} \times 100 = \textbf{\textit{14.24\%}}$$

$$\textit{Over heads Percentage} = \frac{\text{Total Over heads}}{\text{Total Sale}} \times 100$$

$$= \frac{30,300}{3,84,000} \times 100 = 7.89\%$$

Net Loss = Total Cost - Total Sale

Net Profit = Total Sale - Total Cost

Total Cost = Total Food Cost + Total Labour Cost + Total Over heads

= 96,000 + 54,700 + 30,300 = ₹ 1,81,000

Net Profit = 3,84,000 - 1,81,000 = ₹ 2,03,000

Gross Profit = Total Sale - Total Food Cost

= 3,84,000 - 96,000 = ₹ 2,88,000

$$\text{Gross } \textit{Profit Percentage} = \frac{\text{Gross Profit}}{\text{Total Sale}} \times 100$$

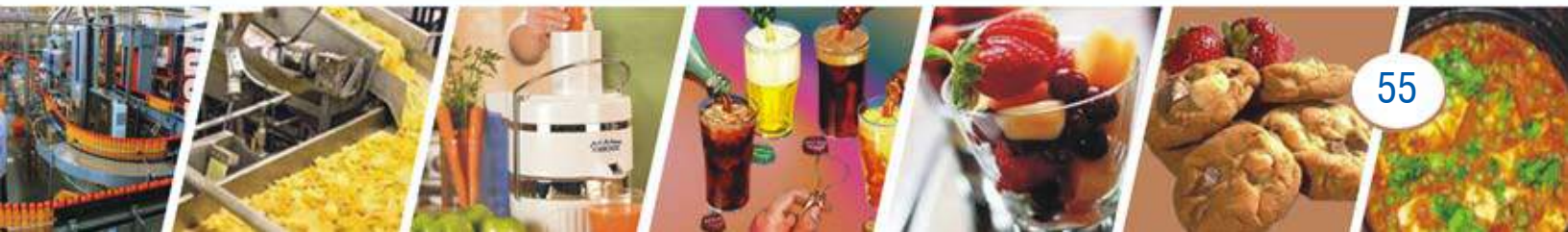
$$= \frac{2,88,000}{3,84,000} \times 100 = 75\%$$

$$\textit{Net Profit Percentage} = \frac{\text{Net Profit}}{\text{Total Sale}} \times 100$$

$$= \frac{2,03,000}{3,84,000} \times 100 = 52.87\%$$

Note:

1. For the purpose of calculating Food Cost 'Food' means Food and Beverage.
2. To find out the Food Cost Percentage and Gross Profit Percentage instead of taking Total Sale only Food and Beverage Sale can also be taken.



II. CONTROL OF FOOD COST

Food Cost is one of the major costs of the Restaurant and there is always a risk of food cost going high and low due to the negligence of the staff. In case the food cost goes high it means direct loss to the hotel/restaurant, as the cost of sale (Food Cost) will go high the gross profit (sale - food cost) will come down. On the other hand, if the food cost is low then that means either the guest is given a small portion or he is served sub standard quality of food. This will subsequently result in losing permanent customers and hence will reduce sale and therefore the profit.

To control the food cost one must remember the following points:

(i) Purchasing

The purchase department must ensure that the right quality of food, at competitive price and right quantity of raw material should be procured to control the cost.

(ii) Receiving and Storing of Raw Material

The raw material received by stores must be inspected for the quality and the quantity desired, and in case not found up to requirement, it should be returned to the supplier for replacement. All material received must be stored at a proper place. It means that in stores there should be, 'a place for every thing and every thing in place'. The store keeper must ensure that no food item should get spoilt and if it happens then he is charged for the same.

(iii) Issuing

All goods should be issued after a proper requisition. The storekeeper must follow the rule of 'FIRST IN FIRST OUT (F.I.F.O.)', which means the goods received first are issued first.

(iv) Wastage

The wastage, at all levels, i.e. Portioning, Cooking, Storing, etc. should be minimum. The wastage of food should be avoided. All trimmings of vegetables, bones, and other raw material wastes should be used intelligently to cook stock, soups, gravies, sauces, etc.

(v) Proper Storing of Cooked Food

In case the cooked food is left at the end of the day then it must be stored at a proper temperature so that it can be used on the following day, if so required.

(vi) Spoilage

The cooks must ensure that there should be as far as possible no spoilage of food in the kitchen.

(vii) Ensure No Food is Served Without Bill

In case food is allowed to be picked up without proper bill then this will increase the cost of food.

(viii) Portion Control

The Chef must ensure that dish is served as per the standard portion, as both the larger portion and smaller portion is harmful to the hotel/restaurant. A large portion will increase the food cost and a small portion will dissatisfy the guest.

(ix) Standard Recipe

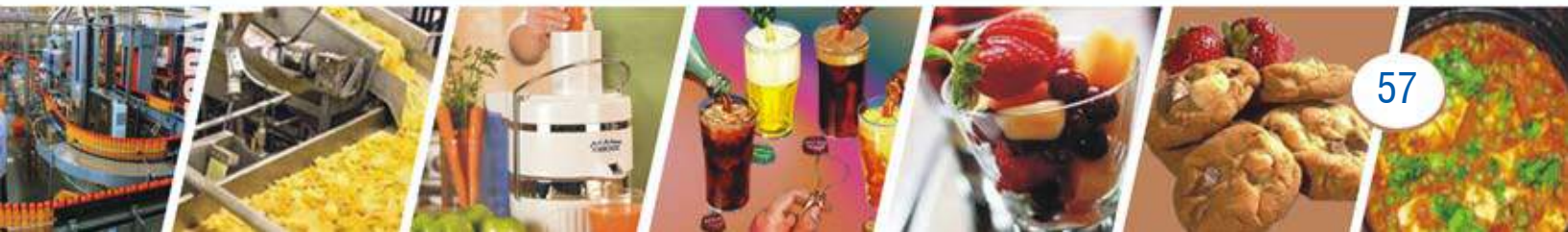
The Chef must ensure that always standard recipe should be followed, or otherwise, the guest may not always find similar standard of the dish and this will dissatisfy him.

III. CONTROL OF LABOUR COST

To control the labour cost, a hotel must ensure that its staff is retained. The new staff will always take some time to adjust and in turn will give less output. Most of the hotels lose money due to over staffing. It has been observed with experience that over staff does not improve the quality of service, on the other hand, it brings slackness in the staff and their output reduces. Over staffing also increases the labour cost. It is not recommended to pay less to staff. If hotel can get the best out of its staff, it is considered a better management of human resource.

The hotel, where ever possible, must reduce over heads and other expenses on staff like on accommodation, food, interest subsidy, L.T.C., etc. To control the labour cost is a very sensitive and a tricky issue. If staff is offered less perks than other similar type of hotels then they may leave and join the other hotel. This can have a bad affect on the quality of product as the good worker will join the other hotel leaving comparatively bad workers behind.

In case sale increases, automatically the labour cost percentage to total sale will come down and vice versa. To control labour cost, the hotel may decide whether it is economical



to bake its own products or to buy ready made material from the market. They may also think to continue with the same menu or to change it to reduce the labour charges. For example, if Chinese food is not doing well, the hotel may decide to close the Chinese Cuisine and hence will save the labour cost.

IV. CONTROL OF OVER HEADS COST

To control the over heads cost, the hotel/restaurant has to study deeply each individual cost in detail. The management and the accountant will decide how to reduce the over heads cost. Some times consultant's services are obtained to find the ways to reduce the over heads.

The most commonly over head to be controlled is interest. The debt should never be allowed to increase beyond a certain limit as the interest burden. Some times when it can not be borne by the company, it gets bankrupt. The other sensitive over heads are travelling expenses, rent, pilferage, electricity and power, advertisement, entertainment, printing and stationery, etc. The over heads should not be curtailed at the cost of the quality of goods/services, as it will directly reduce the sale.

V. PRICING

In hotel industry two system of pricing are very common. Firstly, pricing fixed on the basis of food cost and secondly, marks up pricing. If the management wants to have 30% food cost then the total food cost of a dish or menu is calculated and accordingly selling price is fixed. Suppose a dish's food cost is ₹ 30 then the selling price will be ₹ 100. The balance ₹ 70 is to cover labour charges and over heads and the balance is the profit. This pricing method is very suitable when the other cost are fully controllable, other wise the management will have to bear the loss.

Mark up pricing: This is the pricing of a dish or menu over and above its total cost price. In other words, it is

Total Cost = Desired Profit = Selling Price

In case of mark up pricing, all the expenses are apportioned to individual dish or menu to find out the total cost of the menu or dish. The apportioning of cost is very difficult and more over it differs from the level of sale to sale. That means if the production is more then per dish cost will be less and vice versa. This can be explained with an example.

Mark Up Pricing

Pricing for a Dish/Menu	High Sale 200 covers	Medium Sale 150 Covers	Low Sale 100 Covers
Direct Material Cost (Variable)	₹ 30	₹ 30	₹ 30
Semi Variable Cost	₹ 25	₹ 30	₹ 35
(Labour + Over head)	₹ 20	₹ 30	₹ 40
Fixed Cost	₹ 75	₹ 90	₹ 105
Cost of Per Dish/Menu	₹ 15	₹ 18	₹ 21
20% Profit Selling Price	₹ 90	₹ 108	₹ 126

From the above example, one can see that variable cost remains the same whether the banquet party is for 100 persons, 150 persons or 200 persons but the semi variable cost reduces with the increase in the number of covers; when 100 guests are served then per cover semi variable cost is ₹ 35 and it reduces to ₹ 30 when the covers are increased to 150 and further reduces to ₹ 25 with the increase of covers to 200. In case of fixed cost the cost per cover is reducing with the increase in covers in the same ratio. When 100 covers are served then fixed cost is ₹ 40 per cover and if covers are increased to 200 then fixed cost becomes exactly half i.e. ₹ 20 and if the covers to be served are 150, then the fixed cost per cover is ₹ 30. That is why when there is a large party the caterers agree to charge less money per cover comparatively.

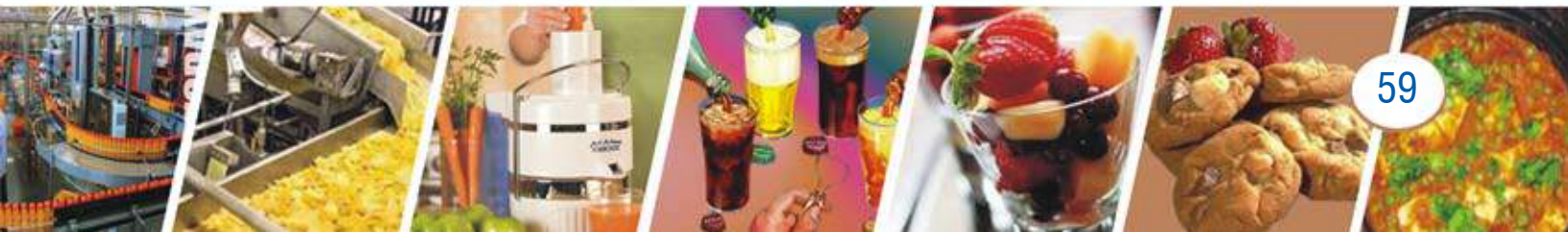
FIFO: This means "First In First Out" i.e. the supply which was received first should be out (issued) first from the store.

LIFO: This means "Last In First Out" i.e. the goods received last, if priced more than that of supplies received earlier, should be charged for goods supplied first for the purpose of calculating the cost.

Defectives, Scrap and Spoilage: It should be charged to the cost or returned to the supplier.

VI. BIN CARDS

Bin cards are used in stores for each item stored therein. This card provides the information like name of the item, supplier's name, address and phone number, maximum stock and



minimum stock which can be stored under the normal circumstances and what is the reordering point, that means at what level of stock the store keeper can apply for the fresh stock. This card also gives the information like balance, fresh supplies, total stock, issued, etc.; Just by looking at the card the store keeper can know how much stock is there in the store of that particular product.

BIN CARD

ITEM	: Black Gram Whole (Pulses)	Maximum Stock :	50 Kg.
Supplier	: ABC & Associates, Delhi	Minimum Stock :	5 Kg.
Phone Number	: 24567658	Reordering	: 10 Kg

Date	Balance	Fresh Supply	Total	Issued	Remarks	Signature

Manager Stores Chief Store keeper Store keeper

Illustration 6

The following figures were extracted from the books of Mayur Hotel. Food Cost ₹ 800, Labour and Over head ₹ 1,000 and Sales ₹ 2,000. Find out Gross Profit, Net Profit, Gross Profit percentage to Sales and Net Profit percentage to Sales.

Solution:

Gross Profit = Sales - Food Cost

= 2,000 - 800 = ₹ 1,200

Net Profit = Sales-Total Cost (Total Cost = Food Cost + Labour Cost + Over head)

= 800 + 1,000 = ₹ 1,800

= 2,000 - 1,800 = ₹ 200

$$\text{Gross } \textit{Profit Percentage to Sales} = \frac{\text{Gross Profit} \times 100}{\text{Sale}}$$

$$= \frac{1{,}200 \times 100}{2000} = 60\%$$

$$\textit{Net Profit Percentage to Sales} = \frac{\text{Net Profit} \times 100}{\text{Sale}}$$

$$= \frac{200 \times 100}{2000} = 10\%$$

Illustration 7 : Total Sale of an Institutes Canteen was ₹ 5,000 and Total Cost was ₹ 6,000. Find out the Net Loss and Net Loss Percentage to Receipts.

Solution

Net Loss = Total Cost - Total Receipts (Sale)

= 6,000 - 5,000 = ₹ 1,000

$$\textit{Net Loss Percentage to Receipts} = \frac{\text{Net Loss} \times 100}{\text{Receipts}}$$

$$= \frac{200 \times 100}{5{,}000} = 20\%$$

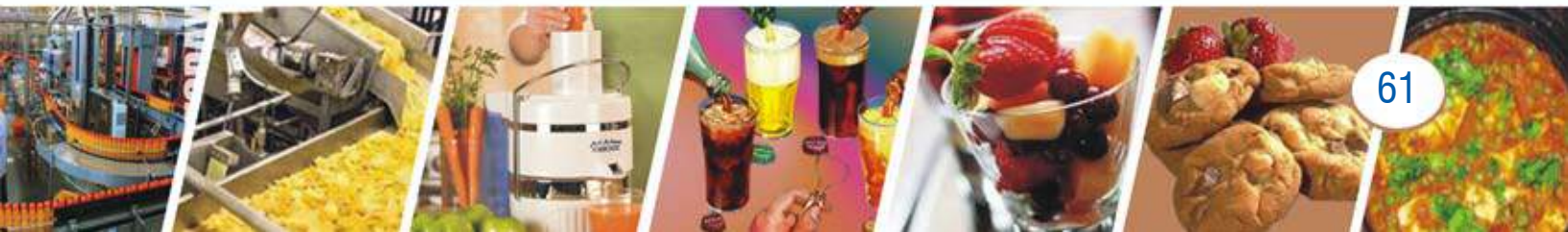


Illustration 8 : The following information was extracted from ABC Restaurant for the month of December, 2006.

Receipts	Amount (₹)
Sales	50,000
Opening Stock	1,000
Purchases	22,000
Closing Stock	1,500
Wages and Salaries	8,500
E.S.I.	500
Gas and Electricity	2,000
Office Expenses	2,000
Insurance Premium	1,000
Telephone and Internet	800
Printing and Stationery	700
Postage	500
Depreciation	5,000
Light and Fuel.	2,500

Note: The following information before calculation:

a) Food worth ₹ 1,500 was served to staff and was charged ₹ 500 only.

b) Food worth ₹ 500 was served as complementary.

c) 2,000 guests were served during the month

Find out (i) Gross Profit (ii) Net Profit (iii) Profit after Wages (iv) Sales Per Cover (v) Gross Profit Percentage to Sales Per Cover.

Solution: ***Total Food Cost:***

	Amount (₹)
Opening Stock	1,000
Add Purchases	22.000
	23,000
Less Closing Stock	1.500
	21,500
Less Staff Meal (1,500 - 500)	1.000
	20,500
Less Free Food Served to Guests	500
	20,000

$$\textit{Food Cost Per Cover/Person} = \frac{\text{Total Food Cost}}{\text{No. of Guests}}$$

$$= \frac{20.000}{2,000} = ₹\ \textit{10 Per Cover}$$

Gross *Profit* = Sale - Total Food Cost

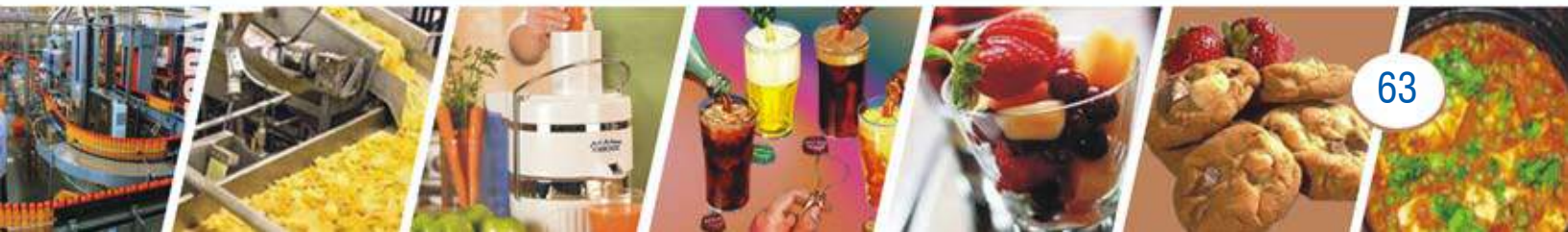
= 50,000 - 20,000 = ₹ 30,000

Total Labour Cost	Amount(₹)
Wages and Salary	8,500
E.S.I.	500
Staff Meal (1,500 - 500)	1,000
Total Labour Cost	10,000

Food and Wages Cost: = Total Food Cost + Total Labour Cost

= 20,000 + 10,000

= ₹ *30,000*



Profit after Wages: = Sale - Food and Wages Cost

= 50,000 - 30,000

= ₹ 20,000

Total Over Heads	Amount (₹)
Gas and Electricity	2,000
Office Expenses	2,000
Insurance Premium	1,000
Telephone and Internet	800
Printing and Stationery	700
Postage	500
Depreciation	5,000
Light and Fuel	2,500
Complementary Food served to Guests	500
Total Over heads	15,000

Total Cost = Total Food Cost + Total Labour Cost + Total Over heads

= 20,000 + 10,000 + 15,000

= ₹ 45,000

Net Profit = Total Sale - Total Cost

= 50,000 - 45,000

= ₹ *5,000*

$$\text{Sales per Cover} = \frac{\text{Total Sales}}{\text{Total No. of Covers}}$$

$$= \frac{50,000}{2000} = ₹\ 25$$

Gross Profit per Cover = Sales per Cover - Food Cost per Cover

= 25-10 = ₹ 15

Gross Profit Percentage to Sales per Cover = $\frac{\text{Gross Profit per Cover} \times 100}{\text{Sales per Cover}}$

= $\frac{15 \text{ X } 100}{25}$ = 60%

Illustration 9 : Calculate the following

(i) Cost Percentage; When Cost is ₹ 400 and Sale is ₹. 1,000

(ii) Cost: When Cost Percentage is 27% and Sales is ₹ 400

(iii) Sales: When Cost Percentage is 25% and Cost is ₹ 100

Solution 9 : ***(i) COST PERCENTAGE:*** If ₹ 1,000 is Sale then Cost is ₹ 400

If Re. 1 is Sale then Cost is $\frac{₹\ 400}{1000}$

and If ₹ 100 is Sale then Cost is = $\frac{400 \text{ X } 100}{100}$ = 40%

(ii) COST : If ₹ 100 is Sale then the Cost is ₹ 27

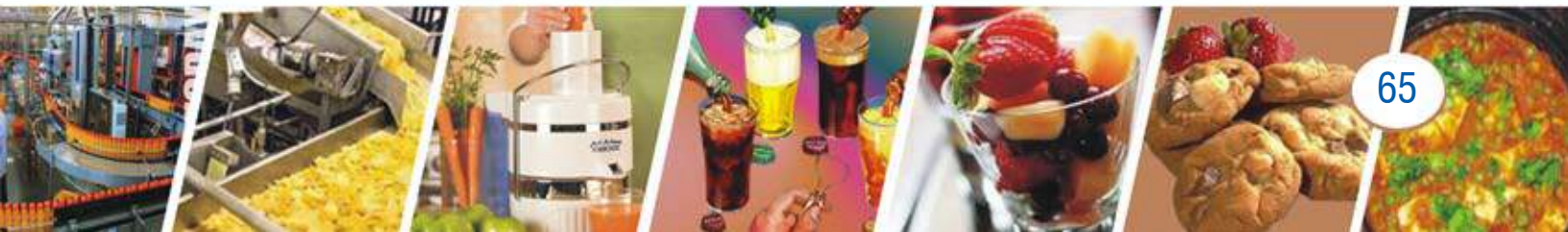
If ₹. 1 is Sale then the Cost is $\frac{₹\ 27}{100}$

and if ₹ 400 is Sale then the Cost is = $\frac{27 \times 400}{100}$ = ₹ 108

(iii) SALES: If ₹ 25 is the Cost then the Sale is ₹ 100

If Re. 1 is the Cost then the Sale is $\frac{₹\ 100}{25}$

and If ₹ 100 is the Cost then the Sale is = $\frac{100 \times 100}{25}$ = ₹ 400



REVIEW QUESTIONS

Q.1 Define Cost Control. What is the objective of cost control and explain in brief different types of costs.

Q.2 With the help of a flow chart diagram, explain the cycle of control in Food & Beverage Department.

Q.3 Explain Bin Card and draw the format of Bin Card.

Q.4 Explain the aims and objectives of Control

Q.5 Briefly explain the various stages in the cycle of control.

Q.6 Define variable, fixed, semi-variable costs in relation to catering industry. What is the impact of the above costs in unit costing?

Q.7 Describe the three major elements of costs. Distinguish controllable cost with uncontrollable cost.

Q.8 Distinguish between fixed, semi-fixed and variable overhead costs, giving an example of each.

Q.9 What are the cost control accounts? Describe their advanatages.

Q.11 The following information's are related to a 100 cover buffet restaurant. The food cost and labour cost will be ₹ 5,000 and ₹ 2,000 respectively. The management wants to recover 15% of sales towards overhead.

You are required to calculate:

a) Selling price per cover to make a net profit of 15% and

b) Gross profit per cover.

Q.12 The following information was extracted from the books of a restaurant in respect of June, 1997

RECEIPTS	Amount (₹)
Sales	40,000
Opening Stock	2,500
Closing Stock	3,200
Purchases	12,300
Wages and Salaries	5,600
Gas and Electricity	1,800

Repairs and Renewals	1,000
Rent and Rates	1,800
Insurance	400
Postage and Telephone	200
Printing and Stationery	300
Depreciation	2,000

You are required:

a) to calculate the elements of cost and to express each as a percentage of sales, assuming that ₹ 800 of the food has been used for staff meals.

b) To calculate the gross profit, after wage profit and net profit.

Q.14 Calculate as given under

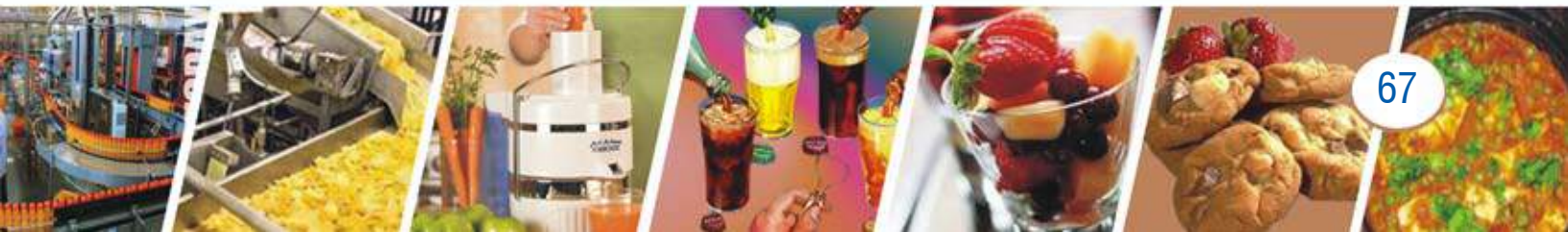
a) Food Cost: When food cost percentage is 30% and total sale is ₹ 600

b) Gross Profit Percentage: When total sale is Rs. 5,000 and total food cost is ₹ 3,000

c) Sale: When food cost percentage is 25% and total food cost is ₹ 750

Q.15 The following information was extracted from ABC Restaurant for the month of December

	Amount (₹)
Sales	50,000
Opening Stock	1,000
Purchases	22,000
Closing Stock	1,500
Wages & Salaries	8,500
E.S.I.	500
Gas & Electricity	2,000
Office expenses	2,000
Insurance Premium	1,000
Telephone & Internet	800
Printing & Stationery	700



Postage	500
Depreciation	5,000
Light & Fuel	2,500

Note the following information before calculating:

a) Food worth ₹ 1,000 was served free of cost to staff.

b) Food worth ₹ 500 was served as complimentary.

c) 2000 guests were served during the month.

Find Out:

(i) Gross profit and percentage gross profit,

(ii) Net profit and percentage net profit

(iii) Profit after wages,

(iv) Net profit per cover.

Q.16 The following information were obtained from the books of accounts of a restaurant for the month of March

RECEIPTS	Amount (₹)
Sales	1,50,000
Opening Stock	2,800
Purchases	28,000
Salaries & Wages	7,000
Depreciation	5,000
E.S.I.	2,000
Repairs & Maintenance	600
Printing & Stationery	3,000
Accommodation to Staff	1,000
Rent	10,000
Gas & Fuel	1,000
Closing Stock	4,000
Insurance	2,500
Postage & Telephone	1,000

You are required to calculate:

a) Elements of costs and express each as a percentage of sales assuming that ₹ 800 of the food has been used for staff meals and ₹ 1,200 of the food as complimentary meals.

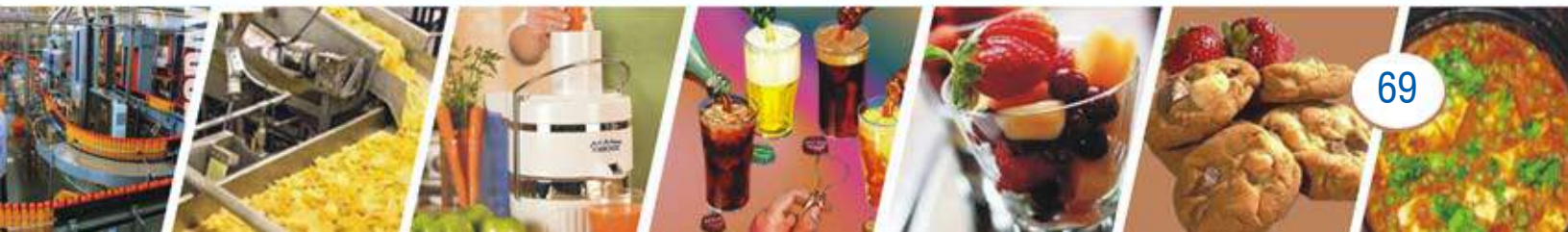
b) Calculate Gross profit, After Wage profit and Net profit.

c) Calculate average spending power per customer assuming that 7500 customers were served in the month of March.

Q.17 A contractor has an order for supply of breakfast to the passengers of a train running daily. The weekly fixed cost will be ₹ 2,000. The variable labour cost will be ₹ 2/-, variable raw material cost will be ₹ 3/- and selling price will be ₹ 10 (all per unit). What sales must the contractor make to earn a profit of ₹ 10,000 per week?

Q.18 The following information was obtained from the books of accounts of a restaurant for the month of January.

RECEIPTS	Amount (₹)
Sales	1,00,000
Opening raw materials	10,000
Closing raw materials	20,000
Purchase of raw materials	50,000
Labour cost	15,000
Depreciation	8,000
Rent	2,000
Municipal tax	1,000
Administrative cost	4,000
Selling & Distribution cost	5,000
Upkeep and Service cost	2,500
Repairs and Maintenance cost	2,500



Calculate the following and express each as a percentage of sales:

(i) Kitchen Profit
(ii) Net Profit
(iii) After Wage Profit
(iv) Elements of Cost

Q.19 A mixed spice is made up of five ingredients. Find the cost of 40 gms. Of the mixture if the following amounts are used:

SI. No.	Ingredients	Quantity	Price
1.	Pepper	0.270kg.	150 per kg.
2.	Chilly	0.05 kg.	90 per kg.
3.	Coriander	0.10 kg.	40 per kg.
4.	Cumin	0.03 kg.	120 per kg.
5.	Clove	0.25 kg.	220 per kg.

Q.20 Calculate as given under:

(i) Cost percentage when cost is ₹ 500 and Sale is ₹ 2,000.
(ii) Cost, when cost percentage is 30% and sale is ₹ 1,500
(iii) Sale, when cost percentage is 25% and cost is ₹ 750

(Answer: (i) 40% (ii) ₹ 450 (iii) ₹ 3,000)

Q.21 Calculate as given under:

(i) Food Cost, when Food Cost Percentage is 30% and Total Sale is ₹ 900
(ii) Gross Profit Percentage, when Total Sale is ₹ 5,000 and Food Cost is ₹3,000
(iii) Net Profit Percentage, when Total Sale is ₹ 6,000 and Total Cost is ₹4,000

(Answer: (i) ₹ 270 (ii) 40% (iii) 33.33%)

Q.22 The following figures were extracted from ABC Hotel. Food Cost ₹ 5,000; Labour and Overhead ₹ 2,500; Sales ₹ 15,000. Find as a percentage of.Sales: (a) Gross Profit (b) Net Profit
(Answer: (a) 66.67% (b) 50%)

Q.23 The total cost of the restaurant is ₹ 15,00,000. The fixed cost is as under: Salaries and Wages ₹ 75,000; Office Expenses ₹ 25,000; Insurance ₹ 10,000; Interest ₹ 5,000; Depreciation ₹ 70,000; Rent ₹ 25,000. Variable Cost will be 30% of Sale. Average Selling Price will be ₹ 30 and the total sale will be ₹ 9,00,000. Calculate: Net Profit at desired sale
(Answer: ₹ 4,20,000)

Q.24 The following information are related to a 150 cover buffet. The food cost and labour cost will be 8,000 and 3,000 respectively. The management wants to recover 20% of sales towards overheads. You are required to calculate

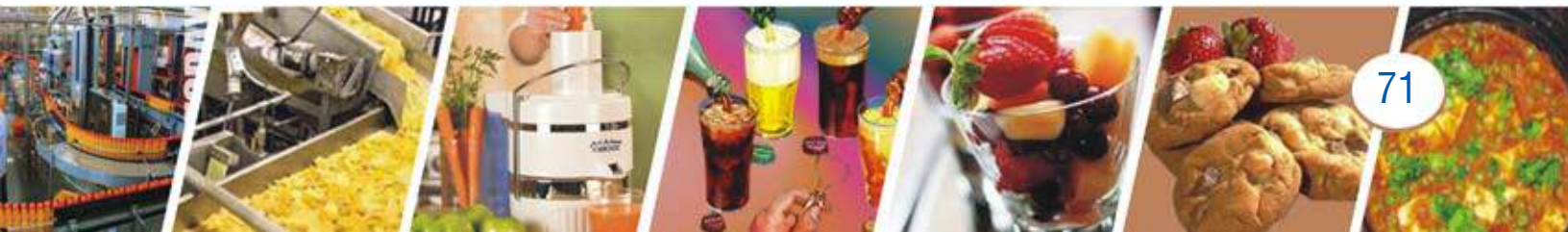
a) Selling price to make a net profit of 25%
b) Net profit per cover.
c) Gross Profit per cover.
d) Average selling price.

Q.25 The following information was extracted from the books of a restaurant in respect of June.

Receipts	Amount(₹)
Sales	30,000
Opening Stock	2,500
Closing Stock	3,200
Purchases	13,000
Wages and Salaries	5,600
E.S.I.	300
Gas and Electricity	800
Repair and Renewals	1,000
Rent and Rates	1,800
Insurance	400
Postage and Telephone	200
Printing and Stationery	300
Depreciation	2,000

You are required:

a) To calculate the elements of cost and to express each as a percentage of sales, assuming that ₹ 800 of the food has been used for staff meals and ₹ 500 of the food as complementary.



b) To calculate the gross profit, after wage profit and net profit.

c) To calculate the average spending power per customer, assuming that 6,000 customers were served in June.

Q.26 Draw costing sheet and find the cost per portion of the following:

a) Shortbread biscuits (12 portions)

Flour	150 gms
Caster sugar	50 gms
Margarine	100 gms.

b) Queen of puddings (4 portions)

Milk	100 gms
Caster sugar	25 gms
Jam	Jam
Eggs	Eggs
Butter	25 gms

The rate of ingredients are given below

S. No.	Name	Quantity	Rate (₹)
1.	Egg	1 no.	1.50
2.	Caster sugar	1 kg.	30
3.	Butter	1kg.	110
4.	Flour	1kg.	20
5.	Jam	500 gms	40
6.	Margarine	1 kg.	100
7.	Milk	1 ltr.	15

Q.27 The following information is related to a 200 cover restaurant. The fixed cost of the restaurant is:

	Amount (₹)
Rent	800
Interest	500
Salary	800
Depreciation	900

You are required to calculate the following assuming the food cost is ₹ 800

(i) Selling price to make a net profit of 25%.
(ii) Net profit per cover
(iii) Gross profit per cover
(iv) Average selling price.

Q.28 Calculate as given under

(i) Cost percentage, when Cost is ₹ 300 and Sale is ₹ 1,000.
(ii) Cost, when Cost percentage is 40% and Sales is ₹ 800
(iii) Sales, when Cost percentage is 30% and Cost is 120

Q.29 The following information was extracted from the books of a restaurant in respect of December: Sales ₹ 60,000; Opening Stock ₹ 5,000; Closing Stock ₹ 6,400; Purchases ₹ 26,000; Wages and Salaries ₹ 11,200; Medical ₹ 600; Power and Fuel ₹ 1,600; Repairs and Renewals ₹ 2,000; Rent and Rates ₹ 3,600; Insurance ₹ 800; Postage and Telephone ₹ 400; Printing and Stationery ₹ 600; Depreciation ₹ 4,000. You are required:

a) To calculate the elements of cost and to express each as a percentage of sales assuming that ₹ 1,600 of the food as complementary.
b) To calculate the Gross Profit, After Wage Profit and Net Profit and their percentage.
c) To calculate the Average spending power for customer, assuming 6,000 customers were served in December.

Q.30 Calculate as given under:

(i) Cost Percentage, when cost is ₹ 200 and Sales is ₹ 500
(ii) Cost, when cost percentage is 28% and sales is ₹ 500
(iii) Sales, when cost percentage is 30% and cost is ₹ 90