COST SHEET

Question 1.A Company makes two distinct types of vehicles A and B. The total expenses during a period as shown by the books for assembly of 600 of A and 800 of B are as under:

Material	Rs. 1,98,000	Depreciation	Rs. 2,200
Direct Wages	Rs. 12,000	Labour amenities	Rs. 1,500
Stores Overheads	Rs. 19,800	Works—general	Rs. 30,000
Running expenses of machine	Rs. 4,400	Administration and Selling	Rs. 26,800

Other data available to you are :	**A:B**
Material cost ratio per unit	1 :2
Direct labour ratio per unit	2:3
Machine utilisation ratio per unit	1 :2

Required: Calculate the cost of each vehicle per unit giving reason for the basis of apportionment adopted by you.

Question 2. The cost structure of an article the selling price of which is Rs. 45,000, is as follows :

Direct Materials 50%, Direct Labour 20%, Overheads 30%

An increase of 15% in the case of materials and 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 profit per article.

You are required to prepare (a) A statement of profit per article at present, and (b) The revised selling price to produce the same percentage of profit to sales as before.

Question 3.SK Engineering Company Limited manufactures two types of product – type 'XD' and type 'XE'. The company's records show the following particulars for those products for the month of May:

Particulars	***Rs.***
Direct Materials	38,10,000
Direct Labour	20,10,000
Production Overheads	6,03,000
Admin Overheads	6,42,300

There was no work-in-progress at the beginning or at the end of the month. It was ascertained that:

i. Direct Material Cost per bearing for type 'XD' was 160 percent of those for type 'XE'.
ii. Direct Labour Cost per bearing for type 'XE' was 40 percent of those for type 'XD'.
iii. Production Overheads were absorbed on the basis of direct labour cost,
iv. Admin Overheads were absorbed on the basis of factory cost.
v. Selling and Distribution Overheads were Rs. 2 per bearing sold for each type.
vi. Stock of Finished Bearing on 1st May was 15,000 bearings @ Rs. 15 of type 'XD' and 20,000 bearings @ Rs. 8 of type 'XE'.
vii. Production during the month of May was 2,70,000 bearings of type 'XD' and 3,30,000 bearings of type 'XE' and out of May's output 25,000 bearings of type 'XD' and 40,000 bearings of type 'XE' would remain in stock on 31st

May which would be valued at cost of production.

You are required to:

a) Prepare a statement showing cost of production each type of bearings.
b) Prepare a statement showing the selling price at which the bearings would be marketed, if the company desires @ 20 percent profit on selling price.

Question 4. From the following information, prepare a statement showing the cost and profit per unit.

1. Direct material consumed	Rs. 4,00,000
2. Direct labour	40% of direct material cost
3. Direct expenses	50% of direct labour cost
4. Factory overheads	25% of prime cost
5. Adm. expenses have been absorbed @ Rs. 150 per 10 units produced.	
6. Selling & distribution expenses have been applied @ Rs. 500 per 100 units sold.	
7. Opening finished Stock	800 units @ Rs. 85.50 per unit
8. Closing finished Stock	400 units
9. Finished goods sold	16,400 units
10. Profit	1/6th of sales

Question 5. The X Ltd. submits the following information for current year:-

Sales for the year	2,75,000	Direct labour	65,000
Inventories at the beginning: Finished goods	 7,000	Factory overhead was 60% of the direct labour cost	

Work-in-progress	4,000		
Purchases of materials	1,10,000	*Inventories at the end of the year:* Work-in-progress Finished goods	 6,000 8,000
Materials inventory: at the beginning of the year at the end of the year	 3,000 4,000	*Other expenses for the year:* Selling expenses 10% of sales Administrative expenses 5% of sales	

Required: Prepare a Statement of Cost and Profit & Loss Statement.

Question 6. The Budget Controller of PCT (Exam.) Ltd. a Manufacturing Organisation producing three products has compiled the following data for the preparation of the annual budget for the next year.

	Price /Kg.	*Product A*	***Product B***	***Product C***
Raw Materials	Rs.			
RM 1	5	1	6	12
RM 2	2	6	—	14
RM 3	3	6	10	2
Direct Labour:	**Rate/Hour**		**Hours Per unit**	
Dept. 1	**2**	9	4	4
Dept. 2	**3**	3	**4**	2
Dept. 3	**4**	2	5	4
Factory Overheads Variable Rs. / Unit		4	8	6
Sales Value (Rs. Lacs)		346.50	275.40	263.25

Opening Stock of Finished Goods (Units)		1200	800	1000
Fixed Factory Overheads Rate Per Direct Labour Hour				
Dept. 1	**Rs. 5**			
Dept. 2	**Rs. 3**			
Dept. 3	**Rs. 6**			

The following policies have been laid down for the budget year -

i. Fixed Factory Overheads will be absorbed on Direct Labour Hour basis.

ii. Administration Overheads are absorbed at the rate of 20% of Factory Cost.

iii. Selling and Distribution Overheads (one-third variable) are recovered at the rate of 25% of the cost of production including Administration Overheads.

iv. Selling Price Per Unit: Product 'A' Rs. 231, Product 'B' Rs. 306, Product 'C Rs. 351

v. Inventories of Finished Goods will be reduced by 25% at the end of budget year

vi. The Finished Goods Inventories are valued on marginal cost basis. The marginal costs of the opening stocks in the beginning of budget year were: Product 'A' Rs. 80, Product 'B' Rs. 120 and Product 'C Rs. 140.

Required: Prepare Statement of Product wise Total Cost and Profit for the budget year.

Question 7. The books of ABC Ltd. present the following data for the month of March:

1. Balance

	1st March (Rs.)	31st March (Rs.)
Raw material	8,000	8,600
Work-in progress	8,000	12,000
Finished Goods	14,000	18,000

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

Required:- Cost sheet for the month of March?

Question 8 Following costs were incurred in producing 800 MT of M.S. Rods:

Materials	Rs. 2,80,000
Labour	1,00,000
Processing Charges	1,00,000
Total Cost	Rs. 4,80,000

Of the total output, 10% was defective and had to be sold after a discount of 10% off the normal price. The scrap arising out of the production realised a sum of Rs. 8,760. The sale price is calculated to yield 15% profit on sales. You are required to find out the normal price as well as the discounted price per MT of M.S. Rods.

Question 9 A factory incurred the following expenditure during the year:

		Rs.
Direct material consumed		12,00,000
Manufacturing Wages		7,00,000
Manufacturing Overheads:		
Fixed	3,60,000	
Variable	2,50,000	6,10,000
		25,10,000

In the next year, following changes are expected in production and cost of production.

i. Production will increase due to recruitment of 60% more workers in the factory,
ii. Overall efficiency will decline by 10% on account of recruitment of new workers.
iii. There will be an increase of 20% in Fixed overhead and 60% in Variable overhead,
iv. The cost of direct material will be decreased by 6%.
v. The company desire to earn a profit of 10% on selling price.

Ascertain the cost of production and selling price.

Question 10. The books of Adarsh Manufacturing Company present the following data for the month of April:

Direct labour cost Rs. 17,500 being 175% of works overheads.

Cost of goods sold Rs. 56,000 Excluding Admin Expense

Inventory accounts showed the following opening and closing balances:

Particulars	***April 1***	***April 30***
	Rs.	**Rs.**
Raw materials	8,000	10,600
Works-in-progress	10,500	14,500
Finished goods	17,600	19,000

Other data are:	**Rs.**
Selling expenses	3,500
General and administration expenses	2,500
Sales for the month	75,000

Required: (i) Compute the value of materials purchased, (ii) Prepare a cost statement showing the various elements of cost and also the profit earned.

Question 11. ABC Ltd. Provides you the following information:

Production Capacity	**33-1/3%**	**50%**
Sales (units)	9,000	15,000
Production (units)	10,000	15,000
Direct Material	1,10,000	1,65,000
Direct Labour	1,80,000	2,30,000
Production Overheads (including depreciation)	1,10,000	1,25,000
Depreciation on Production Machinery	20,000	20,000
Administrative Expenses (related with production activity)	20,950	20,950
Selling & Distribution Expenses	38,000	50,000

Variable labour cost becomes 50% higher for activity in excess of 19,000 units due to the necessity for overtime working. The variable element of selling and distribution expenses is a function of sales. All other costs with a variable element are a function of production volume.

During the previous year, All goods produced were sold @ Rs. 40 were Rs. 7,20,000

During the next year, Selling price is expected to decrease by 5%, Direct Material price is expected to increase by Rs. 1 per unit with 5% inefficiency (wasting allowance), Direct Wage rate is expected to increase by 12-1/2% with 25% increase in productivity of variable labour input, Fixed Production Overheads and Fixed Selling and Distribution Overheads are expected to increase by 20%.

Required: Prepare a Statement of Cost and Profit for the next year if Sales and Output are expected to increase by (a) 1000 units, and (b) 50%

Question 12 A manufacturing company has an installed capacity of 1,50,000 units per annum. Its cost structure is given below:

Particulars	Rs.
(i) **Variable cost per unit**	
Materials	10
Labour (subject to a minimum of Rs. 1,00,000 per month)	10
Overheads	4
(ii) **Fixed overheads per annum**	1,92,300
(iii) **Semi-variable overheads** per annum at 75% capacity (it will increase by Rs. 4,000 per annum for increase of every 5% of the capacity utilisation or any part thereof)	60,000

The capacity utilisation for the next year is budgeted at 75% for first three months, 80% for the next six months and 90% for the remaining three months.

Required: If the company is planning to have a profit of 20% on the selling price, calculate the selling price per unit for the next year.

Question 13 Find out the selling price of an article whose costs for production and sale of 1,00,000 units are:

Material Rs. 50,000, Labour Rs. 40,000, Production Overheads are absorbed @ 100% of Prime Cost, Administration Overheads are absorbed @ Rs.0.70 per unit produced, Selling and Distribution Overheads are recovered @10% on sales.

The fixed portion of capital employed is Rs. 30,000 and the varying portion is 40% of Sales. A profit of 8% net on capital employed after payment of tax at 40% of the earnings is desired.

Question 14 The following figures are extracted from the Trial Balance of X Ltd. on 31st March.

Inventories:	Rs.		Rs.
Finished stock	80,000	Indirect labour	18,000
Raw materials	1,40,000	Factory supervision	10,000
Work-in-process	2,00,000	Repairs and upkeep-factory	14,000
Office appliances	17,400	Heat, light and power	65,000
Plant & machinery	4,60,500	Rates and taxes	6,300
Buildings	2,00,000	Miscellaneous factory expenses	18,700
Sales	7,68,000	Sales commission	33,600
Sales return & rebates	14,000	Sales travelling	11,000
Materials purchased	3,20,000	Sales promotion	22,500
Freight incurred on materials	16,000	Distribution dept. salaries and expenses	18,000
Purchase returns	4,800	Office salaries and expenses	8,600
Direct labour	1,60,000	Interest on borrowed funds	2,000

Further details are available as follows *:*

(i) ***Closing Inventories****:*		(iii)	**Depreciation to be provided on**:	
Finished goods	1,15,000		Office appliances	5%
Raw materials	1,80,000		Plant and machinery	10%
Work-in-process	1,92,000		Buildings	4%
(ii) ***Accrued expenses on****:*				
Direct labour	8,000			
Indirect labour	1,200			
Interest on borrowed funds	2,000			

Distribution of the following costs:

Heat, light and power to factory, office and selling in the ratio 8:1:1. Rates and taxes two-thirds to factory and one-third of 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 condensed Profit and Loss Statement of X Ltd. for the year ended 31st March along with the schedules showing(i) Cost of sales (ii) Selling and distribution expenses (iii) Administration expenses.

Question 15. From the following information, prepare a statement showing cost and profit per unit:

Direct material Rs. 45,000

Direct labour	33-1/3% of direct material cost.
Direct expenses	20% of direct material cost and direct labour cost.
Factory overheads	1/9th of prime cost.
Adm. & Expenses	25% of works cost.
Selling & Distribution Expenses	10% of cost of goods sold.
Units produced	100
Units remain unsold	10% of units produced.
Profit	1/6th of sales.

Question 16. From the following information, prepare a Statement showing the cost and profit.

	Opening	***Closing***
Raw Materials:	Rs. 29,500	Rs. 36,000
Work-in-progress:		
Materials	13,600	12,000
Wages	11,000	16,500
Works overheads	6,600	9,900
Finished Goods:	200 units @ Rs. 84	1600 units

1) Purchases of raw material Rs. 1,90,000, Carriage on purchases Rs. 1,500, Sale of scrap of raw materials Rs. 5,000.
2) Wages Rs. 2,97,000.
3) Works overheads are absorbed @ 60% of direct labour cost.
4) Administration overheads are absorbed @ Rs. 12 per unit produced.
5) Selling & distribution overheads are absorbed @ 20% of sales.
6) Sales — 7600 units @ at a profit of 10% on sales price.

Question 17 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 (Rs.)
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 Rs.1,50,000 p.m. and fixed marketing expenses amount to Rs.2,50,000 p.m. respectively. The variable selling costs amounts to Rs.30 per unit.

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

(a) it gives gift items costing Rs.30 per unit of sale;

(b) it has lucky draw every month giving the first prize of Rs.50,000; 2nd prize of Rs.25,000; 3rd prize of Rs.10,000 and three consolation prizes of Rs.5,000 each to customers buying the product.

(c) It spends Rs.1,00,000 on refreshment served every month to its customers.

(d) It sponsors a television programme every week at the cost of Rs.20,00,000 per month.

It can market 30% of its full capacity output at Rs.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.

Question 18 AB & Co. manufactures two types of pens P and Q. The cost data for the year ended 31st March is as follow:

Direct Materials	Rs. 4,00,000
Direct Wages	Rs. 2,24,000
Production Overheads	Rs. 96,000
	Rs. **7,20,000**

It is further ascertained that:

(a) Direct Material for type P cost twice as much direct materials in Q,

(b) Direct Wages for type Q were 60% of those for type P,

(c) Production Overheads were of same rate for both types,

(d) Administration Overhead for each was 200% of direct labour,

(e) Selling Costs were 50 paise per pen for both types,

(f) Production during the year: Type P — 40,000, Type Q — 1,20,000

(g) Sales during the year: Type P — 36,000, Type Q — 1,00,000

(h) Selling price were Rs. 14 per pen for type P and Rs. 10 per pen for type Q.

Required: Prepare a statement showing per unit Cost of Production, Total Cost, Profit and also Total Sales Value and Profit separately for two types of pen P and Q.

Question 19 From the following information, prepare a Statement showing the cost, and the profit per unit and in total:

1. Cost of materials @ Rs. 13 per unit.
2. Labour cost @ Rs. 7.50 per unit.
3. Factory overheads are absorbed @ 60% of labour cost.
4. Administration overheads are absorbed @ 20% of factory cost.
5. Selling overheads are charged @ 2.50 per unit sold.
6. Opening stock of finished goods — 500 units @ 19.75
7. Closing stock of finished goods — 250 units
8. Sales —10250 units at profit of 20% on sales.

Question 20 Pappu Ltd. provides you the following figures for the previous year:

Direct Material	Rs. 3,20,000
Direct Wages	Rs. 8,00,000
Production Overheads (25% Variable)	Rs. 4,80,000
Administration overheads (Related With Production Activities) (75% Fixed)	Rs. 1,60,000
Selling and Distribution Overheads (2/3rd Fixed)	Rs. 2,40,000
Sales @ Rs125 per unit	Rs. 25,00,000

For the next year, it is estimated that:

1) Output and sales quantity will increase by 20% by incurring additional Advertisement Expenses of Rs. 45,200
2) Material Prices will go up by 10%
3) Wage Rate will go up by 5% along with, increase in overall direct labour efficiency by 12%
4) Variable Overheads will increase by 5%.
5) Fixed Production Overheads will increase by 33.33%.

Required:

a) Calculate the Cost of Sales for the previous year and the next year.

b) Find out the new selling price for the next year.

(i) If the same amount of profit is to be earned as in the next year.

(ii) If the same percentage of profit to sales is to be earned as in the next year.

(iii) If the existing percentage of profit to sales is to be increased by 25%.

(iv) If profit per unit Rs.10 is to be earned.

Question 21 Calculate Conversion Cost in each of the following alternative cases:

Case (a) Direct Labour Cost Rs. 3,00,000, Direct Expenses Rs. 2,00,000 and Factory Overheads Rs. 1,00,000

Case (b) Factory Cost Rs. 10,00,000 and Direct Material Cost Rs. 4,00,000