Time Allowed: 3 Hour   **Full Marks: 100**

The figures in the margin on the right side indicate full marks.

SECTION – A (Compulsory)

1. **Choose the correct option:**   [15 x 2 = 30]

(i) **Which among the following is not the type of cost accounting system?**
  (a) Historical Costing
  (b) Absorption Costing
  (c) Standard Costing
  (d) Process Costing

(ii) **The correct Idle time ratio is:**
  (a) $\frac{Idle\ Hours}{Total\ hours} \times 100$
  (b) $\frac{Total\ hours}{Idle\ Hours} \times 100$
  (c) Idle Hours × Total Hours
  (d) Idle Hours × Hourly Rate

(iii) **Directors' remuneration and expenses form a part of:**
  (a) Production Overhead
  (b) Administration Overhead
  (c) Selling Overhead
  (d) Distribution Overhead

(iv) **Which Cost Accounting Standard deals with Depreciation and Amortisation?**
  (a) CAS 16
  (b) CAS 10
  (c) CAS 9
  (d) CAS 12

(v) **Which Cost Accounting Standard deals with Repairs and Maintenance Cost?**
  (a) CAS 16
  (b) CAS 10
  (c) CAS 9
  (d) CAS 12

(vi) **What will be the journal entry for under-absorption of selling & distribution overhead as per Integrated Accounting System:**
  (a) Profit and loss A/c   Dr.
       To Selling & distribution overhead A/c

  (b) Selling & distribution overhead A/c   Dr.
       To Profit and Loss A/c

(c) Finished Goods Control A/c   Dr.
      To Selling & distribution overhead A/c

(d) Costing Profit and Loss A/c   Dr.
      To Selling & distribution overhead A/c

(vii) **What is the objective of Reconciliation:**

    (a) To assure the mathematical accuracy and reliability of cost accounts

    (b) To have proper control and ascertainment

    (c) To ensure correct profit or loss in financial accounts

    (d) All of the above

(viii) **The type of process loss that should not be allowed to affect the cost of good units is called:**

    (a) Standard Loss

    (b) Normal Loss

    (c) Abnormal Loss

    (d) Seasonal Loss

(ix) **Value of work certified –**

    (a) Value of Contract × Work certified (%)

    (b) Value of Contract × Work uncertified (%)

    (c) Cost of work to date – (Cost of work uncertified+ Material in hand + Plant at site)

    (d) Value of work certified- Payment made to contractor

(x) **A hotel has 80 standard twin-bedded rooms. The hotel is fully occupied for each of the 350 days in each year that it is open. The total costs of running the hotel each year are₹ 33,60,000. What would be cost per unit per day?**

    (a) ₹120

    (b) ₹122

    (c) ₹240

    (d) ₹102

(xi) **ASA Ltd. manufactures a particular fountain pen called ASA Durga, incurring variable costs of ₹30 per unit and fixed costs of ₹20,000 per month. If the product sells for ₹50 per unit, then the breakeven point will be–**

    (a) 666.667

    (b) 1000

    (c) 400

    (d) 250

(xii) **Mrs. S sells a product at ₹20 each and the variable cost is ₹12 each and she sold 2000 units in the market. She also has incurred ₹5,000 fixed cost in producing such product. Determine the value of break-even point.**

    (a) **8333.33**

    (b) **12,500**

    (c) **27,500**

    (d) **50,000**

(xiii) **Which among the following is incorrect?**

    (a) **Material Mix variance = (Revised standard quantity – Actual quantity) × Standard price**

    (b) **b) Material Yield variance = (standard quantity–revised standard quantity) × Standard price**

    (c) **Material Mix variance = (Revised standard quantity- actual quantity) × Standard price**

    (d) **Material Usage Variance = (Standard price – actual quantity) × standard quantity**

(xiv) **Which is not the limitation of zero-based budget?**

    (a) **It is very detailed procedure and naturally it is time consuming and lot of paperwork involved in the same**

    (b) **Cost involved in preparation and implementation of this system is very low.**

    (c) **Morale of the staff is very low as they feel threatened if a particular activity is discontinued**

    (d) **Ranking of activities and decision-making may become subjective at times.**

(xv) **Budgets are shown in-terms:**

    (a) **Qualitative**

    (b) **Quantitative**

    (c) **Materialistic**

    (d) **Both(b) and (c)**

Answer:

i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv
d	a	b	a	d	a	d	c	a	a	c	b	d	b	d

Section – B

(Answer any five questions out of seven questions given. Each question carries 14 Marks)

[5 x 14 = 70]

2.   **(a)**   **Prepare a Cost Sheet and identify the cost per ton of 'A' Grade Paper, manufactured by a paper mill in December 2024 from the following data:**

Direct Materials:
Paper Pulp- 500 tons @ ₹52 per ton
Other Materials – 100 tons @ ₹30 per ton

Direct Labour:
80 Skilled Men @ ₹3 per day for 25 days
40 Unskilled Men @ ₹2 per day for 25 days.

Direct Expenses:
Special Equipment ₹2,500
Special Dyes ₹1,500

Works Overhead:
Variable @ 100%, and
Fixed @ 60% on direct wages

Administration overhead @ 20% and selling and distribution overhead @ 10% on works cost. 400 tons of special paper was manufactured and ₹1,800 was realized by the sale of scrap material during the course of manufacture. The scrap value of the special equipment after utilization in manufacture is nil. **[7]**

(b)   **The components A and B are used as follows:**

Normal usage	300units per week each
Maximum usage	450 units per week each
Minimum usage	150 units per week each
Re-order Quantity	A 2,400 units; B 3,600 units
Re-order period	A 4 to 6 weeks, B 2 to 4weeks

Calculate for each component:

(i)   **Re-order Level.**

(ii)   **Minimum Level.**

(iii)   **Maximum Level.**

(iv)   **Average Stock Level.** **[7]**

Answer:

(a)   **Cost Sheet for the month of December, 2024**

	Total Cost	Unit Cost (₹)
Direct Material Cost		
Paper Pulp (500 tones @ Rs.52 per ton)	26,000	65.00
Other Material (100 tones @ Rs.30 per ton)	3,000	7.50
Direct Material Consumed	**29,000**	**72.5**
Add: Direct labour cost		
Skilled (80 men x 3 x 25 days)	6,000	15.00
Unskilled (40 men c Rs.2 x 25 days)	2,000	5.00
Add: Direct Expenses		
Special Equipment	2,500	6.25
Special Dyes	1,500	3.75
Prime Cost	**41,000**	**102.50**
Add: Works Overhead		
Variable (100% of Direct Wages)	8,000	20.00
Fixed (60% of Direct Wages)	4,800	12.00
Less: Sale of Scrap	(1,800)	(4.50)
Works Cost	**52,000**	**130.00**
Add: Administrative Overhead (20% of Works Cost)	10,400	26.00
Cost of Production	**62,4 00**	**156.00**
Add: Selling and Distribution Overhead (10% on Works Cost)	5,200	13.00
Cost of Sales	**67,600**	**169.00**

(b)

	Particulars	Component A	Component B
i.a)	Re-order Level = Maximum Usage × Maximum Re-order period	$450 \times 6 = 2,700$ units	$450 \times 4 = 1,800$ units
ii.b)	Minimum Level = Re-order Level – (Normal Usage × Normal Re-order period)	$2,700 - (300 \times \frac{4+6}{2})$ = 1,200 units	$1,800 - (300 \times \frac{2+4}{2})$ = 900 units
ii.c)	Maximum Level = Re-order Level + Re-order Quantity – (Minimum Usage × Minimum Re- order period)	$= 2,700 + 2,400 - (150 \times 4)$ = 4,500 units	$= 1,800 + 3,600 - (150 \times 2)$ = 5,100 units
v.d)	Average Stock Level = $\dfrac{\text{Minimum Level + Maximum Level}}{2}$	$= \dfrac{1,200 + 4,500}{2}$ = 2,850 units	$= \dfrac{900 + 5,100}{2}$ = 3,000 units

3. (a) Self-help Ltd generates and produces its own power Data for power costs are as follows:

	Production Departments		Service Departments	
	A	B	X	Y
Horsepower Hours	10,000	20,000	12,000	8,000
Needed at capacity production used during the month of May	8,000	13,000	7,000	6,000

During the month of May costs for generating power amounted to ₹9,300, of this ₹2,500 was considered to be fixed. Department X renders service to other Departments in the ratio of 13:6:1, while Y renders service to A and B in the ratio of 31:3. Given that the direct labour hours in Departments A and B are 1,650 hours and 2,175 hours respectively, calculate the power cost per labour in each of these two departments. **[7]**

(b) Pass the journal entries for the following transactions in a double entry cost accounting system:

Particulars	Amount (₹)
(i) Issue of Material:	
- Direct	5,50,000
- Indirect	1,50,000
(ii) Allocation of wages and salaries:	
- Direct	2,00,000
- Indirect	40,000
(iii) Overheads absorbed in jobs:	
- Factory	1,50,000
- Administration	50,000
- Selling	30,000
(iv) Under / Over absorbed overhead:	
- Factory (Over)	20,000
- Administration (Under)	10,000

[7]

Answer:

(a) Statement Showing apportionment of power cost and computation of cost per hour

Particulars	Basis	Total ₹	A ₹	B ₹	X ₹	Y ₹
Fixed Cost	H P Hours (5:10:6:4)	2,500	500	1,000	600	400
Variable Cost (9,300 – 2,500)	Actual Consumption (8:13:7:6)	6,800	1,600	2,600	1,400	1,200
		9,300	2,100	3,600	2,000	1,600
Cost of X distributed	(13:6:1)		1,300	600	(2,000)	100

Cost of Y distributed	(31:3)		1,550	150	-	(1,700)
Total Power Cost			4,950	4,350	-	-
Labour Hours			1,650	2,175	-	-
Cost of Power per Labour Hour			3	2		

(b)

Journal

Particulars		Dr. Amount (₹)	Cr. Amount (₹)
Work in Progress Control A/c	Dr	5,50,000	
Factory Overhead Control A/c	Dr	1,50,000	
To Material Control A/c			7,00,000
Work in Progress Control A/c	Dr	2,00,000	
Factory Overhead Control A/c	Dr	40,000	
To Wages Control A/c			2,40,000
Work in Progress Control A/c	Dr	1,50,000	
To Factory Overhead Control A/c			1,50,000
Finished Goods Control A/c	Dr	50,000	
To Administrative Overhead Control A/c			50,000
Cost of Sales A/c	Dr	30,000	
To Selling and Distribution Overhead Control A/c			30,000
Factory Overhead Control A/c	Dr	20,000	
To Costing Profit and Loss A/c			20,000
Costing Profit and Loss A/c	Dr	10,000	
To Administrative Overhead Control A/c			10,000

4. (a) **A transport service company is running five buses between two towns, which are 50 kilometers apart. Seating capacity of each bus is 50 passengers. The following particulars are obtained from their books for April 2022.**

Particulars	Amounts (₹)
Wage of drivers, conductors and cleaners	**2,40,000**
Salaries of office staff	**1,00,000**
Diesel oil and other oil	**3,50,000**
Repairs and maintenance	**80,000**
Taxation, insurance etc.	**1,60,000**
Depreciation	**2,60,000**
Interest and other expenses	**2,00,000**
Total	**13,90,000**

Actual passengers carried were 75% of seating capacity. All buses ran on all day of the month. Each bus made one round trip per day. Calculate the cost per passenger kilometer. **[7]**

(b) A contractor has undertaken a construction work at a price of ₹5,00,000 and begun the execution of work on 1st January 2022. The following are the particulars of the contract up to 31st December, 2022:

Particulars	(₹)	Particulars	(₹)
Machinery	30,000	Overheads	8,252
Materials	1,70,698	Materials returned	1,098
Wages	1,48,750	Work certified	3,90,000
Direct expenses	6,334	Cash received	3,60,000
Uncertified work	9,000	Materials on 31.12.2022	3,766
Wages outstanding	5,380		
Value of Machinery on 31.12.2021	22,000		

It was decided that the profit made on the contract in the year should be arrived at by deducting the cost of work certified from the total value of the architect's certificate, that $\frac{1}{3}rd$ of the profit so arrived at should be regarded as a provision against contingencies and that such provision should be increased by taking to the credit of Profit & Loss Account only such portion of the $\frac{2}{3}rd$ profit, as the cash received to the work certified. Prepare the contract account for the year and show the amount taken to the credit of the Profit and Loss account. **[7]**

Answer:

(a) **Operating Cost Statement for the month of April 2022**

Particulars	Amounts (₹)	Amounts (₹)
A. Standing Charges		
Wages of drivers, conductors and cleaners.		
• Salaries of office staff	2,40,000	
• Taxation, insurance etc.	1,00,000	
• Interest and other expenses	1,60,000	
• Depreciation	2,00,000	
• **Total standing charges**	2,60,000	
		9,60,000
B. Running and Maintenance Charges		
• Repairs and maintenance	80,000	
• Diesel oil and other oil	3,50,000	
• **Total running and maintenance charges**		4,30,000
C. Total cost [A+B]		13,90,000
D. Cost per passenger kilometer* ₹ 13,90,000 / 5,62,500 passenger kilometers		2.471

Working: * Passenger kilometres are computed as below:

=   Number of buses × Distance in one round trip × Seating capacity available × Percentage of seating capacity actually used × Number of days in a month × No. of trips

=   5 buses × 50 kilometers × 50 passengers × 75% × 30 days× 2 = 5,62,500 passenger-kms.

(b)

Dr.	Contract Account		Cr.
Particulars	**(₹)**	**Particulars**	**(₹)**
To Depreciation on Machinery A/c [WN-1]	8,000	By Materials (Returned) A/c	1,098
		By Materials at site c/d	3,766
To Materials A/c	1,70,698	By Cost of Construction c/d (Bal. fig.)	3,42,550
To Wages A/c	1,48,750		
To Outstanding Wages A/c	5,380		
To Direct Expenses A/c	6,334		
To Overheads A/c	8,252		
	3,47,414		**3,47,414**
To Cost of Construction b/d	3,42,550	By Work in Progress A/c	
To Notional Profit c/d (Bal. fig.)	56,450	- Value of work certified	3,90,000
		- Cost of uncertified work	9,000
	3,99,000		**3,99,000**
To Profit & Loss A/c [WN-2]	34,738	By Notional Profit b/d	56,450
To Work in progress A/c			
- Provision for Contingencies (Bal. fig.)	21,712		
	56,450		**56,450**

Working Notes:

1)   Depreciation on Machinery = ₹ 30,000 - ₹ 22,000 = ₹ 8,000

2)   Since, degree of completion is above 50% so amount transferred to

Profit & Loss A/c $= \frac{2}{3} \times 56,450 \times \frac{360000}{390000} = $ ₹34,738.

5.   **(a)**   **The following particulars for Process II are given:**

Particulars	Units	Amount (₹)
Transfer to Process II at cost	**4,000**	**9,000**
Direct Wages		**2,000**
Direct Material		**3,000**
Transfer to Finished Stock	**3,240**	

Factory overheads in process are absorbed at a rate of 400% of direct material. Allowance for Normal Loss is 20% of units worked. Scrap value of ₹ 5 per unit.

Demonstrate the cost of transfer to finished stock. Using the information supplied above, show the amount of gain or loss in the process to be taken to Costing Profit and Loss Account.   **[7]**

(b) **From the following you are required to calculate:**

(i) **Material Cost Variance**

(ii) **Material Price Variance**

(iii) **Material Usage Variance**

Quantity of material purchased	3,000 units
Value of material purchased	₹ 9,000
Standard quantity of material required:	
for one tonne of finished product	25 units
Standard rate of material	₹ 2 per unit
Opening stock of material	NIL
Closing stock of material	500 units
Finished production during the period	80 tonnes [7]

Answer:

(a)

Dr.   **Process II Account**   Cr.

Particulars	Units	Rate (₹)	Amount (₹)	Particulars	Units	Rate (₹)	Amount (₹)
To Process I A/c	4,000	2.25	9,000	By Normal Loss A/c	800	5	4,000
To Direct Wages A/c			2,000	(4,000 × 20%)			
To Direct Materials A/c			3,000				
To Factor Overheads A/c (400% ×₹3,000)			12,000	By Balance c/d (bal.fig.) ($\frac{₹22000}{3,200 \text{ units}}$ = ₹ 6.875)	3,200 (Bal. fig)	6.875	22,000
	4,000		26,000		4,000		26,000
To Balance b/d	3,200	6.875	22,000	By Finished Stock A/c	3,240	6.875	22,275
To Abnormal Gain A/c (Bal. fig)	40	6.875	275				
	3,240		22,275		3,240		22,275

INTERMEDIATE EXAMINATION

MODEL ANSWERS

PAPER – 8

COST ACCOUNTING

SET 2

TERM – DECEMBER 2025

SYLLABUS 2022

Dr.   **Abnormal Gain Account**   **Cr.**

Particulars	Units	Rate	Amount (₹)	Particulars	Units	Rate	Amount (₹)
To Normal Loss A/c	40	5	200	By Process II A/c	40	6.875	275
To Costing Profit & Loss A/c (Bal. fig)			75				
	40		275		40		275

(b)   **SQ = Standard Quantity for Actual Output = 80 × 25 = 2,000 units**

SP = Standard Price = ₹ 2 per unit

AQ = Actual Quantity Used for Production = 3,000 – 500 = 2,500 units

AP = Actual Price per unit $= \dfrac{₹9000}{3000\ units} = ₹$ 3 per unit

(a)   **Material Cost Variance**   = SQ × SP – AQ × AP
                                     = (2,000 × 2) – (2,500 × 3)
                                     = 4,000 – 7,500 = ₹ 3,500 (A)

(b)   **Material Price Variance**   = (SP – AP) × AQ
                                     = (2 – 3) × 2,500 = ₹ 2,500 (A)

(c)   **Material Usage Variance**   = (SQ – AQ) × SP
                                     = (2,000 – 2,500) × 2 = ₹ 1,000 (A)

6.   **(a)**   **The sales turnover and profit during two periods were as follows:**

Period	Sales (₹)	Profit (₹)
1	2,00,000	20,000
2	3,00,000	40,000

Demonstrate:

I.   What would be probable trading results with sales of ₹1,80,000

II.   What amount of sales will yield a profit of ₹ 50,000?   **[7]**

(b)   **Mr. Young has ₹1,50,000 investments in a business. He wants a 15% profit on his money. From an analysis of recent cost figures, he finds that his variable cost of operating is 60% of sales; his fixed costs are ₹75,000 per year. Calculate the following:**

I.   What sales volume must be obtained to break even?

II.   What sales volume must be obtained to his 15% return of investment?

III.   Mr. Young estimates that even if he closed the doors of his business, he would incur ₹25,000 expenses per year. At what sales would be better off by locking his sales up?   **[7]**

Answer:

(a) $\text{P/V Ratio} = \frac{\text{Change in Profit}}{\text{changes in sales}} \times 100 = \frac{40,000-20,000}{3,00,000-2,00,00} \times 100 = \frac{20,000}{1,00,000} \times 100 = 20\%$

	Period 1 (₹)	Period 2 (₹)	Proposed sales (₹)
Contribution	2,00,000 × 20%	3,00,000 × 20%	1,80,000 × 20%
= Sales × P/V Ratio	= 40,000	= 60,000	= 36,000
Less: Fixed Cost (Bal. fig.)	20,000	20,000	20,000
Profit	20,000	40,000	16,000

So, Desired Sales $= \frac{\text{Fixed cost+Desired profit}}{\text{p/v ratio}} = \frac{20,000+50,000}{20\%} = \frac{70,000}{20\%} = ₹\,3,50,000$

(b) **Variable Cost Ratio = 60% (given)**

P/V Ratio = 1 – Variable Cost Ratio = 1 – 60% = 40%

(i) Break Even Point (in ₹) $= \frac{\text{Fixed cost}}{\text{p/v ratio}} = \frac{75,000}{40\%} = ₹1,87,500$

(ii) Desired Profit $= 1,50,000 \times 15\% = ₹\,22,500$

Expected sales $= \frac{\text{Fixed cost+Desired profit}}{\text{p/v ratio}} = \frac{75000+22500}{40\%} = ₹\,2,43,750$

Shut down sales $= \frac{\text{Fixed cost−shut down cost}}{\text{p/v ratio}} = \frac{75,000-25,000}{40\%} = ₹\,1,25,000$

7. (a) **The Barker Company manufactures two models of adding machines, A and B. The following production and sales data for the month of June 2022 are given below:**

Particulars	A	B
Estimated inventory (units) June 1	**4500**	**2250**
Desired inventory (units) June 30	**4000**	**2500**
Expected Sales Volume (units)	**7500**	**5000**
Unit sale price (₹)	**75**	**120**

Prepare a sales budget and a production budget for June 2022. [7]

(b) **Briefly explain the cost accounting standard on material cost (CAS- 6).** [7]

Answer:

(a) <center>**Barker Company**</center>

<center>**(Sales Budget for June 2022)**</center>

Product	Sales Volume (Unit)	Unit Selling Price (₹)	Total Sales Price (₹)
A	7,500	75	5,62,500
B	5,000	120	6,00,000
			11,62,500

INTERMEDIATE EXAMINATION
SET 2

MODEL ANSWERS
TERM – DECEMBER 2025

PAPER – 8
SYLLABUS 2022

COST ACCOUNTING

Barker Company
(Production Budget for June 2022)

Particulars	Products A (units)	Product B (units)
Expected Sales	7,500	5,000
Ending inventory, desired	4,000	2,500
Total	11,500	7,500
Less : Beginning inventory	4,500	2,250
Total production (In units)	7,000	5,250

(b) Material cost (CAS- 6):

CAS 6 aims to standardize the determination and reporting of material costs, promoting consistency and transparency in cost accounting practices. It provides guidelines for valuation, assignment, presentation, and disclosure of material costs in cost statements, contributing to effective cost management and decision-making.

1. Introduction: CAS 6 focuses on principles and methods for determining Material Cost, covering various types of materials used in production. It excludes Packing Materials, as a separate standard is dedicated to that.

2. Objective: The primary objective is to establish uniformity and consistency in determining material costs with reasonable accuracy.

3. Scope: CAS 6 applies to cost statements requiring classification, measurement, assignment, presentation, and disclosure of material costs, including those requiring attestation.

4. Definitions: Defines terms like abnormal cost, administrative overheads, cost object, defectives, imputed costs, intermediate product, material cost, production overheads, scrap, standard cost, waste, and spoilage.

5. Principles of Measurement: Details principles for the valuation of material receipts and issues, including the treatment of abnormal costs, waste, spoilage, and the inclusion of imputed costs.

6. Assignment of Costs: Outlines the basis for assigning costs to products or services, covering materials, direct expenses, and indirect materials.

7. Presentation: Cost statements should classify direct materials (e.g., raw materials, components) and indirect materials (e.g., tools, stores) under suitable heads.

8. Disclosures: Specifies information to be disclosed in cost statements, including quantity and rates of major items, valuation basis, changes in accounting principles, excluded abnormal costs, demurrage or detention charges, subsidies/grants, and costs from related parties.

8. (a) Classify the objective of Cost Accounting. [4]

(b) Analyze the measurement of Labour Turnover? [5]

(c) Align the concept of EOQ. [5]

Answer:

(a)   Objectives of Cost Accounting:

It is reiterated that the very basic objective of Cost Accounting is preparation and presentation of cost information. The details of the basic objective are summarized in the following lines.

1.   To ascertain the cost of production on per unit basis, for example, cost per kg, cost per meter, cost per litre, cost per ton etc.

2.   Cost accounting helps in the fixation of selling price. Cost accounting enables to determine the cost of production which helps to fix the selling price.

3.   Cost accounting helps in cost control and cost reduction.

4.   Ascertainment of division wise, activity wise and unit wise profitability is analysed through cost accounting.

5.   Cost accounting also helps in locating wastages, inefficiencies and other gaps in the production processes and services offered.

6.   Cost accounting helps in presentation of relevant data to the management which helps in decision making. Decision making is the most important functions of Management which has specific linkages to the strategic success/failure of an organisation.

(b)   Measurement of Labour Turnover:

It is essential for any organisation to measure the Labour Turnover. This is necessary for having an idea about the turnover in the organisation and also to compare the labour turnover of the previous period with the current one. The following methods are available for measurement of the labour turnover:

1.   Additions Method: Under this method, number of employees added during a particular period is taken into consideration for computing the Labour Turnover. The method of computing is as follows:

Labour Turnover = $\dfrac{Number\ of\ additions}{\text{Average Number of Workers during the period}} \times 100$

2.   Separation Method: In this method, instead of taking the number of employees added, number of employees left during the period is taken into consideration. The method of computation is as follows:

Labour Turnover = $\dfrac{Number\ of\ sepration}{\text{Average Number of Workers during the period}} \times 100$

3.   Replacement Method: In this method neither the additions nor the separations are taken into consideration. The number of employees replaced is taken into consideration for computing the labour turnover.

Labour Turnover = $\dfrac{Number\ of\ Replacement}{\text{Average Number of Workers during the period}} \times 100$

4.   Flux Method: Under this method Labour Turnover is computed by taking into consideration the additions as well as separations. The turnover can also be computed by taking replacements and separations also. Computation is done as per the following methods:

Labour Turnover = $\dfrac{\frac{1}{2}(Number\ of\ Additions + Number\ of\ Sepration)}{\text{Average Number of Workers during the period}} \times 100$

(d)   Economic Batch Quantity (EBQ) is a measure used in batch costing to determine the quantity of units that can be produced at the minimum average cost in a given batch or product run. It is also known as Optimum Batch Quantity (OBQ) and is a refinement of the Economic Order Quantity (EOQ) model. EBQ takes into account the set-up cost, annual demand, production time, and the carrying charge rate per year to calculate the most cost-effective batch size.

The formula for calculating EBQ is similar to EOQ, but with a notable difference in the denominator. The assumptions made for calculating EBQ are that demand is known and constant within a certain period of time, unit cost of the inventory item is constant, production time is known and constant, and set-up cost and constant cost per piece are considered. The importance of EBQ lies in its ability to help companies achieve a balance leading to improved efficiency, reduced costs, and increased profitability.

Setting up and Processing Costs
The setting up and processing costs refer to the costs incurred for setting up and processing operations before the start of production of a batch. There is an inverse relationship between batch size and set up and processing costs.
Large the Batch size: Lower the set-up costs because of few batches.
Smaller the Batch size: Higher the set-up costs because of more batches.

Carrying Costs
The carrying costs refer to the costs incurred in maintaining a given level of inventory. There is positive relationship between batch size and carrying costs.
Large the Batch size : Higher the carrying costs because of high average inventory.
Smaller the Batch size : Lower the carrying costs because of low average inventory.

The trade off
The optimum quantity of batch which should be produced at a point of time determined after achieving a tradeoff between set up costs and carrying costs. Such batch size is known as EBQ because annual total cost of set up and carrying is minimum at this batch size.

Economic Batch Quantity $= \sqrt{\dfrac{2AS}{C}}$

where, A = Annual Demand
S = Set up Cost per batch
C = Carrying Cost per unit per year