List of 59 Comprehensive Questions to score 60+ Marks in CA Inter Cost & Management Accounting

यदा यदा हि धर्मस्य ग्लानिर्भवति भारत ।
अभ्युत्थानमधर्मस्य तदात्मानं सृजाम्यहम् ॥४-७॥

परित्राणाय साधूनां विनाशाय च दुष्कृताम् ।
धर्मसंस्थापनार्थाय सम्भवामि युगे युगे ॥४-८॥

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1. **Comprehensive Coverage:** This set of **59 carefully crafted questions** covers **majority of concepts** from the CA Inter Cost & Management Accounting syllabus. If practiced thoroughly, these can help you **score 60+ marks** in the exam. However, **do not rely solely on them**—ensure you have studied the **full course** first.
2. **Full Course First:** These questions are designed for **revision & reinforcement**, not as a shortcut. **Do not attempt them without completing the entire syllabus**, otherwise, they won't be as effective.
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May God bless you a bright career & cheerful life ahead

Regards
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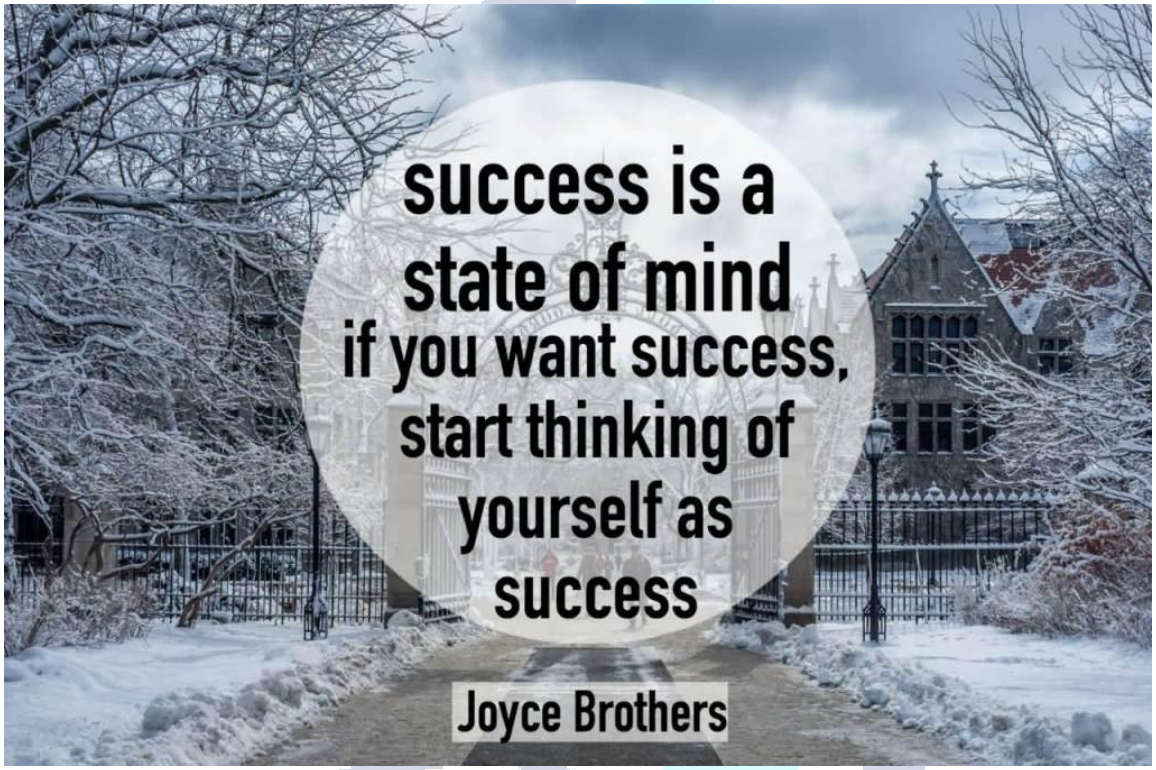
StudyByTech

Chapter 1 Introduction to Cost and Management Accounting

There is no numerical question in this chapter.


success is a
state of mind
if you want success,
start thinking of
yourself as
success
Joyce Brothers

Chapter 2 Material Cost

Sl No.	Items	Treatment
Discounts and Subsidy		
(i)	**Trade Discount**	Trade discount **is deducted** from the purchase price if it is not shown as deduction in the invoice.
(ii)	**Quantity Discount**	Like trade discount quantity discount is also shown as deduction from the invoice. It **is deducted** from the purchase price if not shown as deduction.
(iii)	**Cash Discount**	Cash discount **is not deducted** from the purchase price. It is treated as interest and finance item. It is ignored.
(iv)	**Subsidy/ Grant/ Incentives**	Any subsidy/ grant/ incentive received from the Government or from other sources **deducted** from the cost of purchase.
Duties and Taxes		
(v)	**Road Tax/ Toll Tax**	Road tax/ Toll tax, if paid by the buyer, **is included** with the cost of purchase.
(vi)	**Goods and Service Tax (GST)**	Goods and Service Tax (GST) is paid on supply of goods and provision of services and collected from the buyers. It **is excluded** from the cost of purchase if credit for the same is available. Unless mentioned specifically it should not form part of cost of purchase.
(vii)	**Custom Duty**	Custom duty is paid on import of goods from outside India. It **is added** with the purchase cost.
Penalty and Charges		
(viii)	**Demurrage**	Demurrage is a penalty imposed by the transporter for delay in uploading or offloading of materials. It is an abnormal cost and **not included** with cost of purchase
(ix)	**Detention charges/ Fine**	Detention charges/ fines imposed for non-compliance of rule or law by any statutory authority. It is an abnormal cost and **not included** with cost of purchase
(x)	**Penalty**	Penalty of any type is **not included** with the cost of purchase

Other expenditures		
(xi)	**Insurance charges**	Insurance charges are paid for protecting goods during transit. It **is added** with the cost of purchase.
(xii)	**Commission or brokerage paid.**	Commission or brokerage paid **is added** with the cost of purchase.
(xiii)	**Freight inwards**	It **is added** with the cost of purchase as it is directly attributable to procurement of material.
(xiv)	**Cost of containers**	Treatment of cost of containers are as follows: • Non-returnable containers: The cost of containers **is added** with the cost of purchase of materials. • Returnable Containers: If the containers are returned and their costs are refunded, then cost of containers should not be considered in the cost of purchase. • If the amount of refund on returning the container is less than the amount paid, then, only the short fall is added with the cost of purchase.
(xv)	**Shortage**	Shortage in materials is treated as follows: **Shortage due to normal reasons:** Good units absorb the cost of shortage due to normal reasons. Losses due to breaking of bulk, evaporation, or due to any unavoidable conditions etc. are the reasons of normal loss. **Shortage due to abnormal reasons:** Shortage arises due to abnormal reasons such as material mishandling, pilferage, or due to any avoidable reasons are not absorbed by the good units. Losses due to abnormal reasons are debited to costing profit and loss account.

Question 1 (Question 2a May 14): A company manufactures a product from a raw material, which is purchased at ₹ 80 per kg. The company incurs a handling cost of ₹ 370 plus freight of ₹ 380 per order. The incremental carrying cost of inventory of raw material is ₹ 0.25 per kg per month. In addition, the cost of working capital finance on the investment in inventory of raw material is ₹ 12 per kg per annum. The annual production of the product is 1,00,000 units and 2.5 units are obtained from one kg of raw material.

Required:

(i) Calculate the economic order quantity of raw materials.

(ii) Advice, how frequently company should order for procurement be placed.

(iii) If the company proposes to rationalize placement of orders on quarterly basis, what percentage of discount in the price of raw materials should be negotiated?

Assume 360 days in a year.

[Ans.: (i) 2,000 kg; (ii) 18 days; (iii) 1.5%**]**

Question 2 (Question 3b Nov 20): An automobile company purchases 27,000 spare parts for its annual requirements. The cost per order is ₹ 240 and the annual carrying cost of average inventory is 12.5%. Each spare part costs ₹ 50.

At present, the order size is 3,000 spare parts.

(Assume that number of days in a year = 360 days)

Find out:

(i) How much the company's cost would be saved by opting EOQ model?

(ii) The Re-order point under EOQ model if lead time is 12 days.

(iii) How frequently should orders for procurement be placed under EOQ model?

[Ans.: (i) EOQ: 1,440 units; Cost Savings: ₹2,535 (ii) 900 units; (iii) 18.95 days or 19 days**]**

[Hint for Part (ii): We must not get confused with the word EOQ. In this question we are supposed to find Re-order point/ Re-order level which is equal to Maximum consumption × Maximum lead time

Maximum Consumption doesn't get effected with EOQ and vice versa.

Maximum lead time = 12 days (given)

In this question, Maximum Consumption = Average consumption = Minimum consumption because nothing is mentioned about this question.

Therefore max. consumption per day= 27000 units ÷ 360 days = 75 units per day

Therefore, Re-order level = 75 units per day for 12 days = 900 units**]**

Question 3 (Question 4 Study Material): A Company uses three raw materials A, B and C for a particular product for which the following data apply:

Raw Material	Usage per unit of Product (kg)	Re-order quantity (kg)	Price per kg	Delivery period (in weeks)			Re-order level (kg)	Minimum level (kg)
				Minimum	Average	Maximum		
A	10	10,000	10	1	2	3	8,000	?
B	4	5,000	30	3	4	5	4,750	?
C	6	10,000	15	2	3	4	?	2,000

Weekly production varies from 175 to 225 units, averaging 200 units of the said product. COMPUTE the following quantities:

(i) Minimum stock of A,

(ii) Maximum stock of B,

(iii) Re-order level of C,

(iv) Average stock level of A.

[Ans.: (i) 4,000 kg; (ii) 7,650 kg; (iii) 5,400 kg or 5,600 kg (iv) 9000 kg or 10,125 kg**]**

Question 4 (Question 5 of Study Material): (a) EXE Limited has received an offer of quantity discounts on its order of materials as under:

Price per ton (₹)	Ton (Nos.)
1,200	Less than 500
1,180	500 and less than 1,000
1,160	1,000 and less than 2,000
1,140	2,000 and less than 3,000
1,120	3,000 and above.

The annual requirement for the material is 5,000 tons. The ordering cost per order is ₹ 1,200 and the stock holding cost is estimated at 20% of material cost per annum. You are required to COMPUTE the most economical purchase level.

(b) WHAT will be your answer to the above question if there are no discounts offered and the price per ton is ₹ 1,500?

[Ans.: (a) 1000 units; (b) 200 units**]**

Question 5 (Question 2a May 19): ACE Ltd. produces a product EMM using a material 'REX'. To produce one unit of EMM 0.80 kg of 'REX' is required. As per the sales forecast conducted by the company it will be able to sell 45,600 units of product EMM in the coming year. There is an opening stock of 3,150 units of product EMM and company desires to maintain closing stock equal to one month's forecasted sale. Following is the information regarding material 'REX':

Purchase price per kg	₹ 25
Cost of placing order	₹ 240 per order
Storage cost	2% per annum
Interest rate	10% per annum
Average lead time	8 days
Difference between minimum and maximum lead time	6 days
Maximum usage	150 kg
Minimum usage	90 kg

Opening stock of material 'REX' is 2,100 kg and closing stock will be 10% more than opening stock.

Required:

(i) Compute the EOQ and total cost as per EOQ.
(ii) Compute the reorder level and maximum level.
(iii) If the company places an order of 7,500 kg of REX at a time, it gets 2% discount, should the offer be accepted?

[Ans.: (i) 2,440 kg, ₹ 9,37,750 (for 15.25 orders) or ₹ 9,37,750 (for 16 orders rounded off); (ii) 1,650 kg & 3,640 kg; (iii) ₹ 923,861 (4.96 orders) or ₹ 9,23,870 (5 orders rounded off)**]**

Question 6 (Case Scenario II Sept'24): FW Limited manufactures various types of footwear and covers a considerable market share. The footwear made by company are stylish and durable. The management calls for an urgent meeting because it has come to their notice that two of their old permanent customers have moved on to its competitors.

Marketing Manager has stated that there are circumstances when company cannot fulfill the demand of their customers due to shortage of supply and this is the main reason for move on.

Production Manager has stated that production team is working efficiently but workers have to wait long enough for raw material which leads to idle time and low production.

The cost accounts department of FW Limited has furnished the following data for the component B:

Purchase Price	₹ 4,800 per unit
Trade Discount	2% of purchase price
Total duties (No Credit availed)	8% of purchase price
Insurance Charges	₹ 62,000 per year
Units purchased during the year	60,000 units
Opening Stock	5,000 units @ ₹ 5,150 per unit
Closing Stock	4,500 units

Usages per week		Delivery period	
Minimum	1,050 units	Minimum	5 weeks
Maximum	1,200 units	Maximum	9 weeks
Average	1,125 units	Average	7 weeks

Lead time for emergency purchases is 2 weeks. Additional Information:

- Normal wastage during the storage is 80 units (no realizable value) and abnormal wastage is 40 units.
- Factory works for 365 days in a year.

You are required to calculate the followings (MCQs 1 to 5):

1. Calculate per unit cost of material by using Average Price Method.

A. ₹ 5,100
B. ₹ 5,119
C. ₹ 5,094
D. ₹ 5,133

2. Calculate minimum stock level.

A. 10,800 units
B. 7,825 units
C. 5,250 units
D. 2,925 units

3. What will be danger level of stock?

A. 2,400 units
B. 7,875 units

C. 2,250 units
D. 2,240 units

4. Calculate average number of days (round off) for which average inventory level to be held.

A. 27 days
B. 29 days
C. 26 days
D. 30 days

5. Calculate amount of Abnormal Loss during storage to be transferred to Costing Profit & Loss Account (based on average price)

A. ₹ 2,04,000
B. ₹ 2,04,760
C. ₹ 2,03,760
D. ₹ 2,05,320

[Ans.: 1. A; 2. D; 3. C; 4. B; 5. A**]**

Question 7 (Question 3a Nov 19): M/s XYZ Traders is a distributor of an electronic calculator. A periodic inventory of electronic calculator on hand is taken when books are closed at the end of each quarter.

The following summary of information is available for the quarter ended on 30th September, 2019:

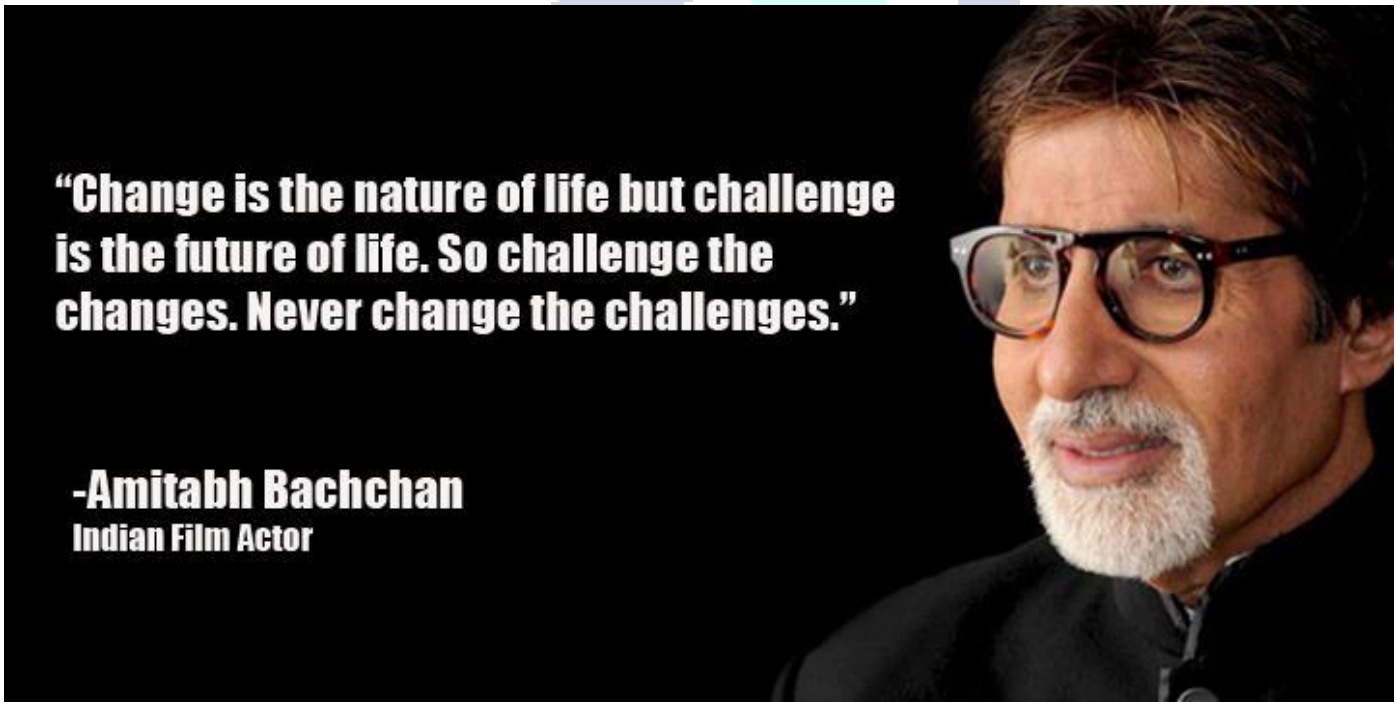
Sales	₹ 1,46,20,000
Opening Stock	25,000 calculator @ ₹ 200 per calculator
Administrative Expenses	₹ 3,75,000
Purchases (including freight inward):	
- July 1, 2019	50,000 calculator @ ₹ 191 per calculator
- September 30, 2019	25,000 calculator @ ₹ 210 per calculator
Closing stock- September 30, 2019	32,000 calculator

You are required to compute the following by WAM (Weighted Average Method), FIFO method and LIFO method.

(i) Value of Inventory on 30th September, 2019.

(ii) Profit or loss for the quarter ended 30th September, 2019.

[Ans.: (i) WAM ₹63,36,000 FIFO ₹65,87,000 LIFO ₹63,37,000; (ii) WAM ₹7,81,000 FIFO ₹10,32,000 LIFO ₹7,82,000**]**



Chapter 3 Employee Cost & Direct Expenses

Question 1 (Illustration 3 Study Material & Question 4b Nov. 2020): CALCULATE the earnings of A and B from the following particulars for a month and allocate the employee cost to each job X, Y and Z:

		A	B
(i)	Basic Wages (₹)	10,000	16,000
(ii)	Dearness Allowance	50%	50%
(iii)	Contribution to provident Fund (on basic wages)	8%	8%
(iv)	Contribution to Employee's State Insurance (on basic wages)	2%	2%
(v)	Overtime (Hours)	10	-

The normal working hours for the month are 200. Overtime is paid at double the total of normal wages and dearness allowance. Employer's contribution to state Insurance and Provident Fund are at equal rates with employees' contributions.

The two workers were employed on jobs X, Y and Z in the following proportions:

Jobs	X	Y	Z
Worker A	40%	30%	30%
Worker B	50%	20%	30%

Overtime was done on job Y.

[Ans.: A: ₹80; B: ₹128; X: ₹19200; Y: ₹11,420; Z: ₹12480**]**

Question 2 (Illustration 5 Study Material & Question 2b Sept 2024-Adapted): In a factory, the basic wage rate is ₹100 per hour and overtime rates are as follows:

Before and after normal working hours	175% of basic wage rate
Sundays and holidays	225% of basic wage rate

During the previous year, the following hours were worked

- Normal time	1,00,000 hours
- Overtime before and after working hours	20,000 hours
- Overtime on Sundays and holidays	5,000 hours
Total	1,25,000 hours

The following hours have been worked on job 'Z'

Normal	1,000 hours
Overtime before and after working hrs.	100 hours.
Sundays and holidays	25 hours.
Total	1,125 hours

You are required to CALCULATE the labour cost chargeable to job 'Z' and overhead in each of the following instances:

(a) Where overtime is worked regularly throughout the year as a policy due to the workers' shortage.

(b) Where overtime is worked irregularly to meet the requirements of production.

(c) Where overtime is worked at the request of the customer to expedite the job.

[Ans.: Employee cost chargeable to job Z: (a) ₹1,31,625; (b) ₹1,12,500; (c) ₹1,23,125**]**

Question 3 (Question 2 Study Material): Wage negotiations are going on with the recognised employees' union, and the management wants you as an executive of the company to formulate an incentive scheme with a view to increase productivity.

The case of three typical workers A, B and C who produce respectively 180, 120 and 100 units of the company's product in a normal day of 8 hours is taken up for study.

Assuming that day wages would be guaranteed at ₹ 75 per hour and the piece rate would be based on a standard hourly output of 10 units.

CALCULATE the earnings of each of the three workers and the employee cost per 100 pieces under (i) Day wages, (ii) Piece rate, (iii) Halsey scheme, and (iv) The Rowan scheme.

Also CALCULATE under the above schemes the average cost of labour for the company to produce 100 pieces.

[Ans.: Average cost of labour for the company to produce 100 pieces: (i) ₹450 (ii) ₹750 (iii) ₹600 (iv) 613.25**]**

Question 4 (Question 1b May 2023): SMC Company Limited is producing a particular design of toys under the following existing incentive system:

Normal working hours in the week	48 hours
Late shift hours in the week	12 hours
Rate of payment	Normal working: ₹ 150 per hour
	Late shift: ₹ 300 per hour

Average output per operator for 60 hours per week (including late shift hours): 80 toys. The company's management has now decided to implement a system of labour cost payment with either the Rowan Premium Plan or the Halsey Premium Plan in order to increase output, eliminate late shift overtime, and reduce the labour cost. The following information is obtained:

The standard time allotted for ten toys is seven and half hours. Time rate: ₹ 150 per hour (as usual).

Assuming that the operator works for 48 -hours in a week and produces 100 toys, you are required to calculate the weekly earnings for one operator under -

(i) The existing Time Rate,
(ii) Rowan Premium Plan and,
(iii) Halsey Premium Plan (50%).

[Ans.: (i) ₹10,800 Alternatively ₹13,500; (ii) ₹9,792; (iii) ₹9,225**]**

Question 5 (Illustration 14 Study Material & Question 1b May 2022-Adapted): The Accountant of Y Ltd. has computed employee turnover rates for the quarter ended 31st March, 2023 as 10%, 5% and 3% respectively under 'Flux method', 'Replacement method' and 'Separation method' respectively. If the number of workers replaced during that quarter is 30, FIND OUT the number of workers for the quarter

(i) recruited and joined and (ii) left and discharged and (iii) Equivalent employee turnover rates for the year.

[Ans.: (a) 42; (b) 18; (c) 40%, 20%, and 12%**]**

Question 6 (Illustration 14 Study Material & Question 1b Nov 2019-Adapted): The management of B.R Ltd. is worried about their increasing employee turnover in the factory and before analyzing the causes and taking remedial steps; it wants to have an idea of the profit foregone as a result of employee turnover in the last year.

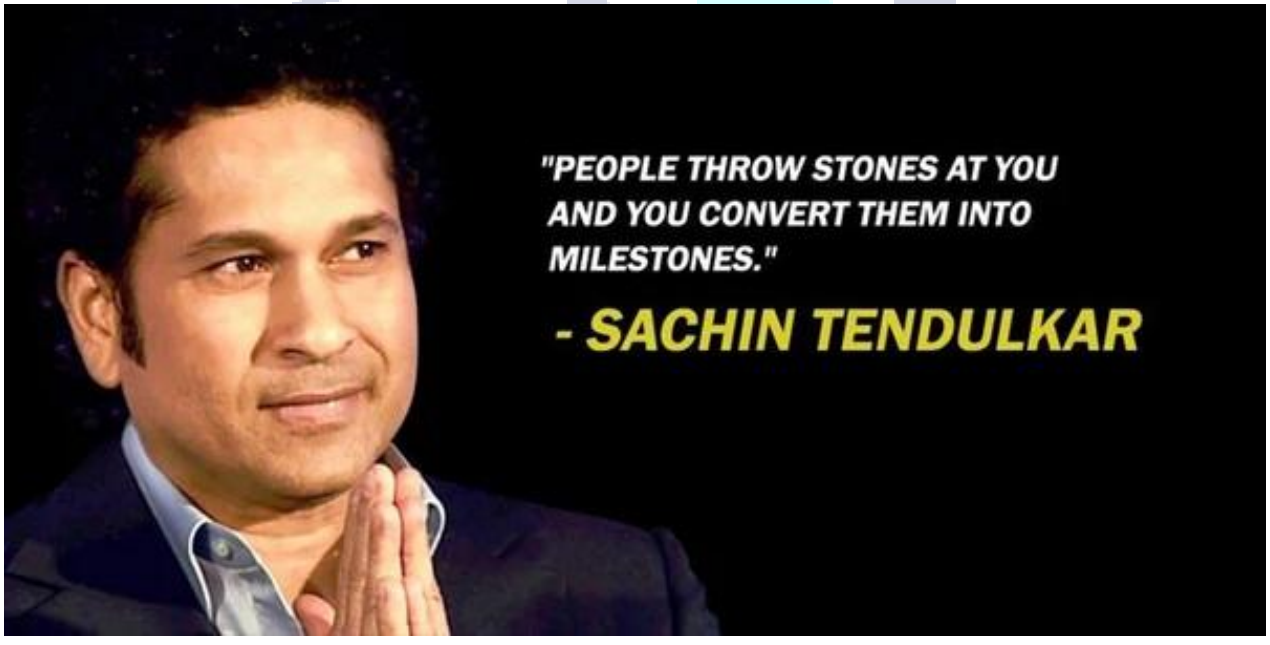
Last year sales amounted to ₹ 83,03,300 and P/V ratio was 20 per cent. The total number of actual hours worked by the direct employee force was 4.45 lakhs. The actual direct employee hours included 30,000 hours attributable to training new recruits, out of which half of the hours were unproductive. As a result of the delays by the Personnel Department in filling vacancies due to employee turnover, 1,00,000 potentially productive hours (excluding unproductive training hours) were lost.

The costs incurred consequent on employee turnover revealed, on analysis, the following:

Settlement cost due to leaving	₹ 43,820
Recruitment costs	₹ 26,740
Selection costs	₹ 12,750
Training costs	₹ 30,490

Assuming that the potential production lost as a consequence of employee turnover could have been sold at prevailing prices, FIND the profit foregone last year on account of employee turnover.

[Ans.: ₹5,57,930**]**



Chapter 4 Overheads – Absorption Costing Method

Question 1 (Illustration 4 Study Material): Sanz Ltd., is a manufacturing company having three production departments, 'A', 'B' and 'C' and two service departments 'X' and 'Y'. The following is the budget for December 2022:

	Total (₹)	A (₹)	B (₹)	C (₹)	X (₹)	Y (₹)
Direct material		1,00,000	2,00,000	4,00,000	2,00,000	1,00,000
Direct wages		5,00,000	2,00,000	8,00,000	1,00,000	2,00,000
Factory rent	4,00,000					
Power	2,50,000					
Depreciation	1,00,000					
Other	9,00,000					
Additional information:						
Area (Sq. ft.)		500	250	500	250	500
Capital value of assets (₹ lakhs)		20	40	20	10	10
Machine hours		1,000	2,000	4,000	1,000	1,000
Horse power of machines		50	40	20	15	25

A technical assessment of the apportionment of expenses of service departments is as under:

	A	B	C	X	Y
Service Dept. 'X' (%)	45	15	30	–	10
Service Dept. 'Y' (%)	60	35	–	5	–

Required:

(i) PREPARE a statement showing distribution of overheads to various departments.

(ii) PREPARE a statement showing re-distribution of service departments expenses to production departments using Trial and error method.

[Ans.: (i) A: ₹2,70,000; B: ₹3,70,000; C: ₹6,00,000; X: ₹4,75,000; Y: ₹5,35,000; (ii) A: ₹8,48,200; B: ₹6,50,500; C: ₹7,51,300**]**

[Hint: Power is apportioned on the basis of HP × Machine Hours. We may apportion it other suitable bases.**]**

Question 2 (B. Com Question): A company has three production departments and two service departments. Distribution summary of overheads is as follows:

	₹
Production Departments	
A	13,600
B	14,700
C	12,800
Service Departments	
X	9,000
Y	3,000

The expenses of service departments are charged on a percentage basis which is as follows:

	A	B	C	X	Y
X Dept.	40%	30%	20%	–	10%
Y Dept.	30%	30%	20%	20%	–

Apportion the cost of Service Departments by using the Repeated Distribution Method, Trial & Error Method and Simultaneous Equation Method.

[Ans.: A: ₹18,712; B: ₹18,833; C: ₹15,555 under all methods**]**

Question 3 (Question 1b May 2019): A manufacturing company has added a new machine to its fleet of eleven existing machines. New machine is purchased for ₹12,70,000 with installation cost of ₹40,000. The machine has an estimated life of 10 years and is expected to realise ₹90,000 as scrap at the end of its useful life. Other relevant data are as follows:

i. Budgeted annual working hours are 2,400 based on 8 hours per day for 300 days. This includes 180 hours for plant maintenance and 120 hours of productive set-up time.
ii. Electricity used by the new machine is 12 units per hour at a cost of ₹ 6.50 per unit. No current is drawn during maintenance and setup.
iii. Three operators control the operations of all the twelve machines and average rate of wages per operator per day is ₹ 600 and production bonus is 10% of wages.
iv. Annual insurance premium for the new machine is ₹ 12,600.
v. Annual maintenance cost of new machine including consumable stores is ₹ 32,500.

vi. Rent of the factory is ₹ 24,000 per month. Area occupied by new machine 200 sq ft. and area occupied by other machines is 2800 sq ft.

Required: Compute the comprehensive machine hour rate.

[Ans.: ₹180 per hour**]**

[Hint: To calculate the effective productive hours, we need to subtract the maintenance time:

Effective hours = Total hours - Maintenance hours = 2,400 - 180 = 2,220 hours

The productive set-up time (120 hours), as it's part of the manufacturing process, is considered part of the effective hours since it's described as "productive." When calculating the comprehensive machine hour rate, use 2,220 hours as the denominator for fixed overhead costs.**]**

Question 4 (Q4 Study Material & Q2a Nov.'22-Adapted): Gemini Enterprises undertakes three different jobs A, B and C. All of them require the use of a special machine and also the use of a computer. The computer is hired and the hire charges work out to ₹4,20,000 per annum. The expenses regarding the machine are estimated as follows:

	(₹)
Rent for a quarter	17,500
Depreciation per annum	2,00,000
Indirect charges per annum	1,50,000

During the first month of operation the following details were taken from the job register:

	Jobs		
	A	**B**	**C**
Number of hours the machine was used:			
(a) Without the use of the computer	600	900	—
(b) With the use of the computer	400	600	1,000

You are required to COMPUTE the machine hour rate:

(a) For the firm as a whole for the month when the computer was used and when the computer was not used.

(b) For the individual jobs A, B and C.

[Ans.: (a) Used ₹27.5; Not used ₹10; (b) A: ₹17; B: ₹17; C: ₹27.5**]**

Question 5: A light engineering factory fabricates machine parts for customers. The factory commenced fabrication of 12 nos. machine parts as per customers' specifications, the expenditure incurred on the job for the week ending 21st August is as tabulated below:

	(₹)	(₹)
Direct materials (all items)		780.00
Direct labour (manual) 20 hours @ ₹15 per hour		300.00
Machine facilities:		
Machine No. I: 4 hours @ ₹45	180.00	
Machine No. II: 6 hours @ ₹65	390.00	570.00
Total		1,650.00
Overheads @ ₹ 8 per hour on 20 manual hours		160.00
Total cost		1,810.00

The overhead rate of ₹ 8 per hour is based on 3,000 man-hours per week; similarly, the machine hour rates are based on the normal working of Machine Nos. I and II for 40 hours out of 45 hours per week.

After the close of each week, the factory levies a supplementary rate for the recovery of full overhead expenses on the basis of actual hours worked during the week. During the week ending 21st August, the total labour hours worked was 2,400 and Machine Nos. I and II had worked for 30 hours and 32.5 hours respectively.

PREPARE a Cost Sheet for the job for the fabrication of 12 nos. machine parts duly levying the supplementary rates.

[Ans.: ₹2000**]**

Question 6: A Ltd., manufactures two products A and B. The manufacturing division consists of two production departments P_1 and P_2 and two service departments S_1 and S_2. Budgeted overhead rates are used in the production departments to absorb factory overheads to the products. The rate of Department P_1 is based on direct machine hours, while the rate of Department P_2 is based on direct labour hours. In applying overheads, the pre-determined rates are multiplied by actual hours.

For allocating the service department costs to production departments, the basis adopted is as follows:

(i) Cost of Department S_1 to Department P_1 and P_2 equally, and

(ii) Cost of Department S_2 to Department P_1 and P_2 in the ratio of 2:1 respectively.

The following budgeted and actual data are available: Annual profit plan data:

Factory overheads budgeted for the year:

Production Departments		Service Departments	
P_1	**P_2**	**S_1**	**S_2**
₹ 25,50,000	₹ 21,75,000	₹ 6,00,000	₹ 4,50,000

Budgeted output in units:

Product A: 50,000; B: 30,000.

Budgeted raw-material cost per unit: Product A ₹ 120; Product B ₹ 150.

Budgeted time required for production per unit:

Department P_1 : Product A: 1.5 machine hours
Product B: 1.0 machine hour

Department P_2 : Product A: 2 Direct labour hours
Product B: 2.5 Direct labour hours

Average wage rates budgeted in Department P_2 are:

Product A - ₹72 per hour and Product B – ₹75 per hour.

All materials are used in Department P_1 only.

Actual data: (for the month of July, 2022)

Units actually produced: Product A: 4,000 units

Product B: 3,000 units

Actual direct machine hours worked in Department P_1:

On product A- 6,100 hours, Product B- 4,150 hours.

Actual direct labour hours worked in Department P_2:

On product A- 8,200 hours, Product B- 7,400 hours.

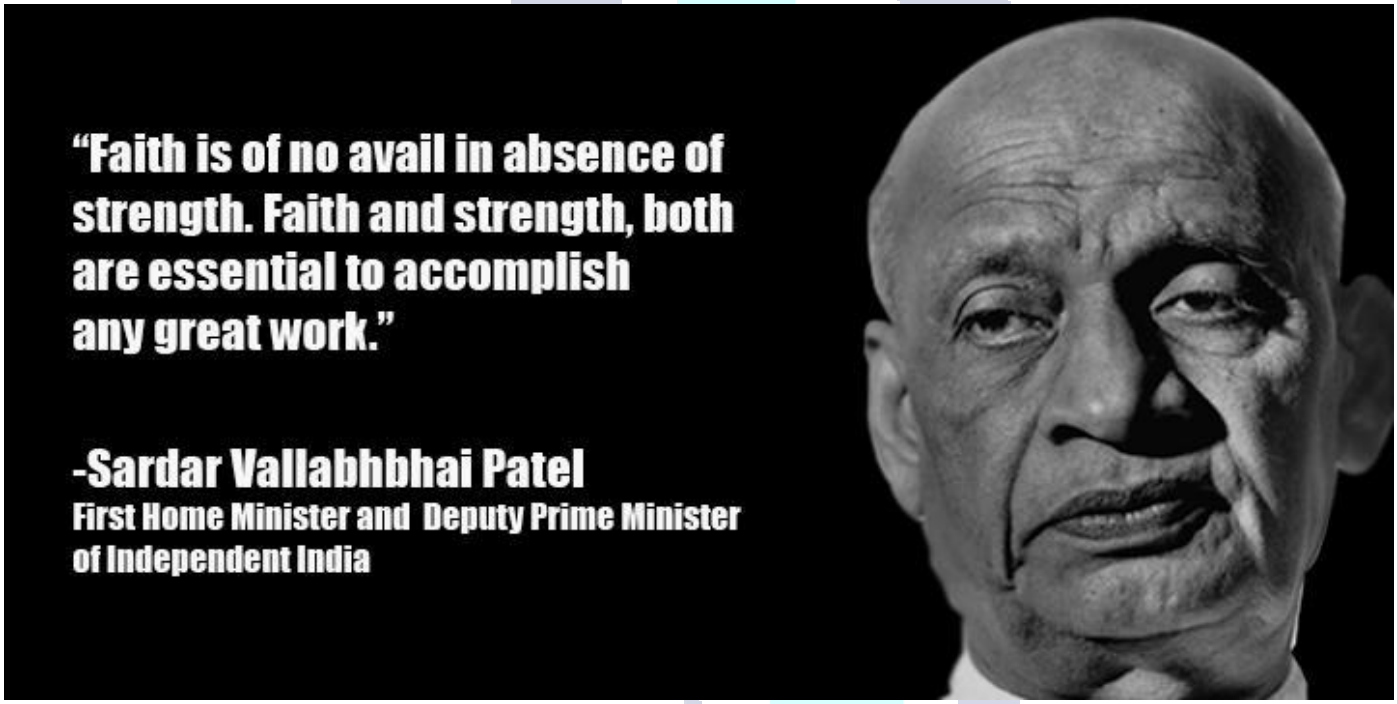
Costs actually incurred:	**Product A**		**Product B**
Raw materials	₹4,89,000		₹4,56,000
Wages	₹5,91,900		₹5,52,000
Overheads: Department **P_1**	₹2,31,000	**S_1**	₹60,000
P_2	₹2,04,000	**S_2**	₹48,000

You are required to:

(i) COMPUTE the pre-determined overhead rate for each production department.

(ii) PREPARE a performance report for July, 2022 that will reflect the budgeted costs and actual costs.

[Ans.: (i) P_1: 30; P_2: 15; (ii) Budgeted: ₹25,71,000; Actual: ₹26,31,861**]**



Chapter 5 Activity Based Costing

Question 1 (Question 3 Sept'24):

(a) GST Limited is a multi-product company. The production and cost details of its two products P and Q are given as follows:

Particulars	Product	
	P	Q
Quantity produced (No.)	9,000	7,200
Direct material cost (₹)	72,000	50,00
Direct labour hours	800	600
Purchase requisition	180	144
Production runs (No.)	144	108
Quality inspections (No.)	27	18

Direct wages rate is ₹ 14.50 per hour. Presently the company uses a single overhead recovery rate based on direct labour hours. Overhead incurred by the company during the year 2023-24 are as follows:

Technical staff salary	₹ 45,000
Machine operation expenses	₹ 1,62,000
Machine maintenance	₹ 27,000
Wages and salary of stores	₹ 36,000

During this period direct labour hours worked 72,000.

Now the Company wants to adopt Activity Based Costing. For this purpose, following activities are identified:

- Quality control
- Setup of machine for production runs
- Store receiving

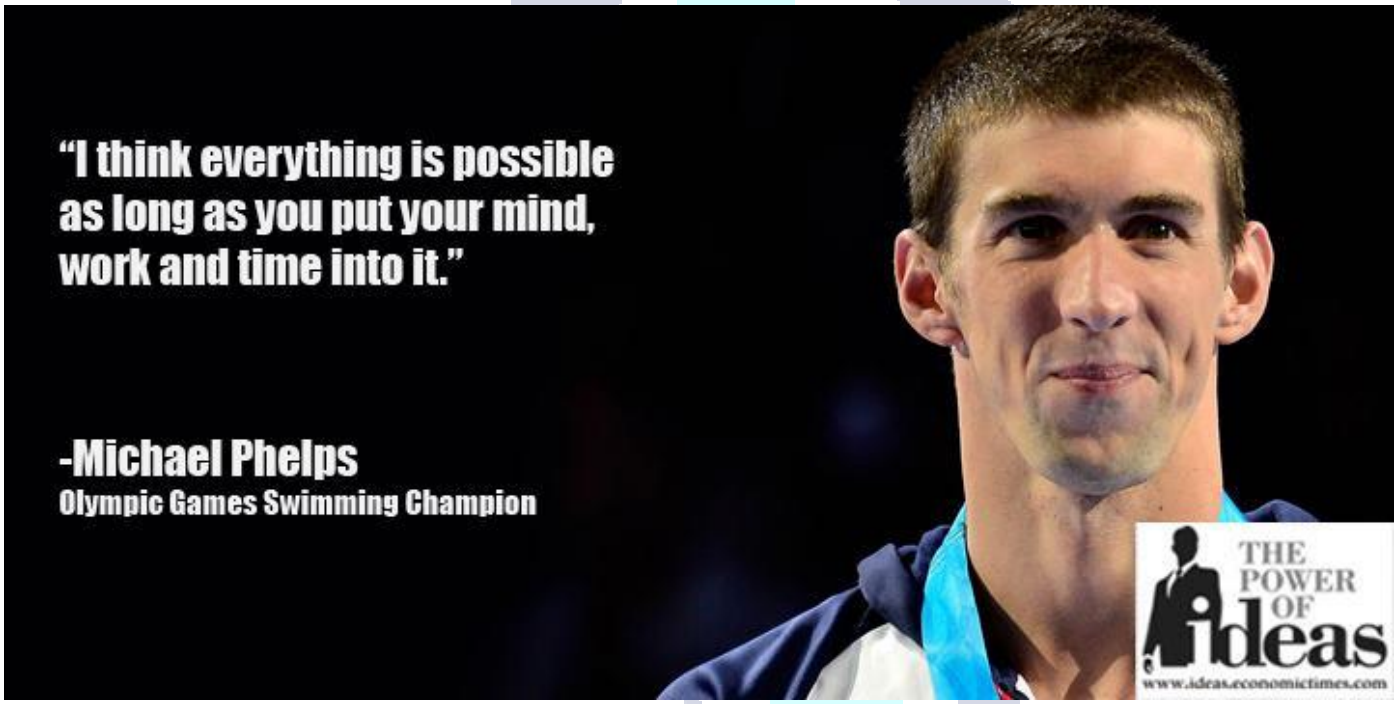
It is also decided that salary of technical staff should be distributed among machine maintenance, setup and quality control in the ratio of 1 : 2 : 2. Machine maintenance expenses and machine operation expenses should be distributed in the ratio of 2 : 3 in between stores and production setup activities.

During this period cost drivers for these activities are identified as under:

- Requisition raised 5,760
- Production setup 7,200
- No. of quality test 720

You are required to compute:

(i) The cost of products P and Q based on traditional absorption costing system.
(ii) The cost of products P and Q based on ABC Costing system.



Chapter 6 Cost Sheet

Question 1 (Question 3b May 2022): The following data are available from the books and records of A Ltd. for the month of April 2022:

Particulars	Amount (₹)
Stock of raw materials on 1st April 2022	10,000
Raw materials purchased	2,80,000
Manufacturing wages	70,000
Depreciation on plant	15,000
Expenses paid for quality control check activities	4,000
Lease Rent of Production Assets	10,000
Administrative Overheads (Production)	15,000
Expenses paid for pollution control and engineering & maintenance	1,000
Stock of raw materials on 30th April 2022	40,000
Primary packing cost	8,000
Research & development cost (Process related)	5,000
Packing cost for redistribution of finished goods	1,500
Advertisement expenses	1,300

Stock of finished goods as on 1st April 2022 was 200 units having a total cost of ₹ 28,000. The entire opening stock of finished goods has been sold during the month.
Production during the month of April, 2022 was 3,000 units. Closing stock of finished goods as on 30th April, 2022 was 400 units.
You are required to:

I. Prepare a Cost Sheet for the above period showing the:

(i) Cost of Raw Material consumed
(ii) Prime Cost
(iii) Factory Cost
(iv) Cost of Production
(v) Cost of goods sold
(vi) Cost of Sales

II. Calculate selling price per unit, if sale is made at a profit of 20% on sales.

[Ans.: I (i) ₹2,50,000; (ii) ₹3,20,000; (iii) ₹3,46,000; (iv) ₹3,78,000; (v) ₹3,55,600; (vi) ₹3,58,400; II ₹160 per unit**]**

Question 2 (Question 1 Study Material): The books of Adarsh Manufacturing Company present the following data for the month of April:

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

Cost of goods sold excluding administrative expenses ₹56,000.

Inventory accounts showed the following opening and closing balances:

	April 1 (₹)	April 30 (₹)
Raw materials	8,000	10,600
Work-in-progress	10,500	14,500
Finished goods	17,600	19,000

Other data are:

	(₹)
Selling expenses	3,500
General and administration expenses	2,500
Sales for the month	75,000

You are required to:

i. FIND out the value of materials purchased.
ii. PREPARE a cost statement showing the various elements of cost and also the profit earned.

[Ans.: (i) ₹36,500 (ii) Profit ₹13,000**]**

Question 3 (Case Scenario May 2024): XYZ Manufacturing company produces a product called 'MizBon' which requires a combination of two raw materials, Material 'M' & Material 'B', for its production. Standard requirement per unit of 'MizBon' is 2.5 kg. of raw material 'M' and 1 kg of raw material 'B' and is strictly followed. The following information was available for the month of March 2024:
5,000 kg of raw material 'M' was purchased at ₹8,50,000 from GST registered supplier on which GST @ 5% to the tune of ₹42,500 was paid (eligible for input tax credit). Rebate of ₹10,000 was allowed by the supplier on purchase of Raw material 'M'.

2,000 kg of raw material 'B' was purchased from a supplier not registered in GST at ₹90,000.

Freight paid on purchase of Raw Material was ₹14,000.

Other data collected for the month of March 2024 was:

Particulars	₹
Wages paid to production workers	4,80,000
Contribution made towards workers PF & ESI	59,000
Primary packing cost necessary to maintain quality	14,000
Amount paid as fine and penalty	10,000
Research and Development cost paid for improvement in the production process	37,500
Interest and Finance charge for usage of non-equity fund	18,000
Expenses paid for pollution control, engineering and maintenance	12,000
Salary paid to Factory supervisors	40,000
Cost of special mould and patterns	4,000
Lease rent of Machinery and Equipment	1,08,000
Administrative expenses (General)-Excluding rent	21,840

Additional information:

(a) The company pays ₹1,00,000 per month as rent for 2,000 square feet of factory premises. Administrative and sales office occupies 200 square feet and 180 square feet respectively of factory space.
(b) There was no opening and closing stock of input material and no wastage during the production process.
(c) Stock of finished goods at the end of the month 80 units. Actual output was 2,000 units.
(d) Selling and Distribution expenses (excluding sales office rent) were incurred @ ₹ 8 per unit sold.
(e) During the month of March 2024, company paid instalment of advance income tax of ₹50,000.

The company's expected profit for the month of March 2024 is ₹1,00,000.

Question 1: What is factory cost?

(A) ₹17,28,000
(B) ₹17,16,000
(C) ₹17,42,000
(D) ₹17,38,000

Question 2: What is the cost of goods sold?

(A) ₹17,07,920
(B) ₹17,08,990

(C) ₹17,08,320
(D) ₹17,06,160

Question 3: What is sales value?
(A) ₹17,82,850
(B) ₹18,82,520
(C) ₹18,32,520
(D) ₹19,18,520

Question 4: What is the cost of raw material consumed?
(A) ₹9,86,500
(B) ₹9,44,000
(C) ₹9,30,000
(D) ₹9,54,000

Question 5: What is Prime Cost?
(A) ₹14,28,000
(B) ₹15,31,000
(C) ₹14,70,500
(D) ₹14,87,000

[Ans.: (i) (A); (ii) (C); (iii) (B); (iv) (B); (v) (D)**]**

[Hint: Interest, including any payment in the nature of interest for use of non-equity funds and incidental cost that an entity incurs in arranging those funds. Interest and finance charges are not included in cost of production. Interest and Financing Charges shall be presented in the cost statement as a separate item of cost of sales. Alternative way: Interested and Financing charges shall be shown separately after calculating Operating Profit.**]**

Chapter 7 Cost Accounting Systems

Question 1 (Question 4a May 2008): The following figures have been extracted from the cost records of a manufacturing company:

	₹
Stores:	
Opening Balance	63,000
Purchases	3,36,000
Transfer from WIP	1,68,000
Issues to WIP	3,36,000
Issues to Repairs and Maintenance	42,000
Deficiencies found in stock taking	12,600
Work in Progress:	
Opening Balance	1,26,000
Direct Wages applied	1,26,000
Overhead Applied	5,04,000
Closing Balance	84,000
Finished Products:	

Entire output is sold at a profit of 10% on actual cost from WIP. Others: wages incurred ₹ 1,47,000; overheads incurred ₹ 5,25,000.
Income from investment ₹ 21,000; Loss on sale of Fixed Assets ₹ 42,000.
Draw the stores control account, WIP control account, costing profit and loss account, profit and loss account and reconciliation statement.
[Ans.: Value of closing stock: ₹1,76,400; Profit as per Costing P & L A/c ₹84,000; Profit as per financial accounts: (₹33,600)**]**

[Hint: 1. Deficiencies found in stock taking can be treated as a type of loss and the treatment depends on the cause of the deficiency.

If the deficiency is due to errors in inventory management or record-keeping:

This is considered a normal loss.

The cost of the missing items is absorbed by the good units produced or charged to a general overhead account.

If the deficiency is due to theft or pilferage:

This is considered an abnormal loss.

The cost of the missing items is charged to a separate loss account.

If the deficiency is due to damage or spoilage:

This is considered a normal or abnormal loss depending on the cause.

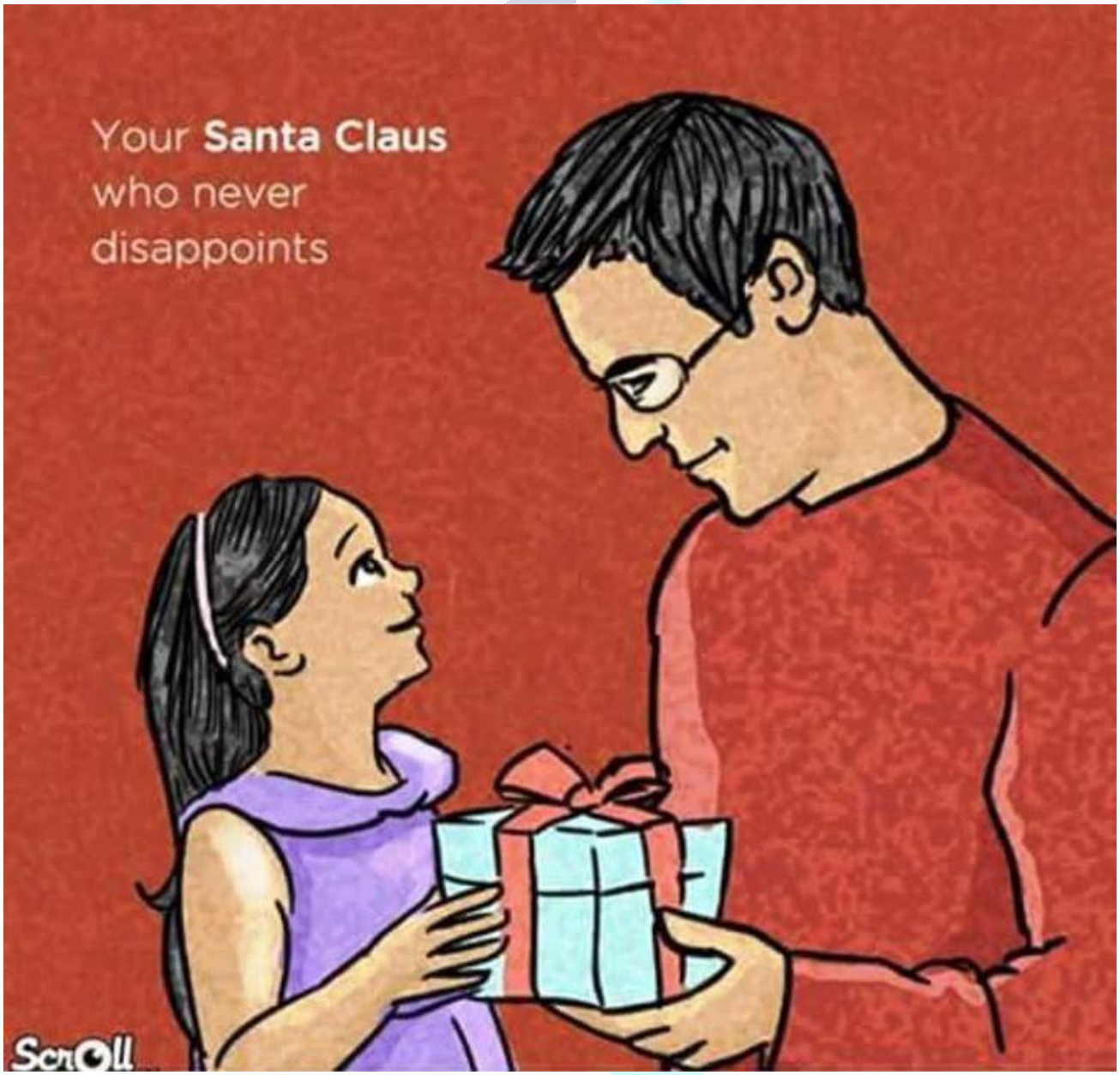
2. Reasons of charging Normal Loss to General Overhead Account: Normal loss is considered an inherent part of the production process. It's a loss that is expected to occur under normal operating conditions. By charging it to the general overhead account, we essentially spread the cost of this loss over all units produced ensuring a fair allocation of costs. It helps in accurately determining the cost of each unit produced, considering the inherent losses.**]**

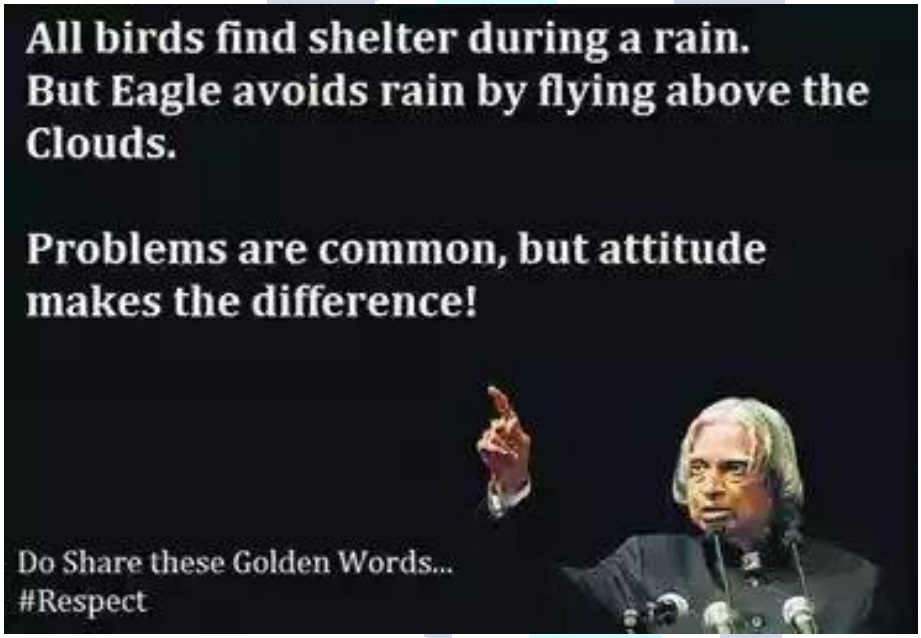
Question 2 (Illustration 7 Study Material): Following are the figures extracted from the Cost Ledger of a manufacturing unit.

	(₹)
Stores:	
Opening balance	15,000
Purchases	80,000
Transfer from WIP	40,000
Issue to WIP	80,000
Issue to repairs and maintenance	10,000
Sold as a special case at cost	5,000
Shortage in the year	3,000
Work-in-Process:	
Opening inventory	30,000
Direct labour cost charged	30,000
Overhead cost charged	1,20,000
Closing Balance	20,000
Finished Products:	
Entire output is sold at 10% profit on actual cost from Work-in- Process	
Others:	
Wages for the period	35,000
Overhead Expenses	1,25,000

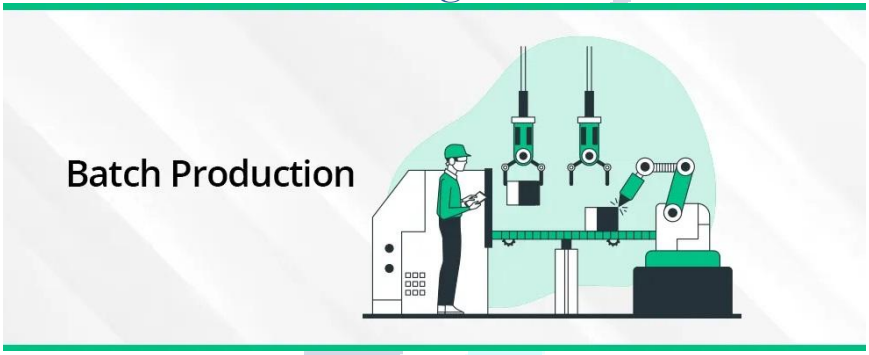
ASCERTAIN the profit or loss as per financial account and cost accounts and reconcile them.

[Ans.: Value of closing stock: ₹2,570; Profit as per cost records: ₹20,000; Profit as per financial accounts: ₹-3,000**]**




All birds find shelter during a rain.
But Eagle avoids rain by flying above the Clouds.
Problems are common, but attitude makes the difference!
Do Share these Golden Words...
#Respect

Chapter 8 Unit and Batch Costing



Question 1 (Question 1 Study Material): Wonder Ltd. has a capacity of 120,000 units per annum as its optimum capacity. The production costs are as under:

Direct Material –	₹ 90 per unit
Direct Labour-	₹ 60 per unit
Overheads:	
Fixed:	₹ 30,00,000 per annum
Variable:	₹ 100 per unit

Semi Variable: ₹ 20,00,000 per annum up to 50% capacity and an extra amount of ₹ 4,00,000 for every 25% increase in capacity or part thereof.

The production is made to order and not for stocks.

If the production programme of the factory is as indicated below and the management desires a profit of ₹20,00,000 for the year DETERMINE the average selling price at which each unit should be quoted.

First 3 months: 50% capacity

Remaining 9 months: 80% capacity

Ignore Administration, Selling and Distribution overheads.

[Ans.: Average S.P.: ₹337.35 p.u.**]**

Question 2 (Question 7 May 2024 RTP): Arnav Ltd. operates in beverages industry where it manufactures soft-drink in three sizes of Large (3 litres), Medium (1.5 litres) and Small (600 ml) bottles. The products are processed in batches. The 5,000 litres capacity processing plant consumes electricity of 90 Kilowatts per hour and a batch takes 1 hour 45 minutes to complete. Only symmetric size of products can be processed at a time. The machine set-up takes 15 minutes to get ready for next batch processing. During the set-up power consumption is only 20%.

(i) The current price of Large, Medium and Small are ₹ 150, ₹ 90 and ₹ 50 respectively.

(ii) To produce a litre of beverage, 14 litres of raw material-W and 25 ml of Material-C are required which costs ₹ 0.50 and ₹ 1,000 per litre respectively.

(iii) 20 direct workers are required. The workers are paid ₹ 880 for 8 hours shift of work.

(iv) The average packing cost per bottle is ₹ 3

(v) Power cost is ₹ 7 per Kilowatt -hour (Kwh)

(vi) Other variable cost is ₹ 30,000 per batch.

(vii) Fixed cost (Administration and marketing) is ₹ 4,90,00,000.

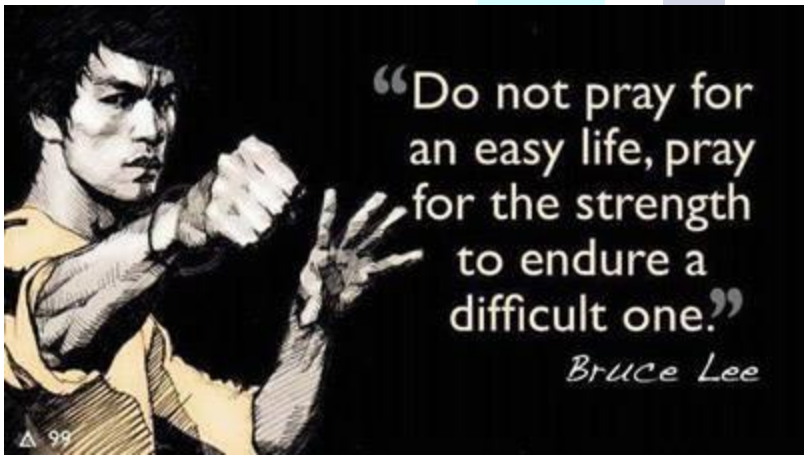
(viii) The holding cost is ₹ 1 per bottle per annum.

The marketing team has surveyed the following demand (bottle) of the product:

Large	Medium	Small
3,00,000	7,50,000	20,00,000

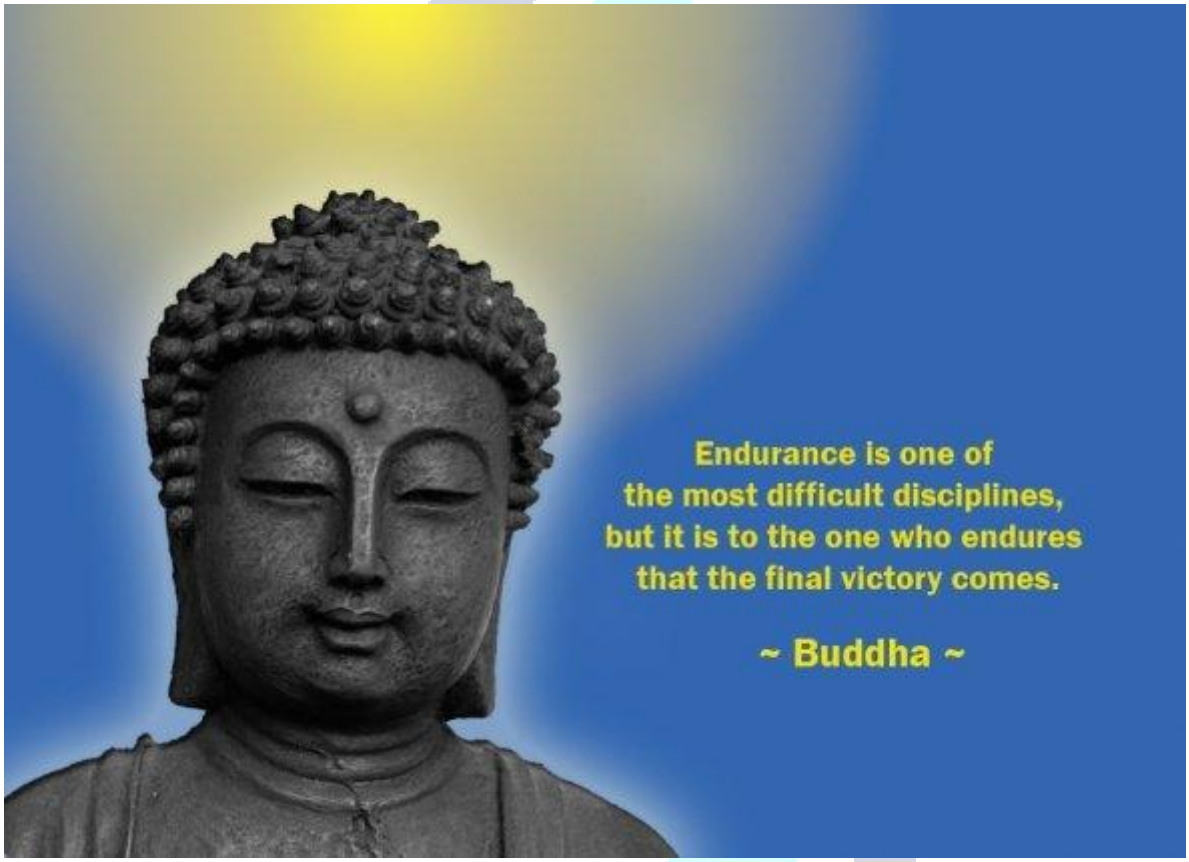
You are required to CALCULATE profit/ loss per batch and also COMPUTE Economic Batch Quantity (EBQ).

[Ans.: (i) Total Profit ₹2,82,17,370; EBQ (Bottle): Large: ₹1,34,234 Medium: ₹2,12,243 Small: ₹3,46,592**]**



Chapter 9 Job Costing

Good and comprehensive questions on this topic are already covered with other topics


Endurance is one of
the most difficult disciplines,
but it is to the one who endures
that the final victory comes.
~ Buddha ~

Chapter 10 Process & Operation Costing

Question 1 (Question 4a July'21): A Manufacturing unit manufactures a product 'XYZ' which passes through three distinct Processes - X, Y and Z. The following data is given:

	Process X	Process Y	Process Z
Material consumed (in ₹)	2,600	2,250	2,000
Direct wages (in ₹)	4,000	3,500	3,000

- The total Production Overhead of ₹ 15,750 was recovered @ 150% of Direct wages.
- 15,000 units at ₹ 2 each were introduced to Process 'X'.
- The output of each process passes to the next process and finally, 12,000 units were transferred to Finished Stock Account from Process 'Z'.
- No stock of materials or work in progress was left at the end.

The following additional information is given:

Process	% of wastage to normal input	Value of Scrap per unit (₹)
X	6%	1.10
Y	?	2.00
Z	5%	1.00

You are required to:

i. Find out the percentage of wastage in process 'Y', given that the output of Process 'Y' is transferred to Process 'Z' at ₹ 4 per unit.
ii. Prepare Process accounts for all the three processes X, Y and Z.

[Ans.: (i) 13.44%**]**

Question 2 (Question 4 (a) May'23): ABC Company produces a Product 'X' that passes through three processes: R, S and T.

Three types of raw materials, viz., J, K, and L are used in the ratio of 40:40:20 in process R. The output of each process is transferred to next process. Process loss is 10% of total input in each process. At the stage of output in process T, a by-product 'Z' is emerging and the ratio of the main product 'X' to the by-product 'Z' is 80:20. The selling price of product 'X' is ₹60 per kg.

The company produced 14,580 kgs of product 'X'

Material price : Material J @ ₹ 15 per kg; Material K @ ₹ 9 per kg.

Material L @ ₹ 7 per kg Process costs are as follows:

Process	Variable cost per kg (₹)	Fixed cost of Input (₹)
R	5.00	42,000
S	4.50	5,000
T	3.40	4,800

The by-product 'Z' cannot be processed further and can be sold at ₹ 30 per kg at the split off stage. There is no realizable value of process losses at any stage.

Required:

Present a statement showing the apportionment of joint costs on the basis of the sales value of product 'X' and by-product 'Z' at the split- off point and the profitability of product 'X' and by-product 'Z.

Question 3 (Question 6 Study Material): 'Healthy Sweets' is engaged in the manufacturing of jaggery. Its process involve sugarcane crushing for juice extraction, then filtration and boiling of juice along with some chemicals and then letting it cool to cut solidified jaggery blocks.

The main process of juice extraction (Process – I) is done in conventional crusher, which is then filtered and boiled (Process – II) in iron pots. The solidified jaggery blocks are then cut, packed and dispatched. For manufacturing 10 kg of jaggery, 100 kg of sugarcane is required, which extracts only 45 litre of juice.

Following information regarding Process – I has been obtained from the manufacturing department of Healthy Sweets for the month of January:

	(₹)
Opening work-in process (4,500 litre)	
Sugarcane	50,000
Labour	15,000
Overheads	45,000
Sugarcane introduced for juice extraction (1,00,000 kg)	5,00,000
Direct Labour	2,00,000
Overheads	6,00,000
Abnormal Loss: 1,000 kg	
Degree of completion:	

	Sugarcane	100%
	Labour and overheads	80%
Closing work-in process: 9,000 litre		
Degree of completion:		
	Sugarcane	100%
	Labour and overheads	80%

Extracted juice transferred for filtering and boiling: 39,500 litre
(Consider mass of 1 litre of juice equivalent to 1 kg)

You are required to PREPARE using average method:

(i) Statement of equivalent production,

(ii) Statement of cost,

(iii) Statement of distribution cost, and

(iv) Process-I Account.

[Ans.: (a) Sugarcane 49,500 & Labour and Overhead 47,500 units (ii) ₹29.216 (iii) Completed and Transferred ₹11,54,032, Abnormal Loss ₹25,595 Closing WIP ₹2,30,355**]**

Question 4 (Question 4a May 2022): STG Limited is a manufacturer of Chemical 'GK', which is required for industrial use. The complete production operation requires two processes. The raw material first passes through Process I, where Chemical 'G' is produced. Following data is furnished for the month April 2022

Particulars	(in kgs.)
Opening work-in-progress quantity	9,500
(Material 100% and conversion 50% complete)	
Material input quantity	1,05,000
Work Completed quantity	83,000
Closing work-in-progress quantity	16,500
(Material 100% and conversion 60% complete)	

You are further provided that:

Particulars	(in ₹)
Opening work-in-progress cost	
Material cost	29,500
Processing cost	14,750

Material input cost	3,34,500
Processing cost	2,53,100

Normal process loss may be estimated to be 10% of material input. It has no realizable value. Any loss over and above normal loss is considered to be 100% complete in material and processing.

The Company transfers 60,000 kgs. of output (Chemical G) from Process I to Process II for producing Chemical 'GK'. Further materials are added in Process II which yield 1.20 kg. of Chemical 'GK' for every kg. of Chemical 'G' introduced. The chemicals transferred to Process II for further processing are then sold as Chemical 'GK' for ₹ 10 per kg. Any quantity of output completed in Process I, are sold as Chemical 'G' @ ₹9 per kg.

The monthly costs incurred in Process II (other than the cost of Chemical 'G') are:

Input 60,000 kg. of Chemical 'G'

Materials Cost ₹ 85,000

Processing Costs ₹ 50,000

You are required:

(i) Prepare Statement of Equivalent production and determine the cost per kg. of Chemical 'G' in Process I using the weighted average cost method.

(ii) Prepare a statement showing cost of Chemical 'G' transferred to Process II, cost of abnormal loss and cost of closing work -in progress.

(iii) STG is considering the option to sell 60,000 kg. of Chemical 'G' of Process I without processing it further in Process-II. Will it be beneficial for the company over the current pattern of processing 60,000 kg in process-II?

[Ans.: (i) Cost per kg of Chemical 'G': Material: ₹3.5 Processing: ₹2.75; Total: ₹6.25; (ii) 84,975; (iii) net profit on further processing in Process II is 45,000**]**

Question 5 (Illustration 6 Study Material): A Ltd. produces product 'AXE' which passes through two processes before it is completed and transferred to finished stock. The following data relate for the month of October:

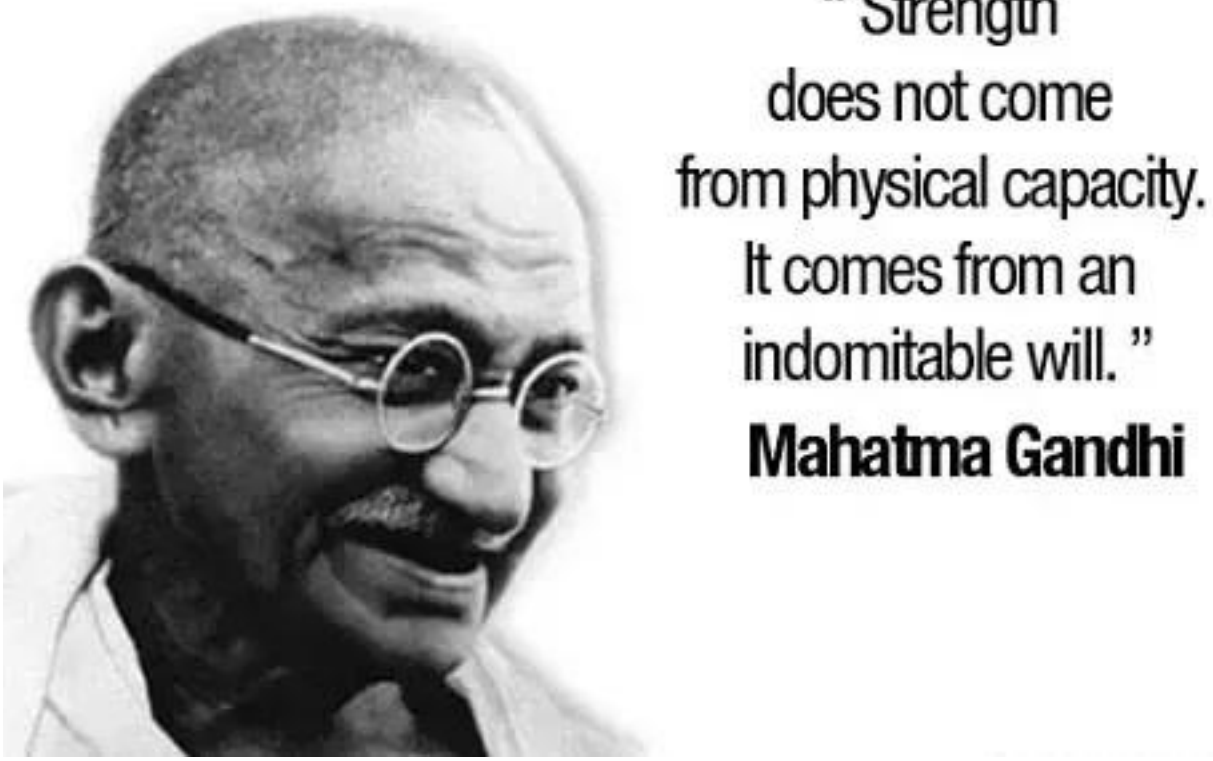
	Process- I (₹)	Process- II (₹)	Finished Stock (₹)
Opening stock	7,500	9,000	22,500
Direct materials	15,000	15,750	-
Direct wages	11,200	11,250	-

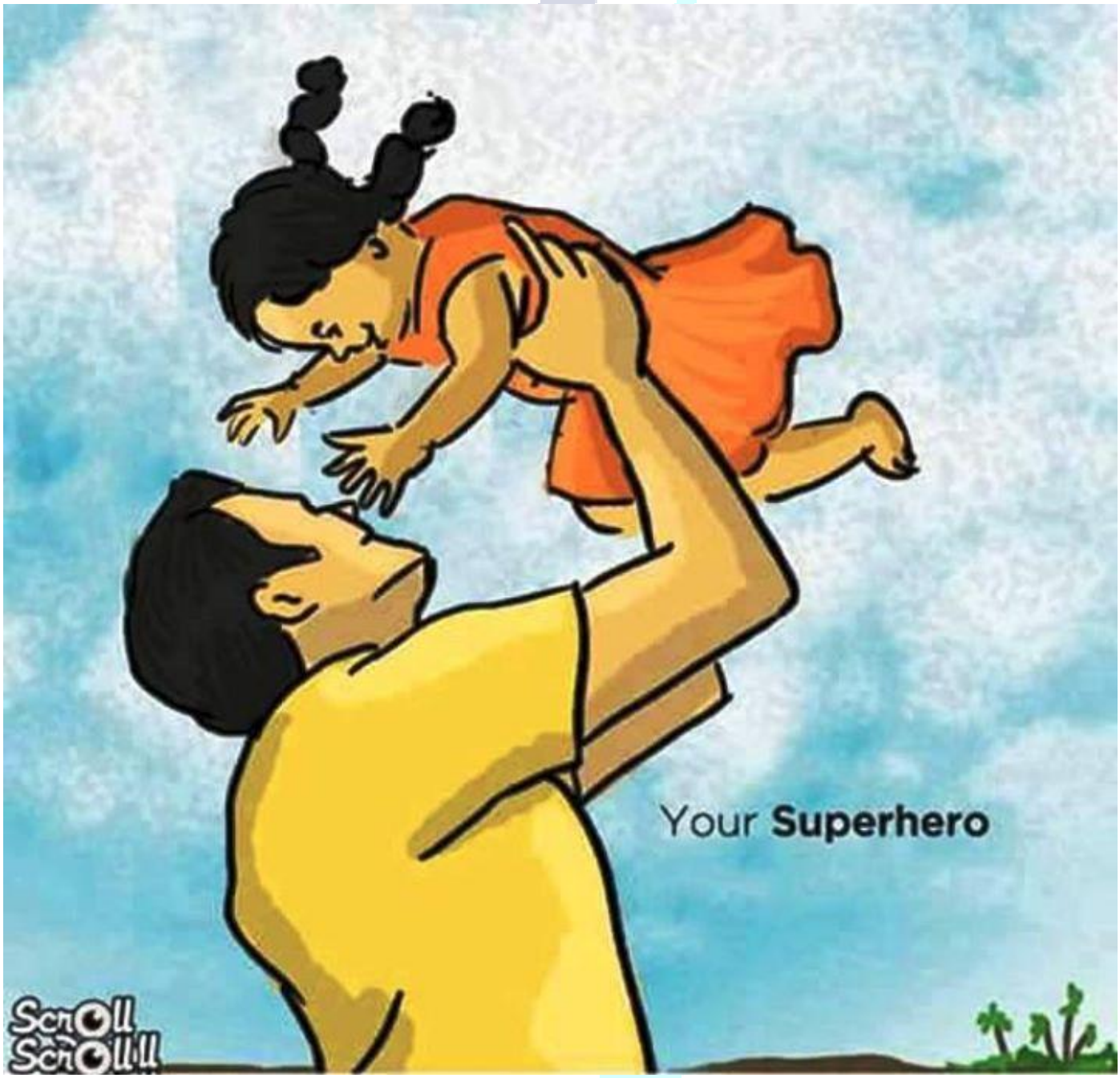
Factory overheads	10,500	4,500	-
Closing stock	3,700	4,500	11,250
Inter-process profit included in opening stock	-	1,500	8,250

Output of Process- I is transferred to Process- II at 25% profit on the transfer price. Output of Process- II is transferred to finished stock at 20% profit on the transfer price. Stock in processes is valued at prime cost. Finished stock is valued at the price at which it is received from process II. Sales during the period are ₹ 1,40,000.

PREPARE Process cost accounts and finished goods account showing the profit element at each stage.

[Ans.: Transferred to Costing P & L A/c from Finished Goods: Total ₹1,40,000, Cost ₹82,425 and Profit 57,575**]**

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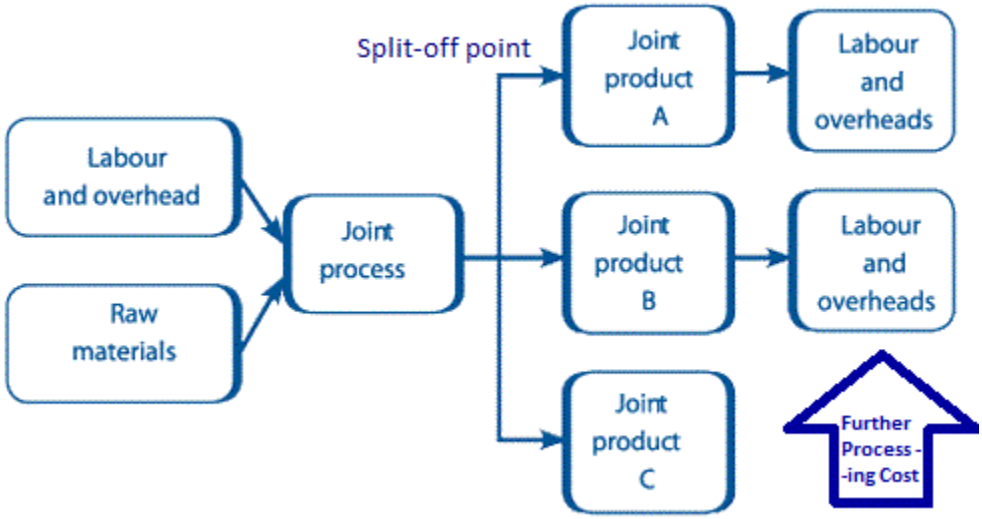
Chapter 11 Joint Product By Product

When a group of individual products are simultaneously produced and each has a significant relative sales value the outputs are usually called joint products. E.g. distillation of coal yields coke, natural gas, and other products. The costs of this distillation are joint product costs. By products are products that have a minor sales value and that emerge incidentally from the production of the major product. The split-off point is the juncture in a joint production process when two or more products become separately identifiable. An example is the point at which coal becomes coke, natural gas, and other products. Separable costs (i.e. further processing costs) are all costs - manufacturing, marketing, distribution, and so on - incurred beyond the split-off point that are assignable to each of the specific products identified at the split-off point.

Remember, for decision making only relevant costs i.e. incremental costs relating to decision shall be considered & joint product costs are entirely inappropriate for decision making.



Question 1 (Question 2 Study Material): Sun-moon Ltd. produces and sells the following products:

Products	Units	Selling price at split-off point (₹)	Selling price after further processing (₹)
A	2,00,000	17	25
B	30,000	13	17
C	25,000	8	12

D	20,000	10	-
E	75,000	14	20

Raw material costs ₹35,90,000 and other manufacturing expenses cost ₹5,47,000 in the manufacturing process which are absorbed on the products on the basis of their 'Net realisable value'. The further processing costs of A, B, C and E are ₹12,50,000; ₹1,50,000; ₹ 50,000 and ₹1,50,000 respectively. Fixed costs are ₹ 4,73,000.

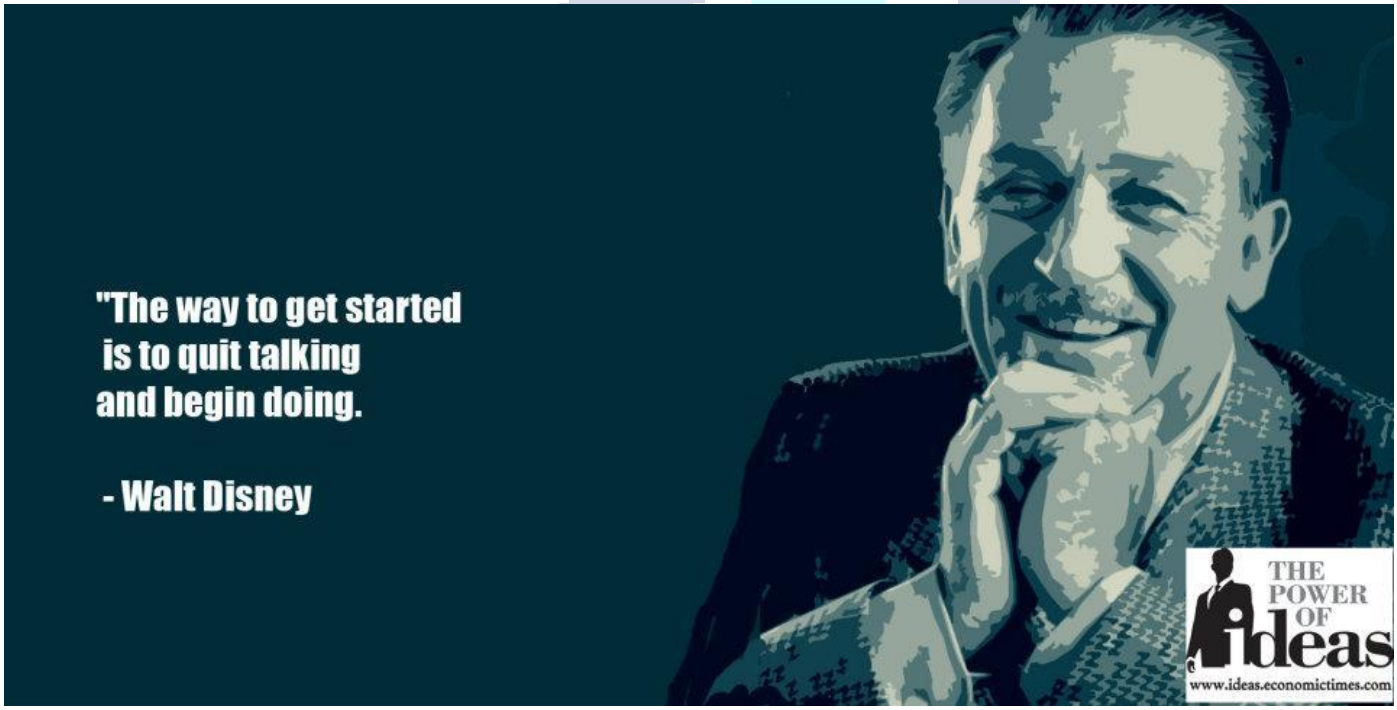
You are required to PREPARE the following in respect of the coming year:

(a) Statement showing income forecast of the company assuming that none of its products are to be further processed.

(b) Statement showing income forecast of the company assuming that products A, B, C and E are to be processed further.

Can you suggest any other production plan whereby the company can maximise its profits? If yes, then submit a statement showing income forecast arising out of adoption of that plan.

[Ans.: (a) Profit: ₹6,30,000; (b) ₹13,00,000; Profit can be increased to ₹13,30,000**]**



Chapter 12 Service Costing

Question 1 (Illustration 4 Study Material): SMC is a public school having five buses each plying in different directions for the transport of its school students. In view of a larger number of students availing of the bus service the buses work two shifts daily both in the morning and in the afternoon. The buses are garaged in the school. The work-load of the students has been so arranged that in the morning the first trip picks up senior students and the second trip plying an hour later picks up the junior students. Similarly, in the afternoon the first trip takes the junior students and an hour later the second trip takes the senior students' home.

The distance travelled by each bus one way is 8 km. The school works 25 days in a month and remains closed for vacation in May, June and December. Bus fee, however, is payable by the students for all 12 months in a year.

The details of expenses for a year are as under:

Driver's salary	₹ 4,500 per month per driver
Cleaner's salary	₹ 3,500 per month
(Salary payable for all 12 months)	
(One cleaner employed for all the five buses)	
License fee, taxes, etc.	₹ 8,600 per bus per annum
Insurance	₹ 10,000 per bus per annum
Repairs & maintenance	₹ 35,000 per bus per annum
Purchase price of the bus	₹ 15,00,000 each
Life of each bus	12 years
Scrap value of a bus at the end of life	₹ 3,00,000
Diesel cost	₹ 45.00 per litre

Each bus gives an average mileage of 4 km. per litre of diesel.

Seating capacity of each bus is 50 students.

The seating capacity is fully occupied during the whole year.

Students picked up and dropped within a range up to 4 km. of distance from the school are charged half fare and fifty per cent of the students travelling in each trip are in this category. Ignore interest. Since the charges are to be based on average cost you are required to:

(i) PREPARE a statement showing the expenses of operating a single bus and the fleet of five buses for a year.

(ii) WORK OUT the average cost per student per month in respect of–

b) students coming from a distance of upto 4 km. from the school and

c) students coming from a distance beyond 4 km. from the school.

[Ans.: (i) Total Cost of 5 Buses: ₹18,90,000; (ii) (A) ₹210 (B) ₹420**]**

Question 2 (Illustration 5 Study Material-Adapted): Bharat Transport Ltd. charges ₹ 90 per ton for its 6 tons truck lorry load from city 'A' to city 'B'. The charges for the return journey are ₹ 84 per ton. No concession or reduction in these rates is made for any delivery of goods at intermediate station 'C'. In January, 2008 the truck made 12 outward journeys for city 'B' with full load out of which 2 tons were unloaded twice in the way at city 'C'. The truck carried a load of 8 tons in its return journey for 5 times but once caught by police and ₹ 1,200 was paid as fine. For the remaining trips the truck carried full load out of which all the goods on load were unloaded once at city 'C'.

The distance from city 'A' to city 'C' and city 'B' are 140 kms and 300 kms respectively.

Annual fixed costs and maintenance charges are ₹ 60,000 and ₹ 12,000 respectively. Running charges spent during January, 2008 are ₹ 2,944.

You are required to find out the cost per absolute ton–kilometer and the profit for January, 2008.

[Ans.: ₹8,944 and ₹3,224**]**

Question 3 (Question 1d May 2023): RST Toll Plaza Limited built an 80-kilometre-long highway between two cities and operates a toll plaza to collect tolls from passing vehicles using the highway. The company has estimated that 50,000 light weight, 12,000 medium weight and 10,000 heavy weight vehicles will be using the highway in one month in outward journey and the same number for return journey.

As per government notification, vehicles used for medical emergencies, Members of Parliament, and essential services are exempt from toll charges. It is estimated that 10% of light weight vehicles will pass the highway for such use.

It is the policy of the company that if vehicles return within 24 hours of their outward journey, the toll fare will be reduced by 25 percent automatically. It is estimated that 30% of chargeable light weight vehicles return within the specified time frame.

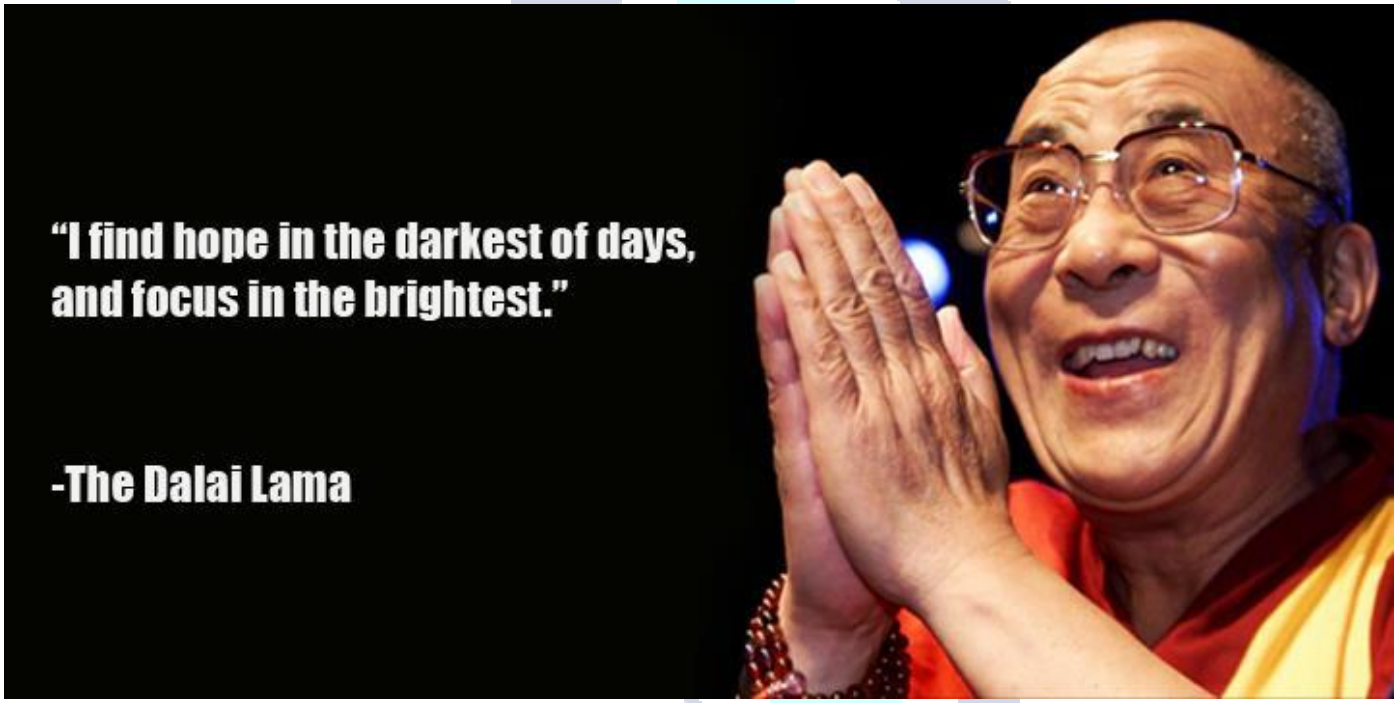
The toll charges for medium weight vehicles are to be fixed as 2.5 times of the light weight vehicles and that of heavy weight vehicles as 2 times of the medium weight vehicles.

The toll and maintenance cost for a month is ₹ 59,09,090, The company requires a profit of 10% over the total cost to cover interest and other costs.

Required:

i. Calculate the toll rate for each type of vehicle if concession facilities are not available on the return journey.
ii. Calculate the toll rate that will be charged from light weight vehicles if a return journey concession facility is available, assuming that the revenue earned from light weight vehicles calculated in option (i) remains the same.

[Ans.: Light Weight Vehicle: ₹26; Medium Weight Vehicle: ₹65; and Heavy Weight Vehicle: ₹130; (ii) 76,500 vehicles: ₹27.01; 13,500 vehicles: ₹20.26**]**


"I find hope in the darkest of days,
and focus in the brightest."
-The Dalai Lama

Chapter 13 Standard Costing

Question 1 (Question 14 Study Material): Following data is extracted from the books of XYZ Ltd. for the month of January:

(i) Estimation-

Particulars	Quantity (kg.)	Price (₹)	Amount (₹)
Material-A	800	?	--
Material-B	600	30.00	18,000
			--

Normal loss was expected to be 10% of total input materials.

(ii) Actuals-

1480 kg of output produced.

Particulars	Quantity (kg.)	Price (₹)	Amount (₹)
Material-A	900	?	--
Material-B	?	32.50	--
			59,825

(iii) Other Information-

Material Cost Variance = ₹ 3,625 (F)

Material Price Variance = ₹ 175 (F)

You are required to CALCULATE:

(i) Standard Price of Material-A;

(ii) Actual Quantity of Material-B;

(iii) Actual Price of Material-A;

(iv) Revised standard quantity of Material-A and Material-B; and

(v) Material Mix Variance.

[Ans.: (i) ₹45; (ii) 650 kg; (iii) ₹43; (iv) A: 886 kg & B: 664 kg; (v) 210 (A)**]**

Question 2 (Question 13 Study Material): J.K. Ltd. manufactures NXE by mixing three raw materials. For every batch of 100 kg. of NXE, 125 kg. of raw materials are used. In the month of April, 60 batches were prepared to produce an output of 5,600 kg. of NXE. The standard and actual particulars for the month of April, are as follows:

Raw Materials	Standard		Actual		Quantity of Raw Materials Purchased
	Mix	Price per kg.	Mix	Price per Kg.	
	(%)	(₹)	(%)	(₹)	(Kg.)
A	50	20	60	21	5,000
B	30	10	20	8	2,000
C	20	5	20	6	1,200

You are required to CALCULATE:

(i) Material Price variance

(ii) Material Usage Variance

[Ans.: (i) Material purchase price variance ₹2,200 (A), Material price variance: ₹3,000 (A); (ii) Material usage variance: ₹14,500 (A)**]**

Question 3 (Question 3a May 2019): Following information relates to labour of KAY PEE Ltd.:

Type of Labour	Skilled	Semi–Skilled	Unskilled	Total
No. of Workers in the Standard Gang	12	8	5	25
Standard Rate per hour (₹)	75	50	40	
Number of Workers in Actual Gang				25
Actual Rate per hour (₹)	80	48	42	

The standard output of gang was 12 units per hour of the product M. The gang was engaged for 200 hours during the month of March 2019 out of which 20 hours were lost due to machine

breakdown and 2,295 units of product M were produced. The actual number of skilled workers was 2 times the semi-skilled workers. Total labour mix variance was ₹ 10,800 (A).

You are required to calculate the following:

(i) Actual number of workers in each category.

(ii) Labour rate variance.

(iii) Labour yield variance.

(iv) Labour efficiency variance

[Ans.: (i) 7, 14 & 4; (ii) 12,800 (A); (iii) 16,875 (F); (iv) 6,075 (F)**]**

Question 4 (Question 10 May 2020 RTP): ABC Ltd. had prepared the following estimation for the month of January:

	Quantity	Rate (₹)	Amount (₹)
Material-A	800 kg.	90.00	72,000
Material-B	600 kg.	60.00	36,000
Skilled labour	1,000 hours	75.00	75,000
Unskilled labour	800 hours	44.00	35,200

Normal loss was expected to be 10% of total input materials and an idle labour time of 5% of expected labour hours was also estimated.

At the end of the month the following information has been collected from the cost accounting department:

The company has produced 1,480 kg. finished product by using the followings:

	Quantity	Rate (₹)	Amount (₹)
Material-A	900 kg.	86.00	77,400
Material-B	650 kg.	65.00	42,250
Skilled labour	1,200 hours	71.00	85,200
Unskilled labour	860 hours	46.00	39,560

You are required to CALCULATE:

(a) Material Cost Variance;
(b) Material Price Variance;
(c) Material Mix Variance;
(d) Material Yield Variance;

(e) Labour Cost Variance;
(f) Labour Efficiency Variance and
(g) Labour Yield Variance.

[Ans.: (a) 7,250 (F); (b) 350 (F); (c) 420 (A); (d) 7,320 (F); (e) 1,768 (A) (f) 4,848 (A); (g) 3,112 (A)**]**

Question 5 (Question 5a Dec 2021): In a manufacturing company the standard units of production for the year were fixed at 1,20,000 units and overhead expenditures were estimated to be as follows:

Particulars	Amount (₹)
Fixed	**12,00,000**
Semi-variable (60% expenses are of fixed nature and 40% are of variable nature)	1,80,000
Variable	6,00,000

Actual production during the month of April, 2021 was 8,000 units. Each month has 20 working days. During the month there was one public holiday. The actual overheads were as follows:

Particulars	Amount (₹)
Fixed	1,10,000
Semi-variable (60% expenses are of fixed nature and 40% are of variable)	19,200
Variable	48,000

You are required to calculate the following variances for the month of April 2021:

1. Overhead Cost variance
2. Fixed Overhead Cost variance
3. Variable Overhead Cost variance
4. Fixed Overhead Volume variance
5. Fixed Overhead Expenditure Variance
6. Calendar Variance

[Ans.: 1. ₹ 45,200 (A); 2. ₹ 34,320 (A); 3. ₹ 10,880 (A); 4. ₹ 21,800 (A); 5. ₹ 12,520 (A); 6. ₹ 5,450 (A)**]**

Question 6 (Question 3a May 16; Question 4(a) October 2023 MTP-2): X Associates undertake to prepare income tax returns for individuals for a fee. They use the weighted average method and actual costs for the financial reporting purposes. However, for internal reporting, they use a standard costs system. The standards, based on equivalent performance, have been established as follows:

Labour per return 5 hrs @ ₹ 40 per hour

Overhead per return 5 hrs @ ₹ 20 per hour

For March 2015 performance, budgeted overhead is ₹98,000 for standard labour hours allowed.

The following additional information pertains to the month of March 2015:

March 1	Return-in-process (25% complete)	200 Nos.
	Return started in March	825 Nos
March 31	Return-in-process (80% complete)	125 Nos
Cost Data:		
March 1	Return-in-process labour	₹ 12,000
	- Overheads	₹ 5,000
March 1 to 31	Labour: 4,000 hours	₹ 1,78,000
	Overheads	₹ 90,000

You are required to compute: (a) For each element, equivalent units of performance and the actual cost per equivalent unit. (b) Actual cost of return-in-process on March 31. (c) The standard cost per return. (d) The labour rate and labour efficiency variance as well as overhead volume and overhead expenditure variance.

[Ans.: (a) 1000 units & Cost per unit: Labour: ₹ 190 p.u. Overhead ₹ 95 p.u.; (b) ₹28,500; (c) ₹44.50; (d) Labour Rate Variance ₹ 18,000(A); Labour Efficiency Variance ₹ 30,000(F); Overhead Expenditure or Budgeted Variance ₹ 8,000(F); Overhead Volume Variance ₹ 3,000(A)**]**

[Hint: For part (iv) FIFO has been applied**]**


EVERY DAY IS A CHANCE
TO GET BETTER, DON'T WASTE IT.

Chapter 14 Marginal Costing

Question 1 (Question 1b Nov 2020-Adapted): A single product company furnishes the following data:

	Year 2007	Year 2008
Sales	24,00,000	?
P/V Ratio	33-1/3 %	30%
Margin of Safety	25%	40%

While there was no change in volume of sales in year 2008, the selling price was reduced. Calculate sales, fixed cost and profit for year 2008.

[Ans.: Sales: 22,85,714; Fixed Cost: 4,11,429; Profit: 2,74,285**]**

Question 2 (Question 11 Study Material-Adapted): The following information is given by Z Ltd.:

Margin of safety	₹1,87,500
Total cost	₹1,93,750
Margin of safety	7500 units
Break-even sales	2500 units

Required:

Calculate Profit, P/V Ratio, BEP Sales (in ₹) and Fixed Cost.

[Ans.: ₹56250, 0.30, ₹62500, ₹18750**]**

Question 3 (Question 1a May 2019): Omega Ltd manufactures a product, currently utilising 75% capacity with a turnover of ₹ 99,00,000 at ₹ 275 per unit. The cost data is as under:

	Amount (₹)
Direct Material per unit	96

Direct wages per unit	42
Variable overhead per unit	18
Semi-variable overheads	7,32,000
P/V ratio	40%

Fixed overhead cost is ₹28,81,000 upto 80% level of activity, beyond this level, an additional ₹2,38,500 will be incurred.

Required:

(i) Break-even point in units and activity level at Break-even point.

(ii) Number of units to be sold to earn profit of ₹ 25 per unit.

[Ans.: (i) 29,900 units & 62.29%; (ii) 41,500 units**]**

Question 4 (Question 4a Nov. 17): A company, with 90% Capacity utilization, is manufacturing a product and makes a sale of ₹ 9,45,000 at ₹ 30 per unit. The cost data is as under:

Materials	₹9.00 per unit
Labour	₹7.00 per unit
Semi variable cost (including variable cost of ₹ 4.25 per unit)	₹2,10,000

Fixed cost is ₹94,500 upto 90% level of output (capacity). Beyond this, an additional amount of ₹15,000 will be incurred.

You are required to calculate:

(i) Level of output at break-even point.

(ii) Number of units to be sold to earn a net income of 10% of sales.

(iii) Level of output needed to earn a profit of ₹ 1,41,375.

[Ans.: (i) 17500 units (at 50% activity level); (ii) 25,278 units; (iii) 33,538 units (95.82% activity level)**]**

Question 5 (Question 3a Jan 2021): Two manufacturing companies A and B are planning to merge. The details are as follows:

	A	B
Capacity utilisation (%)	90	60
Sales (₹)	63,00,000	48,00,000
Variable Cost (₹)	39,60,000	22,50,000

Fixed Cost (₹)	13,00,000	15,00,000

Assuming that the proposal is implemented, calculate:

(i) Break-Even sales of the merged plant and the capacity utilization at that stage.
(ii) Profitability of the merged plant at 80% capacity utilization.
(iii) Sales Turnover of the merged plant to earn a profit of ₹60,00,000.
(iv) When the merged plant is working at a capacity to earn a profit of ₹60,00,000, what percentage of increase in selling price is required to sustain an increase of 5% in fixed overheads

[Ans.: (i) ₹61,31,387 & 40.88%; (ii) ₹26,80,000; (iii) ₹1,92,68,666 (iv) 0.726%**]**

Question 6 (Question 18 Study Material): The following are cost data for three alternative ways of processing the clerical work for cases brought before the LC Court System:

	A Manual (₹)	B Semi-Automatic (₹)	C Fully-Automatic (₹)
Monthly fixed costs:			
Occupancy	15,000	15,000	15,000
Maintenance contract	-	5,000	10,000
Equipment lease	-	25,000	1,00,000
Unit variable costs (per report):			
Supplies	40	80	20
Labour	₹200 (5 hrs × ₹40)	₹60 (1 hr × ₹60)	₹20 (0.25 hr × ₹80)

Required:

(i) CALCULATE cost indifference points. Interpret your results.

(ii) If the present case load is 600 cases and it is expected to go up to 850 cases in near future, SELECT most appropriate on cost considerations?

[Ans.: (i) Cases ≤ 300: Alternative A; 300 ≤ Cases ≤ 800: Alternative B; Cases ≥ 800: Alternative C; (ii) Present case load is 600. Therefore, alternative B is suitable. As the number of cases is expected to go upto 850 cases, alternative C is most appropriate.**]**

Question 7 (Question 19 Study Material): XY Ltd. makes two products X and Y, whose respective fixed costs are F_1 and F_2. You are given that the unit contribution of Y is one-fifth less than the unit contribution of X, that the total of F_1 and F_2 is ₹ 1,50,000, that the BEP of X is 1,800 units (for BEP of

X, F_2 is not considered) and that 3,000 units is the indifference point between X and Y. (i.e. X and Y make equal profits at 3,000 unit volume, considering their respective fixed costs). There is no inventory buildup as whatever is produced is sold.

Required

FIND OUT the values F_1 and F_2 and unit contributions of X and Y.

[Ans.: Contribution per unit of X = ₹50 Contribution per unit of Y is ₹ 40 The Value of F_1 = ₹ 90,000, F_2 = ₹ 60,000**]**

Question 8 (Question 9 Study Material): Mr. X has ₹ 2,00,000 investments in his business firm. He wants a 15 per cent return on his money. From an analysis of recent cost figures, he finds that his variable cost of operating is 60 per cent of sales, his fixed costs are ₹ 80,000 per year. Show COMPUTATIONS to answer the following questions:

(i) What sales volume must be obtained to break even?

(ii) What sales volume must be obtained to get 15 per cent return on investment?

(iii) Mr. X estimates that even if he closed the doors of his business, he would incur ₹25,000 as expenses per year. At what sales would he be better off by locking his business up?

[Ans.: (i) ₹2,00,000; (ii) ₹2,75,000; (iii) Mr. X will be better off by locking his business up, if the sale is less than ₹1,37,500**]**

Question 9 (Question 4a Nov 2022): An agriculture-based company having 210 hectares of land is engaged in growing three different cereals namely, wheat, rice and maize annually. The yield of the different crops and their selling prices are given below:

	Wheat	Rice	Maize
Yield (in kgs per hectare)	2,000	500	100
Selling Price (₹ per kg)	20	40	250

The variable cost data of different crops are given below:

(All figures in ₹ per kg)

Crop	Labour charges	Packing Materials	Other variable expenses
Wheat	8	2	4
Rice	10	2	1
Maize	120	10	20

The company has a policy to produce and sell all the three kinds of crops. The maximum and minimum area to be cultivated for each crop is as follows:

Crop	Maximum Area (in hectares)	Minimum Area (in hectares)
Wheat	160	100
Rice	50	40
Maize	60	10

You are required to:

(i) Rank the crops on the basis of contribution per hectare.

(ii) Determine the optimum product mix considering that all the three cereals are to be produced.

(iii) Calculate the maximum profit which can be achieved if the total fixed cost per annum is ₹21,45,000.

(Assume that there are no other constraints applicable to this company)

[Ans.: (i) Wheat: II, Rice: I, Maize: III; (ii) Rice: 25,000 kg; Maize: 1,000 kg; Wheat: 3,00,000 kg; (iii) ₹4,30,000**]**

Question 10 (Illustration 12 Study Material): X Ltd. supplies spare parts to an air craft company Y Ltd. The production capacity of X Ltd. facilitates production of any one spare part for a particular period of time. The following are the cost and other information for the production of the two different spare parts A and B:

Per unit	Part A	Part B
Alloy usage	1.6 kgs	1.6 kgs
Machine time: Machine A	0.6 hrs	0.25 hrs
Machine time: Machine B	0.5 hrs	0.55 hrs
Target Price (₹)	145	115

Total hours available: Machine A: 4,000 hours

Machine B: 4,500 hours

Alloy available is 13,000 kgs. @ ₹12.50 per kg.

Variable overheads per machine hours:

Machine A: ₹80

Machine B: ₹100

You are required to identify the spare part which will optimise contribution at the offered price. If Y Ltd. reduces target price by 10% and offers ₹60 per hour of unutilised machine hour, what will be the total contribution from the spare part identified above?

[Ans.: (i) Total Contribution-Part A: ₹179982, Part B: ₹162500; Hence Part A (ii) ₹153369**]**

Question 11 (Illustration 10 of Study Material): A Company can make any one of the 3 products X, Y or Z in a year. It can exercise its option only at the beginning of each year. Relevant information about the products for the next year is given below:

	X	Y	Z	
Selling Price	₹10 per unit	₹ 12 per unit	₹ 12 per unit	
Variable Costs	₹ 6 per unit	₹ 9 per unit	₹ 7 per unit	
Market Demand (units)	3,000	2,000	1,000	
Production Capacity (units)	2,000	3,000	900	
Fixed Costs				₹ 30,000

You are required to compute the Opportunity Costs for each of the products.

[Ans.: X- ₹6000; Y- ₹8000; Z- ₹8000**]**

Question 12 (Illustration 11 of Study Material): M.K. Ltd. manufactures and sells a single product X whose selling price is ₹ 40 per unit and the variable cost is ₹ 16 per unit.

(i) If the Fixed Costs for this year are ₹ 4,80,000 and the annual sales are at 60% margin of safety, CALCULATE the rate of net return on sales, assuming an income tax level of 40%

(ii) For the next year, it is proposed to add another product line Y whose selling price would be ₹ 50 per unit and the variable cost ₹ 10 per unit. The total fixed costs are estimated at ₹ 6,66,600. The sales mix values of X : Y would be 7 : 3. DETERMINE at what level of sales next year, would M.K. Ltd. break even? Give separately for both X and Y the break-even sales in rupee and quantities.

[Ans.: (i) 21.6% (ii) Break-even point X: ₹6,48,000 Y: ₹3,47,200**]**

Question 13 (Question 17 of Study Material): XYZ Ltd. has a production capacity of 2,00,000 units per year. Normal capacity utilisation is reckoned as 90%. Standard variable production costs are ₹ 11 per unit. The fixed costs are ₹3,60,000 per year. Variable selling costs are ₹ 3 per unit and fixed selling costs are ₹2,70,000 per year. The unit selling price is ₹ 20. In the year just ended on 31st March, the production was 1,60,000 units and sales were 1,50,000 units. The closing inventory on 31st March was 20,000 units. The actual variable production costs for the year were ₹ 35,000 higher than the standard.

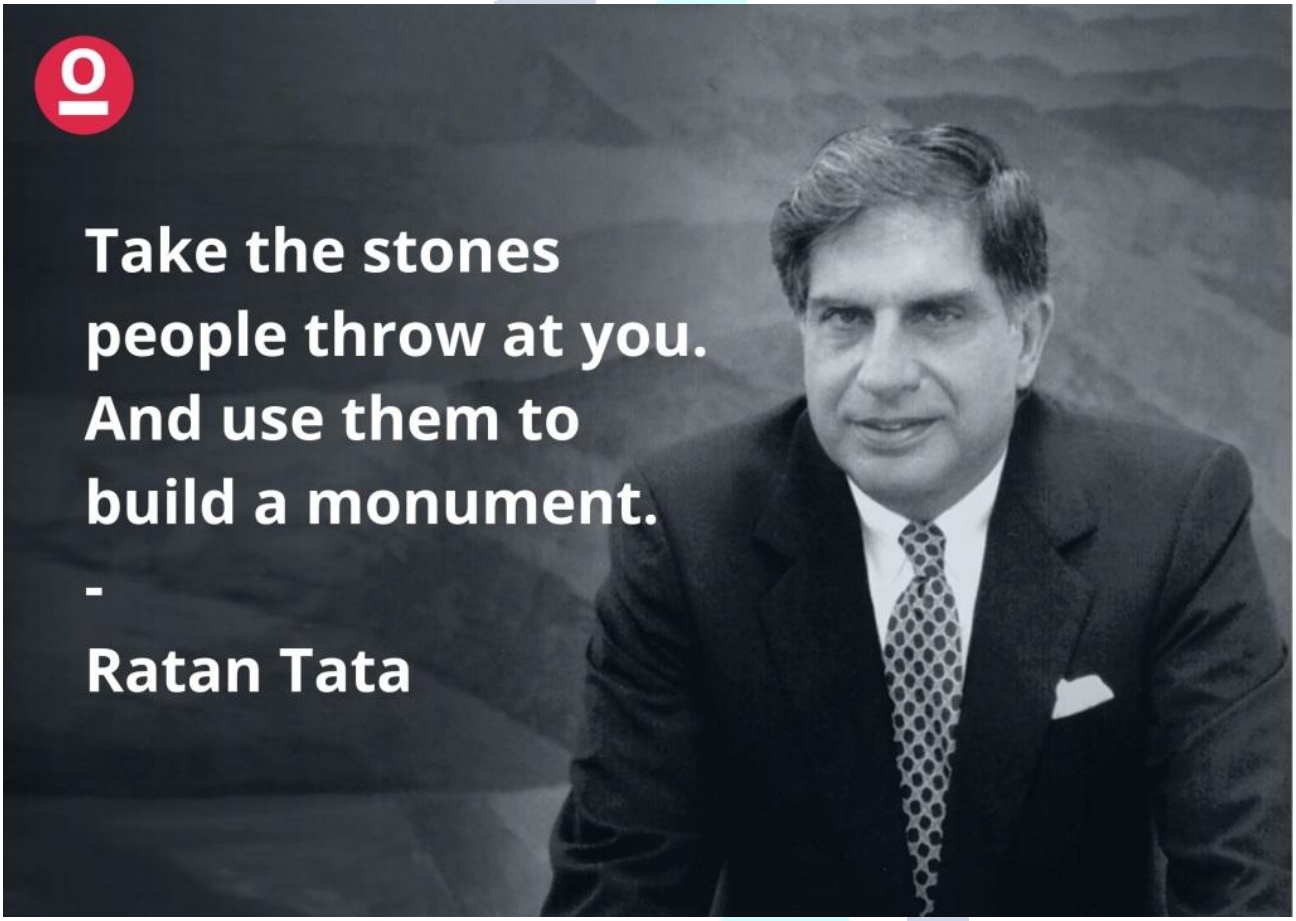
(i) CALCULATE the profit for the year

(a) by absorption costing method and

(b) by marginal costing method.

(ii) EXPLAIN the difference in the profits.

[Ans.: Profit under Absorption Costing: ₹2,59,375; Profit under Absorption Costing: ₹2,39,375; (ii) Opening Stock undervalued 20,000 and closing stock undervalued 40,000**]**


Take the stones
people throw at you.
And use them to
build a monument.
-
Ratan Tata

Chapter 15 Budgets and Budgetary Control

Question 1 (Illustration 4 Study Material): A single product company estimated its quarter-wise sales for the next year as under:

Quarter	Sales (Units)
I	30,000
II	37,500
III	41,250
IV	45,000

The opening stock of finished goods is 6,000 units and the company expects to maintain the closing stock of finished goods at 12,250 units at the end of the year. The production pattern in each quarter is based on 80% of the sales of the current quarter and 20% of the sales of the next quarter. The company maintains this 20% of sales of next quarter as closing stock of current quarter.

The opening stock of raw materials in the beginning of the year is 10,000 kg. and the closing stock at the end of the year is required to be maintained at 5,000 kg. Each unit of finished output requires 2 kg. of raw materials.

The company proposes to purchase the entire annual requirement of raw materials in the first three quarters in the proportion and at the prices given below:

Quarter	Purchase of raw materials % to total annual requirement in quantity	Price per kg. (₹)
I	30%	2
II	50%	3
III	20%	4

The value of the opening stock of raw materials in the beginning of the year is ₹20,000. You are required to PREPARE the following for the next year, quarter-wise:

(i) Production budget (in units).

(ii) Raw material consumption budget (in quantity).

(iii) Raw material purchase budget (in quantity and value).

(iv) Priced stores ledger card of the raw material using First in First out method.

[Ans.: (i) Q_1: 31,500; Q_2: 38,250; Q_3: 42,000; Q_4: 48,250; (ii) Q_1: 63,000; Q_2: 76,500; Q_3: 84,000; Q_4: 96,500; (iii) 3,15,000 kg; Q_1: ₹1,89,000; Q_2: ₹4,72,500; Q_3: ₹2,52,000; (iv) Balances Q_1: 41,500 kg & ₹83,000; Q_2: 1,22,500 kg & ₹3,67,500; Q_3: 1,01,500 kg & ₹3,67,500; Q_4: 5,000 kg & ₹20,000**]**

Question 2 (Illustration 5 Study Material): A company is engaged in the manufacture of specialised sub-assemblies required for certain electronic equipment. The company envisages that in the forthcoming month, December, the sales will be in the ratio of 3 : 4 : 2 respectively of sub-assemblies, ACB, MCB and DP.

The following is the schedule of components required for manufacture:

Component requirements					
Sub-assembly	**Selling Price**	**Base board**	**IC08**	**IC12**	**IC26**
ACB	520	1	8	4	2
MCB	500	1	2	10	6
DP	350	1	2	4	8
Purchase price (₹)		60	20	12	8

The direct labour time and variable overheads required for each of the sub-assemblies are:

Labour hours			
	Grade A	**Grade B**	**Variable overheads (₹)**
ACB	8	16	36
MCB	6	12	24
DP	4	8	24
Direct wage rate per hour (₹)	5	4	—

The labourers work 8 hours a day for 25 days a month.

The opening stocks of sub-assemblies and components for December are as under:

	Sub-assemblies	Components	
ACB	800	Base Board	1600
MCB	1200	IC08	1200
DP	2800	IC12	6000
		IC26	4000

Fixed overheads amount to ₹ 7,57,200 for the month and a monthly profit target of ₹ 12 lacs has been set.

The company is eager for a reduction of closing inventories for the month of December of sub-assemblies and components by 10% of quantity as compared to the opening stock. PREPARE the following budgets for the month of December:

(a) Sales budget in quantity and value.

(b) Production budget in quantity

(c) Component usage budget in quantity.

(d) Component purchase budget in quantity and value.

(e) Manpower budget showing the number of workers and the amount of wages payable.

[Ans.: (a) ACB: 6,300 units & ₹32,76,000; MCB: 8,400 units, & DP: ₹42,00,000; 4,200 units & ₹14,70,000; (b) ACB: 6,220 units; MCB: 8,280 units; DP: 3,920 units; (c) Base Board: 18,420 units; Component IC08: 74,160 units; Component IC12: 1,23,360 units; Component IC26: 93,480 units; (d) Base Board: 18,260 units & ₹10,95,600; Component IC08: 74,040 units & ₹14,80,800; Component IC12: 1,22,760 units & ₹14,73,120; Component IC26: 93,080 units & ₹7,44,640; (e) Grade A: 576 workers & ₹5,76,000; Grade B: 1,152 workers & ₹9,21,600**]**

Question 3 (Question 2b Nov 2023): HL Limited produces and sells four varieties of beverage. The past data shows different demand patterns for various quarters during the year. The sales quantity and selling price for the month of September 2023 is as follows:

	Sales Quantity	Selling Price per unit
Hot Coffee	1,40,000 Units	₹ 20/-
Cold Coffee	3,40,000 Units	₹ 40/-
Fruit Juice	4,20,000 Units	₹ 20/-
Carbonated Soft Drink	2,70,000 units	₹ 20/-

For the quarter October to December 2023, it is estimated that due to climate changes the demand for Hot Coffee would increase every month by 50% of the previous month and the demand for Cold Coffee would decrease every month by 30% of the previous month. The demand for Fruit Juice would decrease by 20% in the month of October 2023 and thereafter it will remain constant. HL Limited would be able to sell only 60,000 units, 50,000 units and 30,000 units of Carbonated Soft Drink respectively during the months of October, November and December 2023. There would be no change in the selling price of all the products during the next quarter.

Standard Quantity of closing stock for the period September 2023 to December 2023 is as follows:

(in units)

	Hot Coffee	Cold Coffee	Fruit Juice	Carbonated Soft Drink
Sep-23	12,000	13,000	11,000	7,500
Oct-23	15,000	14,000	12,000	5,500
Nov-23	13,000	15,000	10,000	6,000
Dec-23	11,000	16,000	13,000	7,000

You are required to prepare a Production Budget (in units) and Sales Budget (in units and sales value) for the months of October, November and December 2023.

[Ans.: Production Budget: Oct'23: 2,13,000, 2,39,000, 3,37,000, 58,000; Nov.'23: 3,13,000' 1,67,600, 3,34,000, 50,500; Dec.'23: 4,70,500, 1,17,620, 3,39,000, 31,000**]**

Question 4 (Illustration 7 Study Material): Following data is available for DKG and Co:

Standard working hours	8 hours per day of 5 days per week
Maximum capacity	50 employees
Actual working	40 employees
Actual hours expected to be worked per four week	6,400 hours
Std. hours expected to be earned per four weeks	8,000 hours
Actual hours worked in the four- week period	6,000 hours
Standard hours earned in the four- week period	7,000 hours

The related period is of 4 weeks. In this period there was a one special day holiday due to national event. CALCULATE the following ratios:

(1) Efficiency Ratio, (2) Activity Ratio, (3) Calendar Ratio, (4) Standard Capacity Usage Ratio, (5) Actual Capacity Usage Ratio. (6) Actual Usage of Budgeted Capacity Ratio.

[Ans.: (1) 116.67%**;** (2) 109.375%; (3) 95%; (4) 80%; (5) 75%; (6) 93.75%**]**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