Unit Costing *(Cost Sheet)*

Q.1 The books of A Ltd. present the following data for the month of June, 2015 :

1. **Balance**

	June 1	*June 30*
Raw Material	8,000	8,600
Work-in-progress	8,000	12,000
Finished Goods	14,000	18,000

2. Raw material purchased ₹ 36,000
3. Direct Labour cost ₹ 16,000 (160% of factory overheads)
4. Selling Expenses ₹ 3,400
5. Administration Expenses ₹ 2,600 (including ₹ 600 as abnormal cost)
6. Sales ₹ 75,000

Required : Cost Sheet for the month of June, 2015:

Q.2. A Ltd. Co. has a capacity to produce 1,00,000 units of the product every month. Its works cost at varying levels of productions is as under :

Levels	Works Cost per unit (₹)
10%	400
20%	390
30%	380
40%	370
50%	360
60%	350
70%	340
80%	330
90%	320
100%	310

Its fixed administration expenses amount to ₹ 1,50,000 p.m. and fixed marketing expenses amount to ₹ 2,50,000 p.m. respectively. The variable selling costs amounts to ₹ 30 per unit.

It can market 100% of its output at ₹ 500 per unit provided it incurs the following further expenditure :

(a) it gives gift items costing ₹ 30 per unit of sale;
(b) it has lucky draw every month giving the first prize of ₹ 50,000; 2nd prize of ₹ 25,000; 3rd prize of ₹ 10,000 and three consolation prizes of ₹ 5,000 each to customers buying the product.
(c) It spends ₹ 1,00,000 on refreshment served every month to its customers.
(d) It sponsors a television programme every week at the cost of ₹ 20,00,000 per month.

It can market 30% of its full capacity output at ₹ 550 per unit without incurring any of the expenses referred to in (a) to (d) above. Prepare cost sheets to compute the amount of profit at 30% and 100% capacity.

Q.3 The following figures are extracted from the Trial Balance of ABC Co. on 30th Sept., 2015:

	₹	₹
Inventories :		
→ Finished Stock	80,000	
→ Raw Material	1,40,000	
→ Work in Process	2,00,000	
Office Appliances	17,400	
Plant and Machinery	4,60,500	
Buildings	2,00,000	
Sales		7,68,000
Sales return	14,000	
Material Purchased	3,20,000	
Freight incurred on material	16,000	
Purchase Return		4,800
Direct labor	1,60,000	
Indirect labor	18,000	
Factory supervision	10,000	
Repairs of factory	14,000	
Heat, light and power	65,000	
Municipal Taxes of building	6,300	
Miscellaneous factory Expenses	18,700	
Sales Commission	33,600	
Sales Travelling expenses	11,000	
Sales Promotion	22,500	
Expenses of Distribution Dept.	18,000	
Office Salaries and Expenses	8,600	
Interest on borrowed funds	2,000	

Further details are available as follows :

(a) Closing Inventories :

Finished Goods	1,15,000
Raw Materials	1,80,000
Work-in-progress	1,92,000

(b) Accrued Expenses :

Direct labour	8,000
Indirect labour	1,200
Interest on borrowed funds	2,000

(c) Depreciation to be provided on :

Office Appliances	5%
Plant and Machinery	10%
Buildings	4%

(d) Distribution of the following costs :

Heat, light and power to the factory, office and distribution in the ratio 8:1:1. Municipal taxes of building two-thirds to factory and one-third to office. Depreciation on buildings to factory, office and selling in the ratio 8:1:1.

With the help of the above information, you are required to prepare a Profit and Loss Statement for the company for the year ended 30th September, 2015 alongwith supporting schedules of:

1. Cost of Sales
2. Selling and Distribution Expenses
3. Office and Administration Expense

Q.4 From the following particulars prepare the Production Account showing all details of cost and their break up.

	01:04:2015	*30:04:2015*
	₹	₹
Stock of Raw Material	75,000	91,500
Stock of Work-in-progress	28,000	35,000
Stock of finished goods	54,000	31,000

	₹		₹
Direct Expenses	1,500	Sales	2,11,000
Raw material purchased	66,000	Salesmen Salaries	6,500
Direct Wages	52,500	Office Rent, Rates, etc.	2,500
Indirect Wages	2,750	Sundry Office Expenses	6,500
Dep. On Plant and Machinery	3,500	Carriage Outwards	2,500

Q.5. Tronics Ltd. furnishes the following information for 10,000 TV valves manufactured during the last year :

	₹
Material	4,50,000
Direct Wages	3,00,000
Power and Consumable stores	60,000
Lighting of factory	1,17,500
Administration Expenses	1,68,000
Selling Expenses	27,000
Sale proceeds of factory scrap	10,000
Plant, repairs, maintenance and depreciation	57,500

The net selling price was ₹ 158 per unit and all units were sold.

From 1st January, of the current year, the selling price was reduced to ₹ 150 per unit. Rates for materials and direct wages will be increased by 10%.

Required:

1. Prepare a cost sheet for last year showing various elements of cost per unit.
2. Compute estimated cost and profit for the current year assuming that 15,000 units will be produced and sold during the year and factory overheads will be recovered as a percentage of direct wages and office and selling expenses as percentage of works cost.

Q.6. The following is the summarised Trading and Profit and Loss A/c of K. Waterproof Manufactures Ltd. for the year ending 31st March, 2015 in which year 800 units were sold by the said company :

Trading and Profit and Loss Account

	₹		₹
To Cost of Materials	32,000	By Sales	1,60,000
To Direct Wages	48,000		
To Manufacturing overheads	20,000		
To Gross Profit c/d	60,000		
	1,60,000		1,60,000
To Office Salaries	24,000	By Gross Profit b/d	60,000
To Rent and Taxes	4,000		
To Selling Expenses	8,000		
To General Expenses	12,000		
To General Reserve	2,000		
To Net Profit	10,000		
	60,000		60,000

Following estimates were made by the costing department of the company for the year ending 31st March, 2016:

(a) The output and the sales will be of 1,000 units.
(b) The price of materials will rise by 25% on the previous year's level.
(c) Wage rate during the year will rise by 12½ %.
(d) Manufacturing overheads will rise in proportion to the increase in prime cost
(e) Selling expenses per unit will remain unchanged.
(f) Other expenses will remain unaffected by the rise in output.

From the above information prepare a estimated cost statement showing the selling price at which the product should be marketed so as to show a profit of 10% on the selling price.

Q.7. The following particulars related to the year have been taken from the books of a chemical works, manufacturing and selling chemical mixture:

	Kgs.	₹
Stock on 1st April, year beginning		
Raw materials	2,000	2,000
Finished Mixture	500	1,750
Factory Stores		7,250
Purchases :		
Raw Materials	1,60,000	1,80,000
Factory Stores		24,250
Sales :		
Finished Mixture	1,53,050	9,18,300
Factory Scrap		8,170
Direct Wages		1,78,650
Power		30,400
Depreciation of Machinery		18,000
Salaries :		
Factory		72,220
Office		37,220
Selling		41,500
Expenses :		
Direct		18,500
Office		18,200
Selling		18,000
Stock on 31st March, year end	*Kgs.*	₹
Raw Materials	1,200	
Finished Mixture	450	
Factory Stores		5,500

The stock of the finished mixture at the end of the year is to be valued at the factory cost of the mixture for that year. Prepare Cost Sheet showing the quantity and the amount.

Q.8. A company can produce 60,000 units per annum at its optimum (100%) capacity. The estimated costs of production are as follows :

Direct Material	₹ 3 per unit
Direct labour	₹ 2 per unit
Indirect expenses :	
Fixed	₹ 1,50,000 per annum
Variable	₹ 5 per unit
Semi variable	₹ 50,000 p.a. upto 50% capacity and an extra expense of ₹ 10,000 for every 25% increase in capacity or part thereof.

The factory produced only against orders and not for own stock. If the production programme of the factory is as indicated below and the management desires to ensure a profit of ₹ 1,00,000 for the year, work out the average selling price at which each unit should be quoted.

First 3 months of the year → 50% of capacity.
Remaining 9 months → 80% of capacity.

Q.9. A manufacturing company has an installed capacity of 1,20,000 units per annum. The cost structure of the product is mentioned below:

(i) *Variable cost per unit*

Materials	₹ 8
Labour	₹ 8
(Subject to minimum of ₹ 56,010 per month)	
Overheads	₹ 3

(ii) Fixed Overheads ₹ 1,68,750 per annum

(iii) Semi-variable overheads ₹ 48,000 per annum at 60% capacity which increases by ₹ 6,000 per annum for increase of every 10% of the capacity utilisation or part thereof, for the year as a whole.

The capacity utilisation for the next year is estimated at 60% for two months, 75% for six months and 80% for remaining part of the year. If the company is planning to have a profit of 25% on the selling price, calculate the selling price per unit.

Q.10. The cost structure of an article the selling price of which is ₹ 45,000 is as follows :

Direct Materials	50%
Direct Labour	20%
Overheads	30%

An increase of 15% in the cost of materials and of 25% in the cost of labour is anticipated. These increased costs in relation to the present selling price would cause a 25% decrease in the amount of present profit per article.

You are required to calculate :

i) Present cost and profit per article; and
ii) The revised selling price to produce the same percentage of profit to sales as before .

Q.11. M/s A B Co. manufactures two types of products A and B. Production costs for the year ended 31st March, 2015 were :

	₹
Direct material	15,00,000
Direct wages	8,40,000
Production overhead	3,60,000

There was no work-in-progress at the beginning or at the end of year. It is ascertained that (a) Direct material cost per unit in type A consists twice as much as that in type B (b) The direct wage cost per unit for type B were 60% of those of type A. (c) Production overhead was same per unit of A and B type. (d) Administration overhead for each type was 150% of direct wages. (e) Selling cost was ₹1.50 per unit. (f) Production during the year were: Type A 40,000 units of which 36,000 were sold; Type B 1,20,000 units of which 1,00,000 were sold. (g) Selling price was ₹ 44 for type A and ₹ 28 for type B per unit. Prepare a statement showing cost and profit.

Q.12. On June 30, 2015, a flood damaged the warehouse of a company completely destroying the work-in-progress inventory. There was no damage to raw material and finished goods inventory. A physical verification taken after the flood reveals the following :

(i) Raw material inventory = ₹ 62,000
(ii) Finished goods inventory = ₹ 1,19,000

The inventory on January 1, 2015 consisted the following :

1. Raw Material ₹ 30,000 2. Work-in-progress inventory ₹ 1,00,000
3. Finished goods inventory ₹ 1,40,000

Additional Information :

1) Gross Profit is 25% of sales.
2) Sales from January to June, 2015= ₹ 3,40,000
3) Raw Material purchased from January to June, 2015 = ₹ 1,15,000.
4) Direct Labour cost from January to June, 2015 = ₹ 80,000.
5) Manufacturing overheads = 50% of Labour cost.

Compute the stock of Work-in-progress as on June 30, 2015.

Q.13. Prepare an estimated cost sheet based on the following data and consider the price that you would quote for an order which requires the following :

Raw Material --10,000 kgs. @ 6.95 per kg.
Direct Labour – 15,000 hours at ₹ 2.00 per hour.
25% overtime at double rate.
Factory Overheads – recovered at 80% of direct wages.
Selling Overheads – recovered at 60% of direct wages.
Fixed Asset Investment – ₹50,000.
Return on Capital employed expected – 25%.
Investment in working capital – 20% of the Sales Value.

Q.14. While preparing the cost sheet, how will you deal with the following situations : -

Situation 1

Opening stock of Raw Material = ₹ 5,000
Purchases of Raw Material = ₹ 50,000
Normal Loss = ₹ 2,000
Abnormal Loss = ₹ 3,000
Closing Stock = ₹ 10,000.

Situation 2

Suppose in situation 1, normally lost units realize ₹ 200 and abnormally lost units realize ₹ 300.

Situation 3

Actual bad debts are ₹ 8,000 on annual sales of ₹ 5,00,000. Under the normal circumstances, 1% of sales is not recoverable.

Situation 4

Sales are ₹ 10,00,000 before any discount. As per business policy, 20% trade discount is allowed to all the customers but 30% discount is allowed to one customer (relative of businessman) on sales level of ₹ 10,000 before discount.

Situation 5

Suppose in situation 4, some of the customers pay their amount very early and as such we allowed them cash discount of ₹ 8,000.

Q.15. A fire occurred in the factory premises on October 31, 2015. The accounting records have been destroyed. Certain accounting records were kept in another building. They reveal the following for the period September 1, 2015 to October 31, 2015 :

(i)	Direct materials purchased	₹ 2,50,000
(ii)	Work in process inventory, 1.9.2015	₹ 40,000
(iii)	Direct materials inventory, 1.9.2015	₹ 20,000
(iv)	Finished goods inventory, 1.9.2015	₹ 37,750
(v)	Factory Overheads	40% of conversion cost

(vi)	Sales revenues	₹	7,50,000
(vii)	Direct manufacturing labour	₹	2,22,250
(viii)	Prime cost	₹	3,97,750
(ix)	Gross margin percentage based on revenues		30%
(x)	Cost of Production of Goods available for sale	₹	5,55,775

Required :

(i) Finished goods inventory, 31.10.2015
(ii) Direct materials inventory, 31.10.2015.
(iii) Factory overheads
(iv) Work-in-process inventory, 31.10.2015

Q.16. In a factory, the factory overheads are calculated on fixed percentage basis on wages and office overhead expenses are calculated on the basis of percentage of works cost.

Following information is supplied to you :

	I Order	*II Order*
Materials	12,500	18,000
Wages	10,000	14,000
Selling price	44,850	61,880
Percentage of profit on cost	15%	12%

Find out percentage for factory overhead and office overhead.

Q.17 Popeye Company is a metal and wood cutting manufacturer, selling products to the home construction market. Consider the following data for the month of October, 2015:

	₹
Sandpaper	5,000
Material-handling costs	1,75,000
Lubricants and Coolants	12,500
Variable indirect manufacturing labour	1,00,000
Direct manufacturing labour	7,50,000
Direct materials, October 1, 2015	1,00,000
Direct materials, October 31, 2015	1,25,000
Finished goods, October 1, 2015	2,50,000
Finished goods, October 31, 2015	3,75,000
Work-in-process, October 1, 2015	25,000
Work-in-process, October 31, 2015	35,000
Plant-leasing costs	1,35,000
Depreciation on factory equipments	90,000
Property tax on factory building	10,000
Fire insurance on plant equipment	7,500
Direct materials purchased	11,50,000
Sales revenues	34,00,000
Marketing promotions	1,50,000
Marketing salaries	2,50,000
Distribution costs	1,75,000
Customer-service costs	2,50,000

Required :

(i) Prepare an income statement with a separate supporting schedule of cost of goods produced.
(ii) For all manufacturing items, indicate by V or F whether each is basically a variable cost or a fixed cost.

Q.18. In a manufacturing company, a product passes through 5 operations. The output of the 5th operation becomes the finished product. The input, rejection and labour cost of each operations for a period is a under :-

Operation	*Input (Units)*	*Rejection (Units)*	*Output (Units)*	*Labour (₹)*
1	21,600	5,400	16,200	1,94,400
2	20,250	1,350	18,900	1,41,750
3	18,900	1,350	17,550	2,45,700
4	23,400	1,800	21,600	1,40,400
5	17,280	2,880	14,400	86,400

Required

(1) Determine the input required in each operation for one unit of final output.

(2) Calculate labour cost at each operation for one unit of final output and the total labour cost of all the operations for one unit of final output.

Q.19. Prepare a Cost Sheet from the following information:

(i) Direct Materials $\frac{1}{3}$ of cost of sales.

(ii) Direct Labour $\frac{1}{4}$ of cost of sales.

(iii) Direct Expenses $\frac{1}{12}$ of cost of sales.

(iv) Works overheads 20% of Prime Cost.

(v) Office Overheads, Selling Expenses and Distribution Expenses are in the ratio of $\frac{3}{9}:\frac{4}{9}:\frac{2}{9}$ respectively.

(vi) Profit is $\frac{1}{10}$ of sales.

(vii) Sales less direct cost is ₹ 8,00,000.

Q.20. XYZ Auto Ltd. is in the business of selling cars. It also sells insurance and finance as part of its overall business strategy. The following information is available for the company:

	Physical Units	*Sales Value*
Sales of Cars	10,000 Cars	₹ 30,000 lacs
Sales of Insurance	6,000 Policies	₹ 1,500 lacs
Sales of Finance	8,000 Loans	₹ 19,200 lacs

The Revenue earnings from each line of business before expenses are as follows:

Sales of Cars	3% of Sales value
Sale of Insurance	20% of Sales value
Sale of Finance	2% of Sales value

The expenses of the company are as follows:

Salesman salaries	₹ 200 lacs
Rent	₹ 100 lacs
Electricity	₹ 100 lacs
Advertising	₹ 200 lacs
Documentation cost per insurance policy	₹ 100
Documentation cost for each loan	₹ 200
Expenses per car sold	₹ 5,000

Indirect costs have to be allocated in the ratio of physical units sold.

Required:

(i) Make a cost sheet for each product allocating the direct and indirect costs and also showing the product-wise profit and total profit.

(ii) Calculate the percentage of profit to revenue earned from each line of business.

IMPORTANT THEORETICAL QUESTIONS

Q.1. Define Unit Costing. In what type of industry it is applied ?

Ans. Unit costing is the costing technique adopted by those undertaking which produces only one product or a few grades of the same product on large scale.

This costing technique is used in the following industries :

1. Brick making
2. Shoe manufacturing industry
3. Cement Industry
4. TV and Radio manufacturing, etc.

Q.2. What are the advantages of preparation of cost sheet ?

Ans.

1. It reveals total cost and cost per unit.
2. It discloses the total break up of total costs.
3. It helps in fixing up selling price more accurately.
4. It facilitates cost comparison.
5. It helps in the preparation of cost estimates for the submission of tenders.

Q.3. What are the characteristics of industries which uses unit costing ?

Ans.

1. Identical or homogeneous goods are manufactured.
2. Production is on large scale.
3. The goods are capable of being expressed in convenient unit of measurement.

Q.4. "Price Quotations requires preparation of estimated cost sheet". Comment.

Ans. It is often seen that the management has to quote prices in advance in relation to goods to be supplied in future. For this purpose, an estimated cost sheet is prepared to show the estimated cost of products to be manufactured. While preparing the estimated cost sheet, the cost of direct materials, direct wages and overheads are estimated on the basis of past cost structure after taking into account the present conditions and also the anticipated changes in future price level.

REVISIONARY PROBLEMS

Q.1. Following are the details of a company relating to month of March 2013:

		As on March 1	As on March 31
1. Stocks			
	- Raw Material	₹ 10,000	₹ 12,000
	- WIP	15,000	20,000
	- Finished goods	40,000	35,000
2. Raw Material Purchased		₹ 80,000	
3. Carriage inwards		₹ 3,000	
4. Direct Labour		₹ 70,000.	
5. Indirect labour		₹ 30,000.	
6. Printing and Stationery		₹ 5,000.	
7. Power	- Factory	₹ 18,000	
	- Office	₹ 8,000	
	- Show Room	₹ 6,000.	
8. Indirect factory materials		₹45,000.	
9. Factory insurance		₹ 7,000.	
10. Managing Director's remuneration		₹.21,000.	
11. Depreciation on machinery		₹ 24,000.	
12. Sales Commission @ 5% of Sales.			
13. Rent	- Factory	₹ 22,000	
	- Office	₹ 14,000	
	- Show Room	₹ 9,000	
14. Sales		₹ 5,00,000	

Prepare cost sheet showing (i) Prime Cost, (ii) Works Cost, (iii) Cost of production, (iv) Cost of Sales, and (v) profit.

Ans.: *(i) ₹ 1,51,000; (ii) ₹ 2,92,000; (iii) ₹ 3,40,000; (iv) ₹ 3,85,000; (v) ₹ 1,15,000.*

Q.2. The following information relates to a company :

		Beginning	Ending
1. Stock			
	- Finished goods	₹ 1,10,000	₹ 95,000
	- WIP	70,000	80,000
	- Raw Material	90,000	95,000
2. Cost of goods produced		₹ 6,84,000	
3. Factory cost		₹ 6,54,000.	
4. Factory Overheads		₹ 1,67,000.	
5. Direct Material consumed		₹ 1,93,000.	

Required :

(1) Raw material purchased. *[Ans. ₹ 1,98,000]*.
(2) Direct labour cost. *[Ans. ₹ 3,04,000]*.
(3) Cost of goods sold. *[Ans. ₹ 6,99,000]*.

Q.3. The following data pertains to a company for the month of March 2012 :

1) Direct Material used ₹ 847.
2) Opening Stock of Finished goods?
3) Closing Stock of Finished goods ₹ 94.
4) Direct Labour cost ₹ 389.
5) Manufacturing Overheads ?
6) Cost of goods produced ₹ 1,878.
7) Cost of goods sold ?
8) Cost of goods available for sale ₹ 1,949.

Find out the missing items assuming that there no office overheads

Ans. *Manufacturing overheads ₹ 642; Opening stock of Finished goods ₹ 71; cost of goods sold ₹ 1,855]*.

Q.4. Nilgiri Air-conditioning Company produces refrigerators and sells each for ₹ 2,000 during a certain accounting year. The direct material the direct labour and overhead costs are 60 per cent, 20 per cent and 20 per cent respectively of the cost of sales.

In a subsequent accounting year, the direct material cost has increased by 15 per cent and direct labour cost by 17.5%. Due to these increases in costs, there would be a 50 percent decrease in the amount of profit if the same selling price is to be maintained.

Compute the new selling price to enable the Company to maintain the same percentage of profit as that earned during the preceding year.

Ans. *Old Cost of Sales ₹ 1,600, New Cost of Sales ₹ 1,800, New Selling Price ₹ 2,250.*

Q.5. The books and records of AX Manufacturing Company present the following data for the month of August, 2015.

Direct labour cost ₹ 16,000 (160% of factory overhead)
Cost of goods sold ₹ 56,000.

Inventory accounts showed these opening and closing balances:

	August 1₹	***August 31st ₹***
Raw materials	8,000	8,600
Work-in-progress	8,000	12,000
Finished goods	14,000	18,000
Other data:		
Selling expenses		3,400
General and administration expenses		2,600
Sales for the month		75,000

You are required to prepare a statement showing cost of goods manufactured and sold and profit earned.

Ans. *Raw Material Purchases ₹ 36,000; Profit ₹ 15,600.*

Q.6. Normal Capacity of a factory is 2,40,000 units per annum. The cost estimates are as follows :

1) Direct Material ₹ 5 per unit.
2) Direct labour ₹ 3 per unit (subject to minimum of ₹ 35,000 p.m.)
3) Indirect expenses –
   - Fixed ₹ 3,00,000.
   - Variable ₹ 4 per unit
   - Semi-variable ₹ 80,000 p.a. upto 50% capacity and additional ₹ 40,000 for every 20% increase in capacity or part thereof.
4) Each unit of raw material yields scrap which is sold at ₹ 1 per unit.
5) During 2015, the factory worked at 50% capacity for first 3 months. However, it is expected that it would work at 80% capacity for remaining 9 months.

During the first 3 months, the selling price was ₹ 20 per unit. What would be the price during 9 months remaining so as to produce total profit of ₹11,39,800 for the year as a whole.

Ans.: *₹ 20.20*

Q.7. During February 2015 Thomas Ltd. has produced 5,000 pieces of a tractor component Z. Costs incurred during the month on this output are as follows :

Direct materials	₹ 1,20,000	Office salaries	₹ 60,000
Direct labour	1,60,000	Sales salaries	80,000
Factory rent and rates	30,000	Carriage outward	10,000
Office rent	20,000	Delivery van expenses	15,000
Show room rent	40,000	Depreciation of plant	25,000
Power	10,000	Direct factory expenses	40,000
Light	5,000	Crane expenses	25,000
Sundry factory expenses	15,000	Factory supervision	40,000
Indirect wages	50,000	Depreciation on office equipment	5,000
Advertisements	50,000	Sales	1,00,0000
Sales commission	25,000		

Prepare cost sheet giving all necessary details regarding various components of cost and showing :
(i) Total cost of 5,000 pieces; (ii) Cost per piece

Ans. *[(i) ₹ 8,25,000 (ii) ₹ 165*

Q.8. The following information relating to a company for the half-year ending 31st December 2015 is supplied to you. You are required to
1. Prepare statement showing cost of production
2. Prepare statement showing profit on quantity sold

Purchase of raw material	₹ 1,20,000	**Stock (31st Dec. 2015) :**	
Rent, rates, Insurance of factory	40,000	Raw materials	₹ 22,240
Direct wages	1,00,000	Finished product (2,000 tons)	32,000
Carriage inwards	1,440	Work-in-progress (1st July, 2015)	4,800
Stock (1st July 2015) :		Work-in-progress (31st Dec. 2015)	16,000
Raw materials	20,000	Sales of goods (15,000 tons)	3,00,000
Finished product (1,000 tons)	16,000	Cost of factory supervision	8,000

The advertising and selling costs are ₹ 1 per ton sold. 16,000 tons of the commodity "A" were produced during the period.

Q.9. The accounts of a radio manufacturing company disclosed the following information for the year ending 31st December :

Materials used	₹ 50,000	Works overhead expenses	₹ 8,000
Productive wages	40,000	Office overhead expenses	4,900

Prepare cost sheet for the year ending 31st December and also calculate the price which the company should quote for the manufacture of a radio in early next year requiring materials valued at ₹ 250 and wags of ₹ 150, so that the price may yield a profit of 20% on the cost. The factory overheads are absorbed on Direct wages and office overheads are absorbed on works cost.

Ans. *[₹ 541.80]*

Q.10. From the books of account of M/s. Aryan Enterprises the following details have been extracted for the year ending March 31, 2015:

		(₹)
Stock of Materials –	Opening	1,88,000
	Closing	2,00,000
Materials Purchased during the year		8,32,000
Direct Wages Paid		2,38,400
Indirect Wages		16,000
Salaries to administrative Staff		40,000
Freights – Inward		32,000
Outward		20,000
Bad Debts Written Off (Abnormal)		18,800
Repairs to Plant and Machinery		42,400
Rent, Rates and Taxes – Factory		12,000
Office		6,400
Travelling Expenses		12,400
Salesmen's Salaries and Commission		33,600
Depreciation Written Off – Plant & Machinery		28,400
Furniture		2,400
Director's Fees		24,000
Electricity Charges (Factory)		48,000
Fuel (for boiler)		64,000
General Charges		24,800
Manager's Salary		48,000

The Manager's time is shared between the factory and the office in the ratio of 20 : 80. From the above details you are required to prepare : (a) Prime Cost; (b) Factory Overhead; (c) Factory Cost; (d) Office and Selling Overheads; and (e) Total Cost.

Ans. *(a) ₹ 10,90,400 ; (b) ₹ 2,20,400; (c) ₹ 13,10,800; (d) ₹ 2,02,000 (e) ₹ 15,12,800*

Q.11. The managing director of a small manufacturing concern consults you as to the minimum price at which he can sell the output of one of the departments of the company. The details of last year are given below :

Production and Sales (100 units)	₹ 39,000	Works Overheads	₹ 7,000
Materials	13,000	Fixed Office Overheads	2,800
Direct Labour	7,000	Selling Overheads	3,200
Direct Charges	1,000	Profit	5,000

You ascertain that 40% of the works overheads fluctuate directly with production and 70% of the selling overheads fluctuate with sales.

It is anticipated that the department would produce 500 units per annum in the next year and that direct labour charges per unit will be reduced by 20% while fixed works overhead charges will increase by ₹ 3,000. Office overheads and fixed selling overheads charges are expected to show an increase of 25% but otherwise no changes are anticipated. The percentage of profit on cost is to be maintained.

Ans.

	Profit	
Level	***Per unit***	***Total***
100 units	₹ 50	₹ 5,000
500 units	₹ 39.74	₹19,867.60

Q.12. M/s Anurag Bros., manufacturers of a standard articles , give you the following cost data :

Element of Cost	***% of Sales***	***Element of Cost***	***% of Sales***
Raw Materials	30	Fuel	10
Wages	20	General Expenses	15
Rent, Rates, etc.	5		

There has been increase in costs of different elements: Fuel 50%; Materials 30%; Wages 25%; Rent, etc., 20%.

He consults you as to what percentage he must add to the selling price in order to obtain the same percentage of profit on sales as before. Give your answer with an assumed figure of sales of ₹ 10,000

Ans. *25%*

Q.13. A firm has purchased a plant to manufacture a new product, the cost data for which is given below :

Estimated Annual Sales	24,000 units	Direct Labour	₹ 0.60 per unit
Estimated Costs:		Overheads	₹ 24,000 per year
Materials	₹ 4 per unit	Administration Expenses	₹ 28,800 per year
		Selling Expenses	15% of sales

Calculate the selling price if profit per unit is ₹ 1.02.

Ans. *₹ 9.20*

Q.14. Find out the selling price of an article whose costs for production and sale of 1,00,000 units are :

Material ₹ 50,000 Labour ₹ 40,000 Overheads ₹ 1,60,000

The fixed portion of capital employed is ₹ 50,000 and the varying portion is 40% of sales turnover. A profit of 8% on capital employed after payment of tax at 40% of the earnings is desired.

Ans. *₹ 2.71 per article.*

Q.15. A manufacturer sold its output in 2009-10 for ₹ 1,12,000 at ₹ 11.20 per unit. Total fixed charges amounted to ₹ 11,500 per annum and the variable cost per unit was ₹ 9.50. The producer wants to reduce the selling price to ₹ 10.50 per unit and maintain the same profit as before. What should be production and sale to implement this decision.

Ans. *17,000 units*

Q.16. An article passes through three successive operations from the raw materials stage to the finished product state. The following data are available from the production records of a particular month:

Operation No.	*No. of Pcs. Input*	*No. of Pcs. Rejected*	*No. of Pcs. Output*
1	60,000	20,000	40,000
2	66,000	6,000	60,000
3	48,000	8,000	40,000

(i) Determine the input required to be introduced in the first operation in number of pieces in order to obtain finished output of 100 pieces after the last operation.

(ii) Calculate the cost of raw material required to produce one piece of finished product, given the following information:

Weight of the finished piece is 0.10 kg. and the price of raw material is ₹ 20 per kg.

Ans. *(i) 198 units, (ii) ₹ 3.96.*

Q.17. The standard production for a particular work order is 20 units per day and piece-rate wage is 60 paise per unit if daily production is 20 units or more. The rate is 50 paise per unit if production is less than 20 units. Cost of materials is 30 paise per unit. It is proposed to charge factory overheads under one of the following methods.

(i) 100% on Labour Cost (ii) 80% on Prime Cost.

Tabulate the above data in the form of a suitable statement and indicate the factory cost per unit under each of the above methods if the daily production is (a) 15 units, (b) 20 units, (c) 25 units.

Ans. *(a) ₹ 1.44, (b) ₹1.62, (c) ₹ 1.62*

Q.18. A company manufactures two types of pens namely 'Hero' and 'Raja'. Following are the details of costs for the year ended 31st March, 2012:

Direct Materials	₹ 1,30,000
Direct Labour	1,10,000
Production Overheads	72,500

Following further information is available:

(i) The direct materials per unit in 'Raja' pen was 40% of that in 'Hero' pen.
(ii) The direct labour cost per unit in 'Hero' pen was twice as much as that in 'Raja' pen.
(iii) Production overhead (total) was in the ratio of 5 : 3 (Hero and Raja).
(iv) Administration overhead for each type of pen was 100% of direct labour cost.
(v) Selling and distribution expenses was ₹ 1.50 per pen for both types.
(vi) Following was the production and sales during the year :

'Hero' pens : 20,000 of which 18,000 were sold @ ₹ 22 each.

'Raja' pens : 15,000 of which 14,000 were sold @ ₹ 14 each.

Prepare a statement showing the cost details and profit per ton of each type.

Ans. *Profit ₹ 94,218 (Hero) and ₹ 65,625 (Raja).*

Q.19. SIGMA Private Limited Company makes two kinds of television sets Sun Rise and Moon Rise. The following particulars relate to these sets for a year:

	Sun Rise	*Moon Rise*
No. of T.V. sets manufactured	5,000	2,400
	₹	₹
Direct costs : Materials	62,800	53,000
Wages	1,88,800	1,14,000
Direct Expenses	42,000	28,000
Other costs:		
Factory supervision (₹36,000)		
Packing and other expenses (₹ 4,000)		
Management & selling expenses (₹ 44,400)		

You are required to prepare a statement showing the cost of each kind of T.V. set taking the following into consideration:

1. The factory supervision to be charged in proportion to direct costs.
2. Packing and other expenses to be apportioned in the ratio that direct costs plus factory supervision cost of Sun Rise bears to similar costs of Moon Rise.
3. Management and selling expenses to be charged in proportion to the number of sets manufactured.

Ans. *Total Cost ₹ 3,47,636 and ₹ 2,25,364*

Q.20. Following are the particulars of 14 H.P.. motor cars produced by M. Motor Manufacturing Company for the year ended 31st December:

	₹		₹
Opening stock of raw materials	₹ 50,000	Works overheads	₹ 1,96,000
Purchases	12,00,000	Administration overheads	1,49,170
Carriage	60,000	Closing stock of raw materials	75,000
Wages	7,00,000		

1. Find out the works cost and total cost of motor car, the percentage the works overhead bears to the wages and percentage that Administration overhead bear to the works cost.
2. Work out what price the Co. should quote for a motor car, which it is estimated will require on expenditure of ₹ 5,500 in raw material and ₹ 4,000 in wages, so that it would yield profit of 25% on total cost.

Ans. *(1) Cost of production ₹ 22,80,170; (2) ₹ 14,204.25*

Q.21. Electronics Ltd. furnish the following information for a 10,000 T.V. equipment manufactured during the year 2008:

	₹		₹
Materials	90,000	Defective work (cost of rectification)	3,000
Direct wages	60,000	Clerical salaries and management expenses	33,500
Power and consumable stores	12,000	Selling expenses	5,500
Factory indirect wages	15,000	Sale proceeds of scrap	2,000
Lighting of factory	5,500	Plant repairs, maintenance and depreciation	11,500

The net selling price was ₹ 31.60 per unit and all units were sold. As from January 1, 2009, the selling price was reduced to ₹ 31 per unit. It was estimated that production could increase in 2001 by 50% due to spare capacity. Rate for materials and direct labour will increase by 10%.

You are required to prepare (a) A Cost sheet for the year 2008 showing various elements of cost per unit and (b) Estimated cost and profit for the year 2009 assuming that 15,000 units will be produced and sold during the year end factory overheads will be recovered as percentage of direct wages and office and selling expenses as a percentage of works cost.

Ans. *(a) Total Profit in year 2008 = ₹ 82,000 (b) Total Profit in year 2009- ₹ 78,900*

Q.22. The following data relate to the manufacturer of a standard product during the month of March, 2011:

	₹
Raw Materials Consumed	80,000
Direct Wages	48,000
Machine Hours Worked	8,000

Works Overheads are ₹ 4 per machine hour.
Office Overheads : 10% of Works Cost
Selling Overheads : ₹ 1.50 per unit sold.
Units Produced : 4,000
Units Sold : 3,600 @ ₹ 50 each.

You are require to prepare a Cost Sheet in respect of the above showing:
(i) Cost per Unit ***(Ans. ₹ 45.50)***
(ii) Profit for the Period ***(Ans. ₹ 16,200)***

Q.23. The directors of a manufacturing business required a statement showing the production results of the business for the month of March 2013. The cost accounts reveal the following information:

	₹
Stock on hand 1st March, 2013:	
Raw Material	25,000
Finished Goods	17,360
Stock on Hand, 31st March, 2013	
Raw Material	26,250
Finished Goods	15,750
Purchase of Raw Materials	21,900
Work-in-progress, 1st March 2013	8,220
Work-in-progress, 31st March 2013	9,100
Sale of Finished Goods	72,310
Direct Wages	17,150
Non-productive Wages	830
Works Expenses	8,340
Office and Administrative Expenses	3,160
Selling and Distribution Expenses	4,210

You are required to construct the statement so as to show (a) the value of materials consumed; (b) the total cost of production; (c) the cost of goods sold; (d) the profit on goods sold and (e) the net profit for the month.

Ans. *(a) ₹ 20,650, (b) ₹ 49,250, (c) ₹ 50,860, (d) ₹ 21,450 , (e) ₹17,240.*

Q.24 A Factory Produces 100 units of each of the commodities A and B. The costs of production are:

	A ₹	**B ₹**
Direct Materials	12,000	10,000
Direct Wages	8,000	5,000
Chargeable Expenses	1,000	1,000

The overhead expenses are (i) Factory, ₹ 6,500 and (ii) Office, ₹ 3,480. If a profit of 25% on sales is to be realized, what should be the selling price of each article? You are required to distribute factory overheads on direct wages and office overheads on factory cost.

Ans. *Selling Price per unit A ₹ 360 and B ₹ 266.40.*

Q.25

TRADING AND PROFIT AND LOSS ACCOUNT OF ELECTRIC ENGINEERING LIMITED

For the year ending on 31st March 2010

		₹			₹
To Cost of Material:			By Sales :		
A	10,000		A	31,000	
B	8,000		B	25,000	
C	6,000	24,000	C	24,000	80,000
To Wages					
A	12,000				
B	7,000				
C	11,000	30,000			
To Manufacturing Exp.		6,000			
To Gross Profit c/d		20,000			
		80,000			80,000
To General Expenses		1,200	By Gross Profit b/d		20,000
To Staff Salaries		2,300			
To Director's Fees		2,500			
To Office Expenses		3,300			
To Selling Expenses		2,700			
To Net Profit		8,000			
		20,000			20,000

Prepare the statement showing a cost and profit of different articles A, B, C separately, if:
(i) Units manufactured and sold of A, B, C articles were 1,600, 800 and 600 respectively.
(ii) Manufacturing expenses are to be apportioned in the ratio of direct wages.
(iii) General expenses, staff salaries, director fees and office expenses should be distributed in the ratio of works cost of different articles.
(iii) Selling expenses incurred equally on per unit sold.

Ans. *Profit A ₹ 1,378, B ₹ 5,338, C ₹ 1,284.*

Q.26 A re-roller produced 400 units spending ₹ 36,00,000 towards materials and ₹ 6,20,000 towards rolling charges. Ten percent of the output was found to be defective, which has to be sold at 10% less than the price for good production. If the sales realisation should give the firm an overall profit of 12.5% on cost, find the selling price per unit of both the categories. The scrap arising during the rolling procedure fetched a realization of ₹ 60,000. ***(Ans. ₹ 11,818 & ₹ 10,636)***

Q.27 Work out in the cost Sheet form the unit cost of production per yard of Khaki Drill Cloth in a Textile Factory from the following data obtained for the month of May 2011.

Khaki cotton thread :
4,000 lbs. @ ₹ 3.50 per lb.
Direct labour:
200 men @ ₹ 4.50 per day for 20 days.
Stores overhead at the rate of 10% on Direct material.

Other Factory overhead :

Variable	50%	on Direct labour
Fixed	100%	

Credit on account of sale of cotton waste, 400 lbs. @ ₹ 1 per lb. recovered from Khaki drill cloth weaving shop of factory.

Administration overhead 10% on factory cost.

Total output for the month : 33,000 yards. ***(Ans. Total Cost is ₹ 2 per yard)***

Q.28 Find out in the appropriate Cost Sheet from the selling rate per ton of special paper manufactured by a Paper Mill for the Government in January, 2011, under the following divisions of cost:

(a) Prime Cost, (b) Works Cost, (c) Total Cost and (d) Selling Price.

The Cost Sheet is to be prepared with reference to data given below:

Paper Pulp – 500 tons @ ₹ 50 per ton.
Other miscellaneous materials – 100 tons @ ₹ 30 per ton } (Direct Materials)

80 Skilled men @ ₹ 3 per for 25 days.
40 Unkilled men @ ₹ 2 per for 25 days. } (Direct Labour)

Special equipments – ₹ 3,000.
Special dyes – ₹ 1,000. } (Direct Expenses)

Works overhead :

Variable @ 100%
Fixed @ 60% } on direct wages

Administration overhead @ 10%
Selling and distribution overhead @ 15% } on Works cost

Profit 10% on Total Cost.

Finished paper manufactured – 400 tons.

Credit on account of sale of wastage – ₹ 800.

Ans. *(a) Prime Cost ₹ 40,000, (b) Works Cost ₹ 52,000, (c) Total Cost ₹ 65,000 and (d) Total Sales ₹ 71,500.*

Q.29 A factory produces a standard product. The following information is given to you from which you are required to prepare "Cost Sheet" for the period ended on 31st July, 2011:

	₹
Direct materials:	
Opening stock	10,000
Purchases	85,000
Closing stock	4,000
Direct wages	20,000
Other direct expenses	10,000
Factory overheads	100% of Direct Labour
Office overheads	10% of Works Costs
Selling and distribution expenses	₹ 2 per unit sold
Units of finished product:	
In hand at the beginning of the period	(value ₹ 16,000) 1,000
Produced during the period	10,000
In hand at the end of the period	2,000

Also, find out the selling price per unit on the basis that profit margin is uniformly made to yield a profit of 20% of the selling price.

Prepare – (1) Cost Sheet showing, production cost (2) Statement of profit showing the amount of profit.

Ans. *Production Cost ₹ 1,55,100 and Profit ₹ 39,520.*

Q.30. From the following data prepare a cost and production statement of Popular Stoves Manufacturing Co. for the year 2012:

	₹
Stock of materials on 1-1-2012	35,000
Stock of materials on 31-12– 2012	4,900
Purchase of materials	52,500
Factory wages	95,000
Factory expenses	17,500
Office expenses	10,000
Completed stock in hand on 1-1-2012	Nil
Completed stock in hand on 31-12-2012	35,000
Sales	1,89,000

The number of stoves manufactured during the year 2012 was 4,000.

The company wants to quote for a contract for the supply of 1,000 Electric Stoves during the year 2013. The stoves to be quoted are of uniform quality and make similar to those manufactured in the previous year; but cost of materials has increased by 15% and cost of factory labour by 10%.

Prepare a statement showing the price to be quoted to give the same percentage of net profit on turnover as was realized ruing the year 2012, assuming that the cost per unit of overhead charges will be the same as in the previous year.

Ans. ₹ *63.053.*

Solutions to Revisionary Problems

Answer to Q. No. 1. **Cost Sheet For The Month ending 31st March 2013**

Opening Stock of Materials	10,000	
+Materials purchased	80,000	
+ Carriage inward	3,000	
	93,000	
- Closing stock of materials	-12,000	
Direct materials		81,000
Direct labour		70,000
Prime cost		1,51,000
Indirect labour	30,000	
Sundry materials	45,000	
Factory power	18,000	
Factory insurance	7,000	
Depreciation on machinery	24,000	
Factory rent	22,000	
Factory overheads		1,46,000
Gross factory cost		2,97,000
+Opening stock of work in process		+15,000
		3,12,000
-Closing stock of Work-in-progress		-20,000
Factory cost		2,92,000
Printing and stationery	5,000	
Office power	8,000	
Managing Director's remuneration	21,000	
Office rent	14,000	
Office and administration over heads		48,000

			3,40,000
Cost of production			+40,000
+Opening stock of finished goods			3,80,000
			-35,000
-Closing stock of finished goods			3,45,000
Cost of goods sold			
Show room power		6,000	
Sales commission 5,00,000*5/100		25,000	
Show room rent		9,000	
Selling and Dist. Overheads			40,000
Cost of sales			3,85,000
Profit (balancing figure)			1,15,000
Sales			5,00,000

Answer to Q. No. 2

i) Raw Material Purchased

		₹
	Raw Material consumed	1,93,000
Add:	Closing stock of Raw Material	95,000
		2,88,000
Less:	Opening stock of Raw Material	(90,000)
	Raw Material purchased	1,98,000

ii) Direct Labour cost

	Factory cost	6,54,000
Add:	Closing stock of WIP	80,000
		7,34,000
Less:	Opening stock of WIP	70,000
	Gross factory cost	6,64,000
Less:	Factory overheads	1,67,000
	Prime Cost	4,97,000
Less:	Material consumed	1,93,000
	Direct Labour cost	3,04,000

		₹.
iii)	Cost of goods produced	6,84,000
Add :	Opening stock of Finished Goods	1,10,000
		7,94,000
Less:	Closing stock of Finished Goods	95,000
	Cost of Goods Sold	6,99,000

Answer to Q.No. 3. Computation of Manufacturing overheads

Cost of goods produced = D. Material + D. Labour + Manufacturing Overheads

₹ 1,878 = ₹ 847 + ₹ 389 + Manufacturing overheads

Hence, Manufacturing overheads = ₹ 642

Computation of opening stock of finished Goods

We know that

Cost of goods available for sale =

Opening Stock of finished goods + Cost of goods Produced

₹ 1,949 = opening stock of finished goods + ₹ 1,878

Hence, opening stock of finished goods = ₹ .71

Computation of cost of goods sold

Cost of goods sold= cost of goods available for sale – Closing stock of finished goods

₹ (1,949 – 94) = ₹ 1,855

Answer to Q.4.

Type of Cost	Present Cost	Increase in Cost	Future Cost
Direct Material	0.6x	15 % of 0.6x =0.09×	0.69x
Direct Labour	0.2x	17.5 % of 0.2x=0.035×	0.235x
Overheads	0.2x	Nil	0.2x
Total	₹. X (assume)		1.125x

Given : Present selling Price = ₹ 2000

Also assume, present profit= ₹ y

Hence,

x+y = ₹ 2,000

and

1.125x + .5y = 2,000

solving, we get

x= ₹ 1,600 and y= ₹ 400

Hence,

Old cost of sales = x = ₹ 1,600

Old Amount of profit = y = ₹ 400

And,

Future cost of sales = 1,125x = 1.125 (1600)
= ₹ 1,800

Ratio of old amount of profit to old cost of sales

$$\frac{400}{1,600} \times 100 = 25\%$$

If same percentage of profit is desired in future, the amount of future selling price is determined as follows :

	₹
Future Cost of sales	1,800
+ Profit (25 % of 1,800)	450
Future amount of sales	2,250

Answer to Q. No. 5. Cost Sheet for the month ending 31 August, 2015.

Opening Stock of Raw Material		8,000	
+ Purchases (*see working note*)		36,000	
		44,000	
- Closing Stock of Raw Material		8,600	
Material Consumed			35,400
+ Direct Labour Cost			16,000
	Prime Cost		51,400
Factory Overhead			10,000
			61,400
+ Opening WIP			8,000
			69,400
- Closing WIP			12,000
	Factory Cost		57,400
General Administrative Expenses			2,600
	Cost of Production		60,000
+ Opening Stock of Finished			14,000
			74,000
- Closing Stock of Finished goods			18,000
	Cost of Goods Sold		56,000
Selling Expenses			3,400
	Cost of Sales		59,400
			15,600
			75,000

Computation of Purchases		
Cost of goods sold (Given)		56,000
+Closing Stock of Finished goods		18,000
		74,000
- Opening Stock of Finished goods		14,000
	Cost of production	60,000
- General Administration Exp.		2,600
		57,400
+ Closing Stock of WIP		12,000
		69,400
- Opening Stock of WIP		8,000
		61,400
- Factory Overhead $\left(16,000 \times \frac{100}{60}\right)$		10,000
	Prime Cost	51,400
- Labour Cost		16,000
	Material Consumed	35,400
+ Closing Stock Of Raw Material		8,600
		44,000
- Opening Stock Of Raw Material		8,000
	Purchases	36,000

Answer to Q 6. **Cost Sheet for the year**

	First 3 months output=30000 units		Remaining 9 months output=144000 units	
	Per Unit (₹)	Total (₹)	Per Unit (₹)	Total (₹)
Direct Material	5	1,50,000	5	7,20,000
Less: Sale of Scrap	-1	-30,000	-1	-1,44,000
	4	1,20,000	4	5,76,000
Direct Labour	3.50	1,05,000	3	4,32,000
PRIME COST	7.50	2,25,000	7	10,08,000
Indirect Expenses:				
Fixed 3,00,000 x 3/12 (3 months) ; 3,00,000 x 9/12 (9 months)	2.50	75,000	1.56	2,25,000
Variable	4	1,20,000	4	5,76,000
Semi Variable				
80,000 x 3/12 ; (3 months)				
1,60,000 x 9/12 (9 months)	0.67	20,000	0.84	1,20,000
Total Cost	14.67	4,40,000	13.40	19,29,000
Profit	5.33	1,60,000	6.80	9,79,800
Sale @ ₹ 20 and ₹ 20.20 resp.	20.00	6,00,000	20.20	29,08,800

Notes :

1. Direct Labour cost of first three months is ₹ 35,000 (being minimum per month) multiplied by 3 = 35,000 x 3 = ₹ 1,05,000
2. Semi-variable Overheads :

Capacity Utilisation	Annual Semi-Variable Overheads
Upto 50%	₹ 80,000
More than 50%, upto 70%	₹ 1,20,000
More than 70%, upto 90%	₹ 1,60,000

During first 3 months, the factory has worked at 50% capacity and as such the proportionate semi-variable overheads for first 3 months are –

$$80,000 \times \frac{3}{12} = ₹\ 20,000$$

During next 9 months, the factory has worked at 80% capacity and as such the proportionate semi-variable overheads for 9 months are ₹ 1,60,000 x $\frac{9}{12}$ = ₹ 1,20,000.

3. Profit for remaining nine months = 11,39,800 -1,60,000= 9,79,800
   Total Sales =19,29,000 + 9,79,800 = ₹ 29,08,800
   Selling Price = 29,08,800 / 1,44,000 = ₹ 20.20

Answer to Q. No. 7.

Thomas Ltd.

Cost sheet of 5,000 pieces of component Z produced in February 2015

Cost Items		Total Cost	Cost Per Unit	
	₹	₹	₹	₹
Direct materials	1,20,000		24	
Direct labour	1,60,000		32	
Direct factory expenses	40,000		8	
Prime cost		3,20,000		64
Factory rent and rates	30,000		6	
Power	10,000		2	
Indirect wages	50,000		10	
Sundry factory expenses	15,000		3	
Depreciation of plant	25,000		5	
Crane expenses	25,000		5	
Factory supervision	40,000		8	
Production overheads		1,95,000		39
Work Cost		5,15,000		103
Office rent	20,000		4	
Light	5,000		1	
Office salaries	60,000		12	
Depre. on office equipment	5,000		1	
Office and administration overheads		90,000		18
Cost of production		6,05,000		121
Show room rent	40,000		8	
Advertisements	50,000		10	
Sales commission	25,000		5	
Sales salaries	80,000		16	
Carriage outward	10,000		2	
Delivery van expenses	15,000		3	
Selling and Distt. Overheads		2,20,000		44
Cost of sales		8,25,000		165
Profit (balancing figure)		1,75,000		35
Sales		10,00,000		200

Answer to Q. No. 8.

Statement showing cost of production

(Production 16,000 tons)

	₹	Total ₹	Per ton ₹
Opening Stock of raw materials	20,000		
Add : Purchases of raw materials	1,20,000		
Add : Carriage inwards	1,440		
	1,41,440		
Less : Closing stock of materials	-22,240		
Direct Materials		1,19,200	7.45
Direct Wages		1,00,000	6.25
Prime Cost		2,19,200	13.70
Rent, rates, insurance of factory		40,000	2.50
Factory supervision		8,000	0.50
		67,200	
Add : Opening Work-in-progress		4,800	+0.30

	2,72,000	17.00
	-16,000	-1.00
Less : Closing Work-in-progress	2,56,000	16.00
Cost of Production (16,000 tons)		

Statement showing profit on quantity sold

Cost of production (16,000 tons)	₹ 2,56,000
(+) opening stock of fin. Goods (1,000 tons)	16,000
Cost of goods available (17,000 tons)	2,72,000
(-) Closing stock of fin. Goods (2,000 tons)	(32,000)
Cost of goods sold (15,000 tons)	2,40,000
(+) Selling overheads (Advertising)	
(15,000 tons @ ₹ 1 per tons)	15,000
Cost of sales	2,55,000
Profit (Balance)	45,000
Sales (15,000 tons @ ₹ 20)	3,00,000

Answer to Q. No. 9.

Cost Sheet for the year ended 31st December

Materials used	₹ 50,000	*Overhead Rates :*
Production wages	40,000	% of works overhead to wages = Works overhead × 100 = 8,000 × 100 = 20%
Prime cost	90,000	40,000
Works overhead	8,000	
Works cost	98,000	% of office overhead to work cost = Office overheads × 100 = 4,900 × 100 = 5%
Office overhead	4,900	Works cost 98,000
Total cost	1,02,900	

Estimated Cost Sheet for a Radio

Materials	₹ 250
Wages	150
Prime cost	400
Works overhead : 20% of wages	30
Works cost	430
Office overhead : 5% of works cost	21.50
Total Cost	451.50
Add : Profit 20% on cost	90.30
Sale price	541.80

Answer to Q. No. 10.

Cost of Production Statement of M/s. Enterprises for the Year ending 31st March, 2015

		₹
Opening Stock of Materials	1,88,000	
Add : Purchases	8,32,000	
	10,20,000	
Add : Freight inward	32,000	
	10,52,000	
Less : Closing Stock	2,00,000	
Raw Material consumed		8,52,000
Direct Wages		2,38,400

(a) Prime Cost		10,90,400
(b) *Add : Factory Overheads*		
Indirect Wages	16,000	
Repairs to Plant & Machinery	42,400	
Rent, Rates and Taxes – Factory	12,000	
Depreciation – Plant & Machinery	28,400	
Electricity Charges	48,000	
Fuel	64,000	
Manager's Salary (20%)	9,600	2,20,400
(c) Factory Cost		13,10,800
(d) *Add :* Office Overheads and Selling Overheads:		
Salaries to Admn. Staff	40,000	
Freight outward	20,000	
Rent, Rates and Taxes – Office	6,400	
Travelling	12,400	
Salesmen's Salaries & Commission	33,600	
Depreciation – Furniture	2,400	
Directors' Fees	24,000	
General Charges	24,800	
Manger's Salary (80%)	38,400	2,02,000
(e) Total Cost		15,12,800

Answer to Q. No. 11. **COST SHEET (LAST YEAR)** *(Output 100 units)*

		Cost per unit	*Total*
Materials		₹ 130	₹ 13,000
Direct Labour		70	7,000
Direct Charges		10	1,000
	Prime Cost	210	21,000
Add : Factory Overheads :			
Variable	40 % of ₹ 7,000	28	2,800
Fixed	60% of ₹ 7,000	42	4,200
	Factory Cost	280	2,800
Add : Fixed Office Overheads		28	2,800
	Office Cost	308	30,800
Add : Selling Overheads :			
Variable	70% of ₹ 3,200	22.40	2,240
Fixed	30% of ₹ 3,200	9.60	960
	Total Cost	340	34,000
	Profit	50	5,000
	Sales	390	39,000

ESTIMATED COST SHEET *(Output 500 units)*

		Cost per unit ₹	*Total* ₹
Material		130	65,000
Direct Labour (less 20% per unit)		56	28,000
Direct Charges		10	5,000
	Prime Cost	196	98,000
Add : Factory Overheads :			
Variable		28.00	14,000
Fixed (increase by ₹ 3,000)		14.40	7,200
	Factory Cost	238.40	1,19,200
Add :Office Overheads : (25% increase in total)		7.00	3,500
	Office Cost	245.40	1,22,700

Add :	Selling Overheads :		
	Variable	22.40	11,200
	Fixed (25% increase in total)	2.40	1,200
	Total Cost	270.20	1,35,100
Profit $\frac{5,000}{34,000}$ × 100 (*i.e.*, 14.71% On cost)		39.74	19,867.60
	Sales	309.94	1,54,967.60

Answer to Q. No. 12. Given that assumed sales are ₹ 10,000

Elements of Cost

	% to Sales	*Amount*
Materials	30	₹ 3,000
Wages	20	2,000
Rent and Rates	5	500
Fuel	10	1,000
General expenses	15	1,500
Total Cost	80	8,000
Profit (20% of sales or 25% of cost)	20	2,000
Selling price	100	10,000

Increased Cost of Production

	Amount
Materials ₹ 3,000 + 30% of ₹3,000	₹ 3,900
Wages ₹ 2,000 + 25% of ₹ 2,000	2,500
Rent and Rates ₹ 500 + 20% of ₹ 500	600
Fuel ₹ 1,000 + 50% of ₹1,000	1,500
General Expenses	1,500
Total Cost	10,000
Profit : 25% on Cost or 20% of Selling Price	2,500
Selling Price	12,500

Thus, in order to maintain the same percentage of profit, the selling price should be increased by 25% (i.e. 100 × 2,500 / 10,000).

Answer to Q. No. 13. **COMPUTATION OF SELLING PRICE PER UNIT**

Cost of Production

		₹
Material	(24,000 × 4.00)	96,000
Direct Labour	(24,000 × 0.60)	14,400
Overheads		24,000
Administrative Expenses		28,800
		1,63,200

Profit = ₹ 1.02 × 24,000 = ₹ 24,480

Selling expenses are 15% of Sales.

Hence, Total Cost = 1,63,200 + 15% of Sales.

Let x be total sales.

x = Total Cost + Profit

x = 1,63,200 + 15% of x + 24,480

or $x - 3x/20 = 1,87,680$

or x = ₹ 2,20,800

Selling Price per unit = 2,20,800 / 24,000 = ₹ 9.20 per unit.

Answer to Q. No. 14. Let selling price be ₹ 'x' per unit.
Cost of Sales = 50,000 + 40,000 + 1,60,000 = ₹ 2,50,000
Profits before tax = 1,00,000 x – 2,50,000

$$\text{Tax @ 40\%} = \frac{40}{100}\ (1{,}00{,}000\ x - 2{,}50{,}000)$$

Now, Profit before tax – Tax = Profit after tax = 8% of capital employed

$$(1{,}00{,}000\ x - 2{,}50{,}000) - \frac{40}{100}\ (1{,}00{,}000\ x - 2{,}50{,}000) = \frac{8}{100}\left[50{,}000 + \frac{40}{100} \times 1{,}00{,}000\ x\right]$$

Solving, we get x = ₹ 2.71

Answer to Q. No. 15.

1. Number of units produced ₹ 1,12,000/11.20 = 10,000 units.
2. Cost of production = 11,500 + (10,000 × 9.5) = 1,06,500
3. Profit = ₹ 1,12,000 – 1,06,500 = ₹ 5,500

Now, suppose output desired is x ; the cost of producing x units = ₹ 11,500 + 9.5x
Sale proceeds of x units @ ₹ 10.50 = 10.5x. The producer wants to earn same profits as before.
Therefore:
New sales – New total cost = Old profit, *i.e.*, (10.5x) – (11,500 + 9.5x) = 5,500; Or
10.5x – 9.5 x = 5,500 + 11,500 = 17,000; Or x = 17,000.
Thus, the output should be 17,000 units. He should produce 7,000 units more.

Answer to Q. No. 16

(i) Statement of Production for the Month

Operation No.	*Input Total No.*	*Rejections*		*Output Total No.*
(i)	*(ii)*	*Total No. (iii)*	*% Rejection to output [(iii) – (v) × 100]*	*(v)*
1	60,000	20,000	50%	40,000
2	66,000	6,000	10%	60,000
3	48,000	8,000	20%	40,000

Input required for final out of 100 units :

	₹
Output of Process 3	100
Loss in Process 3, 20% of output of Process 3	20
Input to Process 3 or output of Process 2	120
Loss in Process 2, 10% of output of Process 2	12
Input to Process 2 or output of Process 1	132
Loss in Process 1, 50% of output of Process 1	66
Input to Process 1	198

(ii) 198 pieces of initial input are used to produce 100 pieces of final output. The weight of one piece of finished output is 0.10 kg. Thus, the weight of input for one piece of output = 0.10 × 198 ÷ 100 = 0.198 kg. At ₹ 20 per kg. the cost of materials for producing one piece = 0.198 × ₹ 20 = ₹ 3.96.

Answer to Q. No. 17

Statement of Works Cost

	Production 15 Units		Production 20 Units		Production 25 Units	
	Total	Per Unit	Total	Per Unit	Total	Per Unit
Materials	₹ 4.50	₹ 0.30	₹ 6.00	₹ 0.30	₹ 7.50	₹ 0.30
Labour	7.50	0.50	12.00	0.60	15.00	0.60
Prime Cost	12.00	0.80	18.00	0.90	22.50	0.90
(i) Factory Overhead @ 100% on Labour Cost	7.50	0.50	12.00	0.60	15.00	0.60
Works Cost	19.50	1.30	30.00	1.50	37.50	1.50
(ii) Overheads 80% on Prime Cost						
Prime Cost (as above)	12.00	0.80	18.00	0.90	22.50	0.90
Factory overhead @ 80% of Prime Cost	9.60	0.64	14.40	0.72	18.00	0.72
Works Cost	21.60	1.44	32.40	1.62	40.50	1.62

Answer to Q. No. 18

Particulars	Basis	Total	Hero	Raja
Direct Materials	20,000 x 1 : 15,000 x 0.40	1,30,000	1,00,000	30,000
Direct Labour	20,000 x 2 : 15,000 x 1	1,10,000	80,000	30,000
Prime Cost		2,40,000	1,80,000	60,000
Production Overheads	5 : 3	72,500	45,313	27,187
Work Cost		3,12,500	2,25,313	87,187
Administration Overheads	100 % of Labour Cost	1,10,000	80,000	30,000
Cost of Production →		4,22,500	3,05,313	1,17,187
(–) Closing Stock of Finished Goods		38,343	30,531	7,812
Cost of goods sold		3,84,157	2,74,782	1,09,375
Selling Expenses	₹ 1.50 p.u. sold	48,000	27,000	21,000
Cost of Sales		4,32,157	3,01,782	1,30,375
Profit		1,59,843	94,218	65,625
Sales		5,92,000	3,96,000	1,96,000

Valuation of Closing Stock of Finished Goods :

$$\text{Hero} = \frac{₹\,3,05,313}{20,000\ \text{units}} \times 2,000\ \text{units} = ₹\ 30,531$$

$$\text{Raja} = \frac{₹\,1,17,187}{15,000\ \text{units}} \times 1,000\ \text{units} = ₹\ 7,812$$

Answer to Q. No. 19

SIGMA Private Limited
Statement of Cost for the period ending .....

Cost Items	Sun Rise (5,000)		Moon Rise (2,400)	
	Per unit ₹	Total ₹	Per unit ₹	Total ₹
Materials	12.56	62,800	22.08	53,000
Wages	37.76	1,88,800	47.50	1,14,000
Direct Expenses	8.40	42,000	11.67	28,000
Prime Cost	58.72	2,93,600	81.25	1,95,000
Factory supervision: 2,93,600 : 1,95,000	4.33	21,632	5.98	14,368

Packing and other expenses: (2,93,600 + 21,632) : (1,95,000+14,368)	0.48	3,404	0.66	1,596
Management and selling expenses: 5,000 : 2,400	6.00	30,000	6.00	14,400
Total Cost	69.53	3,47,636	93.89	2,25,364

Answer to Q. No. 20 **(1)**

M. Motor Manufacturing Co.
Cost sheet for the year ending 31st December

Opening stock of raw materials	₹ 50,000	
Add: Purchases	+ 12,00,000	
	12,50,000	
Add: Carriage Inward	+ 60,000	
	13,10,000	
Less: Closing stock of raw materials	-75,000	
Direct material		12,35,000
Direct wages		7,00,000
Prime cost		19,35,000
Add: Works overhead		1,96,000
Works cost or Factory cost		21,31,000
Add: Administration overheads		1,49,170
Cost of production		22,80,170

(i) Percentage of works overheads to wages $= \frac{1,96,000}{7,00,000} \times 100 = 28\%$

(ii) Percentage of Administration Overheads to works cost $= \frac{1,49,170}{21,31,000} \times 100 = 7\%$

(2) **Cost Sheet for a Motor Car**

Raw material	₹ 5,500
Wages	4,000
Prime Cost	9,500
Works overhead (28% on wages of 4,000)	1,120
Works cost	10,620
Administration Overheads	743.40
Cost of production or total cost in this case	11,363.40
Profit (25% on total cost)	2,840.85
Quotation	14,204.25

Answer to Q. No. 21

Cost Sheet of Electronics Ltd. of 10,000 units
Produced during for the year ending 31st December 2008
(Output 10,000 units)

	Total		*Cost per unit*	
	₹	₹	₹	₹
Materials		90,000		9.00
Wages		60,000		6.00
Prime Cost		1,50,000		15.00
Factory Overheads:				
Power and Consumable stores	12,000		1.20	
Factory Indirect wages	15,000		1.50	
Lighting of factory	5,500		0.55	

Defective works (rectification)	3,000		0.30
Plant repairs etc.	11,500		1.15
	47,000		4.70
Less : Sale of scrap	–2,000		–0.20
Work on Cost		45,000	4.50
Works Cost		1,95,000	19.50
Clerical salaries and Management Exp.		33,500	3.35
Cost of Production		2,28,500	22.85
Selling Overheads		5,500	00.55
Cost of Goods Sold		2,34,000	23.40
Profit (Balancing figure)		82,000	8.20
Sales		3,16,000	31.60

Estimated Cost Sheet for Output 15,000 units in 2009

		Total Cost ₹	*Cost per unit* ₹
Materials @ ₹ 9 = (9 × 15,000)	1,35,000		
Add : 10% increase in the cost	13,500	1,48,500	9.90
Direct wages @ ₹ 6 per unit = (6 × 15,000)	90,000		
Add: 10% increase	9,000	99,000	6.60
Prime Cost		2,47,500	16.50
Factory overheads : 75% of wages = (99,000 × 75/100)		74,250	4.95
Works Cost		3,21,750	21.45
Office and Selling exp. : 20% of works cost = (3,21,750 × 20/100)		64,350	4.29
Cost of Goods Sold		3,86,100	25.74
Profit (Balancing figure)		78,900	5.26
Sales		4,65,000	31.00

Working Notes:

(i) Percentage of Factory Overheads to Wages = (45,000 ÷ 60,000) × 100 = 75%;

(ii) Percentage of Office and Selling expenses to Works Cost = (39,000 ÷ 1,95,000) × 100 = 20%

Answer to Q. No. 22 **COST SHEET**

Period : March, 2011 Output : 4,000 Units

	Total ₹	*Cost per Unit* ₹ P.
Raw Materials Consumed	80,000	20.00
Direct Wages	48,000	12.00
Prime Cost	1,28,000	32.00
Works Overheads @ ₹ 4 per machine hour for 8,000 hours	32,000	8.00
Works Cost	1,60,000	40.00
Office Overheads @ 10% on Works Cost	16,000	4.00
Cost of Production (4,000 Units)	1,76,000	44.00
Less: Closing Stock of Finished Goods (400 units @ ₹ 44 each)	17,600	44.00
Cost of Goods Sold (3,600 Units)	1,58,400	44.00
Selling Overheads @ ₹ 1.50 per unit	5,400	1.50
Cost of Sales	1,63,800	45.50
Profit	16,200	4.50
Sales (3,600 units @ ₹ 50 each)	1,80,000	50.00

Answer to Q. No. 23

STATEMENT OF COST

Period : March, 2013

Opening Stock of Raw Materials		₹ 25,000	₹
(+) Purchase of Raw Materials		21,900	
		46,900	
(–) Closing Stock Raw Materials		26,250	
(a) Materials Consumed			20,650
Direct Wages			17,150
Prime Cost			37,800
Non-productive Wages		830	
Works Expenses		8,340	9,170
(+) Work-in-progress (1.3. 2013)			46,970
			8,220
(–) Work-in-progress (31.3. 2013)			55,190
			9,100
Work Cost			46,090
Office and Administrative expenses			3,160
(b) Total Cost of Production			49,250
(+) Stock of Finished Goods (1.3. 2013)			17,360
			66,610
(–) Stock of Finished Goods (31.3. 2013)			15,750
(c) Cost of Goods Sold			50,860
(d) Gross Profit on Goods sold			21,450
Sales			72,310

Net Profit:

		₹
Cost of Goods Sold		50,860
Selling and Distribution Expenses		4,210
Cost of Sales		55,070
Net profit for the month		17,240
Sales		72,310

Answer to Q. No. 24

COST SHEET

Particulars	A (100 units)		B (100 units)	
	Total ₹	Cost Per unit ₹	Total ₹	Cost Per unit ₹
Direct Materials	12,000	120	10,000	100
Direct Wages	8,000	80	5,000	50
Chargeable Expenses	1,000	10	1,000	10
Prime Cost	21,000	210	16,000	160
Factory Overheads (apportioned on the basis of Direct Wages in 8 : 5 ratio)	4,000	40	2,500	25
Factory Cost	25,000	250	18,500	185
Office Overheads (apportioned on the basis of Factory Cost in 250 : 185 ratio)	2,000	20	1,480	14.80
Cost of production	27,000	270	19,980	199.80
Profit @ 25% on Sales $\left(\frac{\text{Cost} \times 25}{100-25}\right)$	9,000	90	6,660	66.60
Selling Price	36,000	360	26,640	266.40

Answer to Q. No. 25 STATEMENT SHOWING COST AND PROFIT OF ARTICLES A, B AND C

(Produced and sold during the year ended 31st March, 2010)

Particulars	Article A		Article B		Article C	
	Cost of 1,600 units ₹	Cost per unit ₹	Cost of 800 units ₹	Cost per unit ₹	Cost of 600 units ₹	Cost per unit ₹
Direct Material	10,000	6.25	8,000	10.00	6,000	10.00
Direct Labour	12,000	7.50	7,000	8.75	11,000	18.33
Prime Cost	22,000	13.75	15,000	18.75	17,000	28.33
Manufacturing Expenses (in ratio of direct wages)	2,400	1.50	1,400	1.75	2,200	3.67
Works Cost	24,400	15.25	16,400	20.50	19,200	32.00
Administrative expenses (in ratio of works cost)						
General Expenses 1,200						
Staff Salaries 2,300						
Director's Fees 2,500						
Office Expenses 3,300						
9,300	3,782	2.36	2,542	3.18	2,976	4.96
Cost of Production	28,182	17.61	18,942	23.68	22,176	36.96
Selling Exp. (in ratio of units)	1,440	0.90	720	0.90	540	0.90
Cost of Sales	29,622	18.51	19,662	24.58	22,716	37.86
Profit	1,378	0.86	5,338	6.67	1,284	2.14
Sales	31,000	19.37	25,000	31.25	24,000	40.00

Answer to Q. No. 26 Computation of total sales value

	₹
Material Consumed	36,00,000
Rolling charges	6,20,000
	42,20,000
(–) Sale of Scrap	60,000
Total Cost	41,60,000
Profit (12.5% of ₹ 41,60,000)	5,20,000
Total Sales Value	46,80,000

Computation of Selling Price per unit

Assume, Selling Price per unit

→ Good output = ₹ x.

→ Defective output = ₹ $0.9x$

(₹ x less 10%)

Total Output

→ Good = 90% of 400 = 360 units

→ Defective = 10% of 400 = 40 units.

Hence, total Sales Value

→ Good output = $360x$

→ Defective output = $36x$ ($40 \times 0.9x$)

$396x$

Now, $396x$ = ₹ 46,80,000

i.e. x = 11,818.

Hence, Selling Price per unit

→ Good output = ₹ x = ₹ 11,818.

→ Defective output = ₹ 0.9x = ₹ 10,636

Answer to Q. No. 27 **TEXTILE FACTORY COST SHEET**

(Output : 33,000 yds.) (Month: May 2011)

		Cost per yard ₹	Amount ₹
Materials		0.424	14,000
Direct labour		0.545	18,000
	Prime Cost	0.969	32,000
Stores overhead		0.042	1,400
Other Factory overhead:			
Variable		0.273	9,000
Fixed		0.546	18,000
		1,830	60,400
Less: Sale of Cotton waste		.012	400
	Factory Cost	1.818	60,000
Administration overhead		.182	6,000
	Total Cost	2.000	66,000

Answer to Q. No. 28 **COST SHEET OF SPECIAL PAPER** (Output : 400 tons)

	₹	Total ₹	Cost per Unit ₹
Direct Materials:			
Paper pulp (500 tons @ ₹ 50 per ton)	25,000		
Other Materials 100 tons @ ₹ 30 per ton)	3,000	28,000	70
Direct Labour:			
80 Skilled men @ ₹ 3 per day for 25 days	6,000		
40 Unskilled men @ ₹ 2 per day for 25 days	2,000	8,000	20
Direct Expenses:			
Special equipments	3,000		
Special dyes	1,000	4,000	10
Prime Cost		40,000	100
Works Overhead:			
Variable at 100% on Direct Wages	8,000		
Fixed at 60% on Direct Wages	4,800	12,800	32
		52,800	1132
Less Sale of waste		800	2
Works Cost		52,000	130
General Overhead:			
Administration at 10% on Works Cost	5,200		
Selling and distribution at 15% on			
Works Cost	7,800	13,000	32.50
Total Cost		65,000	162.50
Profit @ 10% on Cost		6,500	16.25
Selling Price		71,500	178.75

Answer to Q. No. 29 **COST SHEET FOR THE PERIOD ENDED ON 31-7-2009**

Output 10,000 Units.

Particulars	₹	*Amount ₹*
Direct Materials : Opening Stock	10,000	
Add: Purchases	85,000	
	95,000	
Less: Closing Stock	4,000	
Cost of Raw Materials consumed		91,000
Direct Wages		20,000
Other Direct Expenses		10,000
Prime Cost		1,21,000
Factory Overheads – 100% of Direct Labour		20,000
Works or Factory Cost		1,41,000
Office Overheads – 10% of Works Cost		14,100
Cost of Production		1,55,100

STATEMENT OF PROFIT

Sales 9,000 Units

Particulars	*Total ₹*
Total Cost of Production (10,000 units @ ₹ 15.51 per unit)	1,55,100
Add: Opening Stock of Finished Products (1,000 units @ ₹ 16 per unit)	16,000
Cost of Production of goods available for sale	1,71,000
Less: Closing Stock of Finished Products @ ₹ 15.51 per unit of 2,000 units	31,020
Cost of Production of Goods Sold	1,40,080
Add: Selling and Distribution Overheads @ ₹ 2 per unit sold	18,000
Cost of Sales	1,58,080
Profit (20% on selling price)	39,520
Selling Price	1,97,600

$$\text{Selling Price per unit} = \frac{1,97,600}{9,000} = ₹\ 21.96$$

Answer to Q. No.30 **COST STATEMENT OF STOVES FOR THE YEAR 2012**

Output 4,000 stoves

Particulars		*Amount Total ₹*	*Amount per unit ₹*
	₹		
Opening stock of materials	35,000		
Purchase of materials	52,500		
	87,500		
Less: Closing stock	4,900		
	Cost of Materials consumed	82,000	20.65
Factory wages		95,000	23.75
	Prime Cost	1,77,600	44.40
Factory expenses		17,500	4.37
	Works Cost	1,95,100	48.77
Office Expenses		10,000	2.50
	Total Cost of Production	2,05,100	51.27
Opening Completed Stock		Nil	
Total Cost of Production during the period		2,05,100	
		2,05,100	
Less: Closing Completed Stock		35,000	
	Cost of Sales	1,70,100	
	Profit	18,900	
	Selling Price	1,89,000	

STATEMENT SHOWING QUOTATION PRICE FOR 1,000 STOVES

Particulars		Amount Total ₹	Amount per unit ₹
Material consumed	20,650		
+ 15% increase	3,098	23,748	23.748
	23,750		
Factory wages	2,375		
+ 10% increase		26,125	22.125
Prime Cost		49,873	49.873
Factory expenses		4,375	4.375
Factory Cost		54,248	54.248
Office expenses		2,500	2.500
Total Cost		56,748	56.748
Profit 10% on selling price		6,305	6,305
Selling price		63.053	63.053

RECONCILIATION OF COST AND FINANCIAL ACCOUNTS

Q.1. The following figures have been extracted from the Financial Accounts of a manufacturing firm for the first year of its operation :

	₹
Direct Material Consumption	50,00,000
Direct Wages	30,00,000
Factory Overheads	16,00,000
Administrative Overheads	7,00,000
Selling & Distribution Overheads	9,60,000
Bad Debts (Abnormal)	80,000
Preliminary expenses written off	40,000
Legal Charges	10,000
Dividends received	1,00,000
Interest received on deposits	20,000
Sales (1,20,000 units)	1,20,00,000
Closing Stock :	
Finished goods (4,000 units)	3,20,000
Work in progress	2,40,000

The cost accounts for the same period revealed that the normal direct material consumption was ₹ 56,00,000. Factory overhead is recovered at 20% on the prime cost. Administration overheads is recovered at ₹ 6 per unit of the production. Selling and distribution overheads are recovered at ₹ 8 per unit sold.

Calculate the amount of profit both as per financial records and as per costs records. Reconcile the profits as per the two records.

Q.2. **Profit & Loss Account for the year ended on March 31,2015.**

	₹		₹
To Materials	27,40,000	By Sales	60,00,000
To wages	15,10,000	(60,000 units)	
To factory expenses	8,30,000	By Stock of finished goods	1,60,000
To Admn. Expenses	3,42,400	(2,000 units)	
To selling expenses	4,50,000	By stock of WIP	1,20,000
To Preliminary expenses	60,000	By Dividend Received	18,000
Written off			
To Net Profit	3,65,600		
	62,98,000		62,98,000

In the cost accounts :

i) Factory expenses have been allocated at 20% of the prime cost.
ii) Admn. Expenses at ₹ 6 per unit produced.
iii) Selling expenses at ₹ 8 per unit sold.

Prepare costing Profit & Loss Account and reconcile the same with the profit disclosed by Financial Accounts.

Q.3. The Profit and Loss Account of XYZ Ltd. for the year ended 31st March, 2015 is as follows:

	₹			₹
To Materials	4,80,000	By Sales		9,60,000
To Wages	3,60,000	By Closing Stock		1,80,000
To Factory Expenses	2,40,000	By Work-in-progress:		
To Gross Profit	1,20,000	Materials	30,000	
		Wages	18,000	
		Factory Exp.	12,000	60,000
	12,00,000			12,00,000
To Administration Expenses	60,000	By Gross Profit		1,20,000
To Net Profit	66,000	By Dividend received		6,000
	1,26,000			1,26,000

As per the costing records, the factory overheads have been absorbed at 50% of wages and administrative overheads at ₹ 15 per kg. During the year 6,000 kgs. were manufactured and 4,800 kgs. were sold. Prepare a statement of cost and profit as per Cost Accounts and reconcile the costing profit with the financial profit.

Q.4. In a factory, works overheads are recovered @ 60% of the labour cost and office expenses @ 20% of works cost. The total expenditure is as follows :

	₹
Materials	2,00,000
Labour	1,50,000
Factory overheads	98,000
Office overheads	85,000
TOTAL	5,33,000

10% of the output is in the stock and remaining 90% quantity is sold for ₹ 5,10,000. Prepare Reconciliation Account after ascertaining profit as per cost books and financial books.

Q.5. From the following information, prepare a reconciliation account and ascertain the profit as per financial books :

	As per Cost Records (₹)	*As per Financial Books (₹)*
Value of opening stock of :		
(a) Raw materials	27,342	27,458
(b) Finished goods	21,000	20,642
(c) Work-in-progress	19,488	19,379
Value of closing stock of :		
(a) Raw materials	20,457	20,326
(b) Finished goods	24,000	32,860
(c) Work-in-progress	21,296	21,382
Profit as revealed	1,20,000	?

Q.6. The following information is available from the financial books of a company having a normal production capacity of 60,000 units for the year ended on 31.3.2015.

(i) Sales ₹ 10,00,000 (50,000 units).
(ii) There was no opening and closing stock of finished goods.
(iii) Direct material and Direct wage cost was ₹ 5,00,000 and ₹ 2,50,000 respectively.
(iv) Actual factory expenses were ₹ 1,50,000 of which 60% are fixed.
(v) Actual administrative expenses were ₹ 45,000 which are completely fixed.
(vi) Actual selling expenses are ₹ 30,000 of which 40% are fixed.
(vii) Interest and dividend received ₹ 15,000.

You are required to:

a) Compute profit as per financial books for the year ended on 31.3.2015
b) Prepare a cost sheet and ascertain profit as per cost accounts for the year ended on 31.3.2015 assuming that the indirect expenses are absorbed on the basis of normal production capacity.
c) Prepare a statement reconciling profits shown by financial and cost books.

Q.7. The financial books of a company reveal the following for the year ended on 31.3.2015 :

1)	*Stock on 1.4.2014*	
	– Finished goods (875 units)	₹ 74,373
	– Work-in-Progress	32,000
2)	Raw Material consumed	7,80,000
3)	Direct Labour	4,50,000
4)	Factory overheads	3,00,000
5)	Goodwill written off	1,00,000
6)	Administration overheads	2,95,000
7)	Dividend paid	85,000
8)	Bad debts	12,000
9)	Selling and Distribution overheads	61,000
10)	Interest received	45,000
11)	Rent received	18,000
12)	Sales (14,500 units)	20,80,000
13)	Closing stock –	
	– Finished goods (375 units)	41,250
	– Work-in-Progress	38,667

The cost records provide as under :

(a) Factory overheads are absorbed at 60% of direct wages.
(b) Administration overheads are recovered at 20% of factory cost.
(c) Selling overheads are charged at ₹ 4 per unit sold.
(d) Opening stock of finished goods is valued at ₹ 104 per unit.
(e) Closing stock of finished goods is valued on weighted average basis.

Required:

(i) Compute profit as per financial books.
(ii) Compute profit as per cost books.
(iii) Reconcile the profit as per cost books with the profit as per financial books.

Q.8. The following is the Trading and Profit & Loss Account of Omega Limited:

Particulars	₹	*Particulars*	₹
To Materials consumed	23,01,000	By Sales (30,000 units)	48,75,000
To Direct Wages	12,05,750	By Finished Goods Stock (1,000 units)	1,30,000
To Production Overheads	6,92,250	By WIP stock	97,500
To Administration Overheads	3,10,375	By Dividends received	3,90,000
To Selling Overheads	3,68,875	By Bank interest	65,000
To Preliminary Expenses written off	22,750		
To Goodwill written off	45,500		
To Fines	3,250		
To Interest on Mortgage	13,000		
To Loss on sale of machine	16,250		
To Taxation	1,95,000		
To Net Profit for the year	3,83,500		
	55,57,500		55,57,500

The cost records show –

(1) Production Overheads are absorbed at 20% of Prime Cost.

(2) Administration overheads are absorbed at ₹ 9.75 per unit produced.

(3) Selling overheads are absorbed at ₹ 13 per unit sold.

Required:

(1) Cost Sheet.

(2) Control Accounts of production overheads, administration overheads and selling overheads.

(3) Reconciliation Statement.

IMPORTANT THEORETICAL QUESTIONS

Q.1. Why is reconciliation of cost and financial accounts necessary? State the possible reasons for difference between profits shown by both the accounts.

Ans.: ***Need of Reconciliation:*** Since cost accounts and financial accounts are maintained separately, it is very certain that profit shown by cost accounts may not agree with profit shown by financial accounts. Hence, it becomes necessary that the profit shown by two set of accounts be reconciled.

Advantages of Reconciliation :

1. It helps in checking the arithmetical accuracy of both the sets of accounts.
2. It explains the reasons for difference in profits in two sets of books.
3. It promotes co-ordination between cost and financial accounting departments.

Reasons for Difference in profits : There are some expenditures and income which are purely financial in nature and are not recorded in cost books.

Some examples of financial expenditures or losses which appear only in financial books are as follows :

1. Loss on sale of assets;
2. Interest paid on bank loan, debentures, etc.;
3. Goodwill or preliminary expenses written off;
4. Fines and penalties;
5. Charitable donations;
6. Income tax;
7. Amount transferred to any reserve;
8. Payment of Dividends.

Some examples of financial income which appear only in financial books are as follows :

(a) Profit on sale of assets.

(b) Interest received.

(c) Dividends received.

(d) Transfer fees.

(e) Rental income.

One important reason for difference in profits is depreciation, which may be charged differently in two sets of books.

Different methods of valuation of closing stocks adopted in cost and financial accounts is also a reason difference in profit.

In cost accounts, overhead are generally absorbed on the basis of a pre-determined overhead rate whereas in financial accounts actual expenditure is recorded. It also results in difference in profits shown by cost and financial accounts.

Q.2. Explain the procedure of reconciliation of cost and financial accounts ?

Ans.: Following steps should be taken to reconcile the profits as shown by cost books and financial books :

1. Ascertain items which appear in financial accounts but not in cost accounts.
2. Ascertain items which appear in cost accounts only but not in the financial accounts.
3. Ascertain the difference between actual indirect expenses as recorded in financial books and the amount of overheads recovered in cost books.
4. Compare the figure of variation of stock of raw material, work-in-progress, finished goods, etc., as shown in the cost accounts and financial accounts.
5. Ascertain the other items which are shown in cost as well as financial accounts, but differ in value.
6. Start with profit as per cost accounts.
7. Add or deduct, as the case may be, item which differ from financial accounts and item which are recorded in financial accounts and not in cost accounts.
8. After making the necessary additions and deductions, the resultant figure is profit as per financial accounts.

Q.3. "Reconciliation of cost and financial accounts in modern computer age is redundant". Comment.

Ans.: This statement signifies the importance of computers in modern age and its relation with the accounting aspect. The functioning of computers reduces the necessity for reconciliation of cost and financial accounts due to following reasons:

1. Computers can bring out different financial accounting and cost accounting statements and reports and precisely.
2. The reasons for difference in profits as per cost and financial books can be presented at one place in one statement by the computer.

Hence, the work of the accountant has been greatly reduced in computing the two amount of profits. However, the main reason for disagreement of profits shown by financial and cost Accounts is the presence of certain items in financial books only and not in cost books. Similarly, there may be some items which appear in cost books but do not find any place in financial books. Hence, the reconciliation of cost and financial accounts is still considered essential and not redundant even in the modern age of computers.

REVISIONARY PROBLEMS

Q.1. The Hind Workshop started on 1st January, 2013, manufacturing two types of machines styled as A and B. You are asked to prepare a statement showing the cost of each type of machine as well as profit on its sale.

Materials used for manufacturing A and B types are ₹ 1,25,000 and ₹ 75,000 respectively, while the labour charges are ₹ 75,000 and ₹ 60,000. Works overhead is charged at 70% on labour and office overhead at 20% on works cost.

250 machines of A type and 150 machines B type were manufactured and sold during the year at an average price ₹ 2,000 and ₹ 2,500 respectively. Find the cost of production per machine of each type and also prepare profit and loss account for the period in the financial books. The actual works expenses for A and B types were ₹ 47,000 and ₹ 40,000 respectively, while the actual office expenses were ₹ 52,700 and ₹ 38,500 respectively. Reconcile the profit figures of the two sets of books.

[Ans.: Profit as per Cost Accounts ₹ 3,59,600; Profit as per Financial Accounts ₹ 3,61,800].

Q.2. A firm of Sports Equipments commenced business on 1-4-2013 for manufacturing 2 varieties of bat, "*Senior*" *and* "*sub-junior*". The following information has been extracted from the accounts for the half, year period ended 30.9.2013 :

		₹
(i)	Average material cost per piece of "*Senior*" bat	80
(ii)	Average material cost per piece of "*Sub-junior*" bat	60
(iii)	Average cost of labour per piece of "*Senior*" bat	140
(iv)	Average cost of labour per piece of "*Sub-junior*" bat	110
(v)	Finished goods sold :	
	Senior 300 pieces	
	Sub-junior 700 pieces	
(vi)	Sale price :	
	– Per piece of "*Senior*" bat	500
	– Per piece of "*Sub-junior*" bat	390
(vii)	Work expenses incurred during the period	1,20,000
(viii)	Office expenses	68,000

You are required to prepare a statement showing : (1) the profit per each branch-piece of bat; charge labour and material at actual average cost, works overheads at 100% on labour cost and office overheads at 25% of works cost.(2) financial profit for the half-year ending 30.9.2013. (3) reconciliation between profits as shown by cost accounts and financial accounts.

[Ans.: Profit as per Cost Books ₹ 43,000 and as per financial books ₹ 50,000].

Q.3. A Company's Trading and Profit and Loss Accounts was as follows:

Dr. **Cr**

	₹		₹
To Purchases	25,210	By Sales: 50,000 units	
Less: Closing Stock	4,080	@ ₹ 1.50 each	75,000
	21,130	By Discount received	260
To Direct Wages	10,500	By Profit on sale of land	2,340
To Works Expenses	12,130		
To Selling Expenses	7,100		
To Administration Expenses	5,340		
To Depreciation	1,100		
To Net Profit	20,300		
	77,600		77,600

The Profit as per Cost Accounts was only ₹ 19,770. Reconcile the financial and cost profits using the following information:

(a) Cost accounts valued closing stock at ₹ 4,280.
(b) The works expenses in the cost accounts were taken at 100% of direct wages.
(c) Selling expenses and administration expenses were charged in the cost accounts at 10% of sales and ₹ 0.10 per unit respectively.
(d) Depreciation charged in the cost accounts was ₹ 800.

Q.4. The following informations from the financial accounts are available for the year ending 31.3.2012.

	₹
Direct material consumption	2,50,000
Direct wages	1,00,000
Factory overheads	3,80,000
Administration overheads	2,50,000
Selling and distribution overheads	4,80,000
Bad debts	20,000
Preliminary expenses (written off)	10,000
Legal charges	5,000
Dividends received	50,000
Interest on deposit received	10,000
Sales 1,20,000 units	7,00,000
Closing stock: Finished stock-40,000 units	1,20,000
Work-in-progress	80,000

The cost accounts reveal:

Direct material consumption ₹ 2,80,000
Factory overheads recovered at 20% on prime cost.
Administration overhead at ₹ 3 per unit of production
Selling and distribution overheads at ₹ 4 per unit sold

Prepare: (1) Costing Profit and Loss Account.
(2) Financial Profit and Loss Account.
(3) Statement reconciling the profit or loss disclosed by the costing profit and loss account and financial profit and loss account.

[Ans.: *Loss as per Cost Books ₹ 4,22,000; and*
Loss as per Financial Books ₹ 5,35,000].

Q.5. A company's profit as per costing system was ₹ 46,126 whereas the financial accounts showed a profit of ₹ 33,248 for the year ended on 31.3.2013.

The profit and loss account is given below:

To Opn. Stock		4,94,358	By Sale		6,93,000
(+) Purchases		1,64,308			
		6,58,666			
(–) Closing Stock	1,50,242	5,08,424			
To Direct wages		46,266			
To factory overheads		41,652			
To Gross profit c/d		96,658			
		6,93,000			6,93,000
To Admn. Expenses		19,690	By Gross Profit b/d		96,658
To Selling Expenses		44,352	By Sundry income		632
To Net Profit		33,248			
		97,290			97290

The cost records show :
(1) Closing stock balance of ₹ 1,56,394.
(2) Direct wages absorbed ₹ 49,734.
(3) Factory overheads absorbed ₹ 39,428.
(4) Admn. Expenses charged @ 3% on sales.
(5) Selling expenses charged @ 5% on sales.
(6) No mention of sundry income.

Prepare reconciliation account.

Q.6 From the following figures prepare a reconciliation statement :

Net Loss as per costing records	1,72,400	Stores adjustment (credit) in financial books	475
Works overhead under recovered in cost	3,120	Value of Opening stock	
Administrative overhead recovered in excess	1,700	– In Cost books	52,600
Depreciation charged in financial records	11,200	– In financial books	54,000
Depreciation recovered in costing	12,500	Value of closing Stock	
Interest received not included in costing	8,000	– In Cost books	51,000
		– In Financial books	49,600
Obsolescence charged (Loss) in financial records	5,700	Interest charged in cost accounts but not in financial accounts	6,000
Income tax provided in financial books	40,300	Provision for doubtful debts in financial accounts	800
Bank interest credited in financial books	750	Preliminary expenses written off in financial accounts	150

Ans. Net Loss as per financial accounts ₹2.07,045

Q.7 The net profit of A Co. Ltd. appeared at ₹60,652 as per financial records for the year ending 31st March 2012. The cost books, however, showed a net profit of ₹86,200 for the same period. A scrutiny of the figure from both the sets of ac counts revealed the following facts:

	₹
Works overhead under recovered in cost accounts	1,560
Administrative overheads over-recovered in cost accounts	850
Depreciation charged in financial accounts	5,600
Depreciation recovered in cost accounts	6,250
Interest on investment not included in cost accounts	4,000
Loss due to obsolescence charged in financial accounts	2,850
Income tax provided in financial accounts	20,150
Bank interest and transfer fee in financial books (credit)	375
Stores adjustment (credit in financial books)	237
Value of opening stock in cost accounts 24,800	
Value of opening stock in financial accounts	26,300
Value of closing stock in cost accounts 25,000	
Value of closing stock in financial accounts	23,000
Interest charged in cost accounts	2,000
Goodwill written off	5,000
Loss on sale of furniture	600

Prepare a statement showing the reconciliation between the figure of net profit as per cost accounts and the figure of net profit as shown in the financial books.

Q.8 The following is a summary of the Trading and Profit and Loss Account of a manufacturing company for the year ended 31st March.

Trading and Profit and Loss Account

	₹ (000)		₹ (000)
Materials consumed	2,740	Sales (1,20,000 units)	6,000
Wages	1,510	Finished stock (4,000 units)	160
Factory expenses	830	Work-in-progress	120
Administration expenses	382	Dividend Received	18
Selling and distribution expenses	450		
Preliminary expenses (written off)	40		
Goodwill (written off)	20		
Net profit	326		
	6,298		6,298

In the accounts the following allocation have been made :

(a) Factory expenses at 20% on prime cost. (b) Administration expenses at ₹3 per unit of production. (c) Selling and distribution expenses at ₹4 per unit of sales.

You are required to prepare a Costing Profit and Loss A/c of the company and to reconcile the profit disclosed with that shown in the financial account.

Ans. Profit as per cost Books ₹341 thousands

Q.9 The following information is available from the financial books of S.V. Ltd. for the year ended 31st March 2013:

Direct materials used	₹ 3,00,000	Sales	₹ 7,50,000
Direct wages	2,00,000	(2,00,000 units)	
Factory expenses	1,20,000		
Office expenses	40,000		
Selling & Distribution expenses	80,000		
Net Profit	10,000		
	7,50,000		7,50,000

Normal output of the factory is 2,50,000 units. Factory overheads are fixed upto ₹ 60,000 and office expenses are fixed for all practical purposes. Selling and distribution expenses are fixed to the extent of ₹ 50,000, the rest are variable.

Prepare a statement reconciling the profits as per Cost and Financial Accounts assuming that indirect expenses are absorbed on the basis of normal production capacity in cost accounts. ***(Ans. Profit as per Cost Books ₹ 40,000)***

Q.10 A company's profit as per the costing system was ₹ 46,126 whereas the audited financial accounts showed a profit of ₹ 33,248. From the following additional information you are required to prepare a reconciliation statement, showing clearly the reasons for the difference between the two figures:

Profit and Loss Account
(for the year ended 31st December, 2012

Dr.		₹	*Cr.*	₹
Opening stock	4,94,358		Sales	6,93,000
Purchases	1,64,308			
	6,58,666			
Closing stock	–1,50,242	5,08,424		
Direct wages		46,266		
Factory overheads		41,552		
Gross profit c/d		96,658		
		6,93,000		6,93,000
Administration expenses		19,690	Gross profit	96,658
Selling expenses		44,352	Sundry income	632
Net profit		33,248		
		97,290		97,290

The cost records show (i) Closing stock balance of ₹ 1,56,394, (ii) Direct wages absorbed during the year ₹ 49,734. (iii) Factory overhead absorbed ₹ 39,428; (iv) Administration expenses charged @ 3% on sales; (v) Selling expenses charged @ 5% of value of sales; (vi) No mention of sundry income.

Q.11 The following is the summarized Trading and Profit and Loss Account of T Ltd. For the year ended 31st December, 2012:

	₹		₹
Materials consumed	7,08,000	Sales (30,000 units)	15,00,000
Direct wages	3,71,000	Finished stock (1000 units)	40,000
Works overheads	2,13,000	Work-in-progress	30,000
Administration overheads	95,500		
Selling and distribution overheads	1,13,500		
Net profit for the year	69,000		
	15,70,000		15,70,000

The company's cost records show that in course of manufacturing a standard unit (i) Works overheads have been charged @ 20% on prime cost, (ii) Administration overheads have been recovered at ₹3 per finished unit, and (iii) Selling and distribution overheads have been recovered at ₹4 per unit sold.

You are required to prepare (i) the Costing Profit and Loss Account indicating the net profits, and (ii) a Statement reconciling the profits as disclosed by the Cost Accounts and that shown in the Financial Accounts. ***(Ans. Profit as per Cost Books ₹ 66,000)***

Q.12 The following figures are available from the books of Mangal Drugs Co. for the year ended 31st Dec. 2012:

	Financial Accounts ₹	*Cost Accounts* ₹		*Financial Accounts* ₹	*Cost Accounts* ₹
Stock on 1-1-2012			Direct wages	40,000	
Raw materials	12,000	10,000	Indirect wages	6,000	
Work-in-Progress	14,000	13,000	Other factory expenses	34,000	42,000
Finished stock	10,000	9,000	Sales	2,20,000	
Stock on 31-12-2012			Administration expenses	6,000	4,600
Raw materials	8,000	8,600	Selling expenses	8,000	9,000
Work-in-progress	6,000	7,400	Financial expenses	2,000	
Finished stock	11,800	12,400	Dividend received	3,200	
Purchases	80,000		Net profit	37,000	

Prepare a cost sheet and reconcile costing profit with financial books profit.
(Ans. Profit as per cost books ₹ 34,800)

Q.13 The profit as per cost accounts is ₹1,50,000. The following details are ascertained on comparison of cost and financial accounts:

	Cost Accounts	*Financial Accounts*
(a) Opening Stock:		
Materials	₹10,000	₹15,000
Finished goods	18,000	16,000
(b) Closing Stock :		
Materials	12,000	13,000
Finished goods	20,000	17,000

(c) Interest charged but not paid ₹ 10,000; (d) Dividends received from U.T.I. ₹1,000; (e) Indirect expenses charged to Financial Accounts ₹80,000 but ₹75,000 recovered in Cost Accounts. Find out the profit as per Financial Accounts by preparing a reconciliation Statement.
(Ans. ₹1,31,000)

Solutions to Revisionary Problems

Answer to Q. No. 1 :

Step (I)

Computation Of Profit as Per Financial Books

Profit & Loss Account

To Material		By Sales	
A 1,25,000		A 250 x 2000	500000
B 75,000	2,00,000	B 150 x 2500	375000
To Labour			
A 75000			
B 60000	1,35,000		
To Work Exp.			
A 47000			
B 40000	87,000		
To Office Exp.			
A 52700			
B 38500	91,200		
To Net Profit	3,61,800		
	8,75,000		8,75,000

Step II:- Computation of Profit as per cost books

	Total	A	B
Material	2,00,000	125000	75000
Labour	1,35,000	75000	60000
Prime Cost	3,35,000	2,00,000	1,35,000
+ Work Overhead (70% of Labour)	94,500	52,500	42,000
Work Cost	4,29,500	252500	1,77,000
+ Office Overhead (20 % of Work Cost)	85,900	50,500	35,400
Total Cost	515400	303000	212400
Profit	3,59,600	1,97,000	1,62,600
Sales	8,75,000	5,00,000	3,75,000

Reconciliation Statement

Particulars	+	-
1) Net Profit as per Cost Books	3,59,600	
2) Works Overheads Over recovered in Cost books	7,500	
3) Office Overheads under recovered in cost books		5,300
	3,67,100	5,300

Net Profit as per financial books = 3,67,100 – 5,300 = ₹ 3,61,800

Answer to Q. No. 2 : **Statement of cost and profit (Cost books)**

Particulars	*Senior bat 300 units*		*Sub-junior bat 700 units*		*Total of both varieties*
	Per unit cost	*Total cost*	*Per unit cost*	*Total cost*	*Total cost*
Material cost	80	24,000	60	42,000	66,000
Labour cost	140	42,000	110	77,000	1,19,000
Prime cost	220	66,000	170	1,19,000	1,85,000
Add : Factory overhead (100% of labour cost)	140	42,000	110	77,000	1,19,000

Work cost	360	1,08,000	280	1,96,000	3,04,000
Add : Office overhead (25% of works cost)	90	27,000	70	49,000	76,000
Total cost	450	1,35,000	350	2,45,000	3,80,000
Sales	500	1,50,000	390	2,73,000	4,23,000
Profit	50	15,000	40	28,000	43,000

Profit and loss account (Financial books) for half-year ending 30-9.2009

Particulars		₹	*Particulars*		₹
To Materials			By Sales		
Senior bat	24,000		Senior	1,50,000	
Sub-junior bat	42,000	66,000	Sub-junior	2,73,000	4,23,000
To Wages					
Senior bat	42,000				
Sub-junior bat	72,000	1,19,000			
To Works expenses		1,20,000			
To Office expenses		68,000			
To Net Profit		50,000			
		4,23,000			4,23,000

Reconciliation Statement

	₹
Profit as per Cost Books	43,000
Add : Office overhead expenses over charged in cost books ₹ 76,000 as against actual of ₹ 68,000	8,000
	51,000
Less : Works overheads under-charged in cost books ₹ 1,19,000 instead of actuals of ₹ 1,20,000	1,000
profit as per Financial Accounts	50,000

Answer to Q. No. 3

Reconciliation Statement

Particulars	+	–
1) Net Profit as per Cost Books	19,770	
2) Over-Valuation of closing stock in cost books		200
3) Under-Recovery of works expenses in cost books		1,630
4) Over-recovery of selling Expenses in Cost Books	400	
5) Under-recovery of Admn. Expenses in cost books		340
6) Under recovery of depreciation in cost books		300
7) Discount received not recorded in cost books	260	
8) Profit on sale of land not recorded in cost books	2,340	
	22,770	2,470

Net profit as per financial books

= 22,770-2,470

= ₹ 20,300

Answer to Q. No. 4.

Costing P/L A/c

(Fc. the year ended 31/3/2012)

To Direct Material	2,80,000	By Sales	7,00,000
Wages	1,00,000	Net Loss	4,22,000
Prime Cost	3,80,000		
To Factory Overhead (20% of prime Cost)	76,000		
	4,56,000		
- WIP (Closing stock)	80,000		
Factory Cost	3,76,000		

To Adm. Overhead (₹ 3 per unit produced)	4,80,000	
Cost of production (160 000 units)	8,56,000	
– Closing Stock of finished goods (40,000 units) (₹ 5.35 per unit)	2,14,000	
Cost of goods sold	6,42,000	
To Selling overhead	4,80,000	
	11,22,000	11,22,000

$$\text{Cost per unit of Finished goods} = \frac{8,56,000}{1,60,000 \text{ unit}} = ₹ 5.35$$

Financial P/L A/c
(For the Years ended 31/3/2012)

To Direct Material	2,50,000	By Sales	7,00,000
Wages	1,00,000	Dividend Received	50,000
Factory overhead	3,80,000	Int. on Deposit	10,000
Adm. Overhead	2,50,000	By Closing stock	
Selling & Distribution	4,80,000		
Bad debts	20,000	Finished goods	1,20,000
Preliminary Exp. W/off	10,000	WIP	80,000
Legal charges	5,000	By Net Loss	5,35,000
	14,95,000		14,95,000

Reconciliation Statement

Loss as per Cost Accounts		4,22,000
Add : Factory overhead under absorbed	3,04,000	
Over valuation of c/s in cost A/c	94,000	
Bad debts not included in costing	20,000	
Preliminary Exp. Not shown in costing	10,000	
Legal charges not included in costing	5,000	4,33,000
		8,55,000
Less : Material cost over charged in costing (2,80,000-2,50,000)	30,000	
Adm overhead over absorbed (4,80,000-2,50,000)	2,30,000	
Dividend, Received not included in cost	50,000	
Int. Deposit Received	10,000	3,20,000
Loss as per Financial Accounts		5,35,000

Answer to Q. No. 5 :

Reconciliation Account

To over-valuation of closing stock in cost	6,152	By Profit as per cost books	46,126
To under-recovery of factory overheads	2,224	By over-absorption of direct wages	3,468
To under-recovery of selling expenses	9,702	By over-recovery of Admn. Expenses	1,100
To profit as per financial books	33,248	By sundry income not recorded in cost books.	632
	51,326		51,326

	₹	₹
Answer to Q. No. 6 :		
Net Loss as per cost records		(-) 1,72,400
Add : Administrative overhead over recovered	1,700	
Interest received not included in cost books	8,000	
Bank interest credited in financial books	750	
Stores adjustment credited in financial books	475	
Depreciation overcharged in cost records (12,500 –11,200)	1,300	
Interest charged in cost accounts only	6,000	+ 18,225
		1,54,175
*Less :*Works overheads under recovered in cost books	3,120	
Obsolesce charged in financial books as loss	5,700	
Income tax provided in financial books	40,300	
Opening stock undervalued in cost records (54,000-52,600)	1,400	
Closing stock over valued in cost records (51,000-49,600)	1,400	
Preliminary expenses written off in financial account	800	
Provision for doubtful debts	150	- 52,870
Loss as per Financial Accounts		(-) 2,07,045

Answer to Q. No. 7 : **Reconciliation Statement as at 31st March, 2012**		
	₹	₹
Profit as per Cost Books		86,200
Add : Administrative overheads over-recovered	850	
Depreciation excess recovered in cost books 6,250 – 5,600)	650	
Interest on investments	4,000	
Bank interest and transfer fee	375	
Stores adjustment credited in financial books	237	
Interest charged in cost accounts only	2,000	+8,112
		94312
*Less :*Works overhead under-recovered	1,560	
Loss due to obsolescence charged in financial books	2,850	
Income tax provided in financial accounts	20,150	
Opening stock under valued in cost books (26,300 – 24,800)	1,500	
Closing stock over-valued in cost books (25,000 – 23,000)	2,000	
Goodwill written off	5,000	
Loss on sale of furniture	600	– 33,600
Profit as per Profit and Loss Accounts		60,652

Answer to Q. No. 8 :

Costing P&L A/c for the year ending 31st March

	₹ ,000		₹ ,000
Material consumed	2,740	Sales	6,000
Wages	1,510	(1,20,000 units)	
Prime cost	4,250		
Factory expenses (20% on prime cost = 4,250 × 20/100)	850		
	5,100		
Less : Closing WIP	-120		
Factory cost (1,24,000 units)	4,980		
Admn. Exp @ ₹ 3 per unit	372		
Cost of production : (1,24,000 units)	5,352		
Less : Closing Finished Stock (4,000 units)	-173		
Cost of goods sold (1,20,000 units)	5,179		

Selling & Dist. Exp @ ₹ 4 per unit sold	480		
Cost of sales	5,659		
Profit	341		
Sales	6,000		6,000

Note : (i) Units produced = Units sold + Closing stock in units = 1,20,000 + 4,000 = 1,24,000 units

(ii) Value of closing stock of finished goods = ₹ 53,52,000 = ₹ 1,72,645.16 taken as ₹ 173 thousands.

Reconciliation statement as at 31st March

		(₹ '000)	
Profit as per Costing P & L A/c			341
Add : Factory expenses over absorbed (850 – 830)	20		
Add : Selling & Dist. Expenses over-absorbed (480-450)	30		
Add : Dividend received	18		+68
			409
Less : Admn. exp. under absorbed (382-372)	10		
Less : Finished stock at the end valued higher in Cost A/cs (173-160)	13		
Less : Preliminary exp. written off	40		
Less : Goodwill written off	20		-83
Profit as per Financial P & L			326

Answer to Q. No. 9 :

Variable component of cost varies in proportion to output. For various fixed costs, absorption rates are calculated as follows with respect to normal output of 2,50,000 units :

$$\text{Fixed factory overhead rate} = \frac{60,000}{2,50,000} = ₹\ 0.24 \text{ per unit}$$

$$\text{Office overhead rate} = \frac{40,000}{2,50,000} = ₹\ 0.16 \text{ per unit}$$

$$\text{Fixed Selling \& Distribution overhead rate} = \frac{50,000}{2,50,000} = ₹\ 0.20 \text{ per unit}$$

Statement of Cost for the year ending 31st March 2013

Direct material used		₹ 3,00,000
Direct wages		2,00,000
PRIME COST		5,00,000
Factory expenses : Variable 1,20,000 – 60,000 =	60,000	
Fixed 2,00,000 units @ 0.24 =	48,000	1,08,000
FACTORY COST		6,08,000
Office expenses : 2,00,000 units @ 0.16		32,000
OFFICE COST		6,40,000
Selling & Dist. Exp : Variable 80,000 – 50,000 =	30,000	
Fixed 2,00,000 units @ 0.20 =	40,000	70,000
COST OF SALES		7,10,000
Profit (Balancing figure)		40,000
SALES		7,50,000