

COST AND MANAGEMENT ACCOUNTING

Syllabus

Course No.: MGT 212

Nature of the Course: Core

Full Marks:100

Pass Marks:35

Lecture hour:150

Course Objectives

The objectives of the course are to provide the students with in-depth knowledge of cost and management accounting in order to enable them to develop, arrange and classify cost information required for decision making for maximizing the profit and reducing/eliminating losses.

The course further aims at developing a sound base for higher study in accounting besides in practical knowledge required by the middle level managers to handle cost information independently.

Contents

Unit 1: Conceptual Foundation

LH 6

- Meaning, objectives, importance, advantages and limitations of cost & management accounting.
- Differences between cost and management accounting. Limitations of financial accounting.
- Concept and importance of cost, cost segregation & estimation: Concept and methods of cost segregation: (i) Two point method and (ii) Least square method & (iii) Estimation of cost

Unit 2: Accounting for Materials

LH 10

- Materials/Inventory: Concept, reasons and objectives for holding material / inventory. Inventory
- Control: Meaning, importance and techniques: Economic order quantity: concept and techniques-formula, and trial and error approaches-considering discount under certainty condition, re-order, maximum, minimum, danger and average stock levels, safety stock under certainty.
- Perpetual inventory system, stock control through ABC analysis Concept & technique and just in time inventory: concept, advantages and limitations.

Unit 3: Accounting for Labour Cost

LH 14

- Labour cost: Concept and need for control of labour cost.
- Premium Plan: Premium bonus scheme-Halsey and Rowan Plan, Taylor's differential piece rate system, and Gantt's Task and Bonus plan, Group bonus scheme: Pristman's and Scanlon's plan.
- Labour turnover: Concept, causes and effects, cost of labour turnover: preventive and replacement cost calculation, labour turnover ratios.

Unit 4: Accounting for Overhead Cost:

LH 14

- Overhead cost distribution: Meaning, primary & secondary distribution of overhead cost under direct method.

- Allocation, apportionment and absorption of overhead: meaning, importance, and allocation, apportionment and absorption of overhead based on:
 - ↳ Volume: Concept and ascertainment of total cost and profit under Traditional Volume Base Costing Technique.
 - ↳ Activity: Concept, limitations of traditional overhead absorption system, procedures of absorption of overhead cost under Activity Base Costing Technique, ascertainment of cost and profit under ABS technique, activity based profitability analysis, benefits and limitations of activity based costing system.

Unit 5: Costing in Different Situations

LH 30

- Service costing: Concept and scope of operating costing; Preparation of Cost sheet for Transport Service for passenger, Hospital and Hotel & Restaurant Services, limitations of service costing
- Job order costing: Concept, Measuring direct material, direct labour and manufacturing overhead cost, Accounting for job order: Preparation of job order cost sheet showing nonmanufacturing costs & determination of cost of goods manufactured and cost of goods sold and computation of unit costs, Job order costing in service companies.
- Process costing: Concept and preparation of Process account with/without beginning and ending work-in-progress inventory, partial & total transfer of output to next process, accounting for process loss/gain: normal and abnormal loss, abnormal effective/gain and treatment of spoilage, wastage, scrap and defective unit, accounting for inter process profit, reserve for unrealized profit, Equivalent Unit: Concept and costing: need, importance and methods:
- Weighted average and FIFO costing techniques, difference between job order costing and process costing.
- Joint Product and by product costing: Concept of joint and by-product, apportionment of joint cost under unit of output and revenue basis.

Unit 6: Accounting for Profit Planning

LH 30

- Absorption costing: Concept, importance, and income statement under absorption costing, normal capacity and fixed manufacturing overhead rate, treatment of opening and closing stock, over and under absorption of fixed manufacturing overhead & adjustment in margin and limitations.
- Variable costing: Concept, use and importance, Income statement under variable costing, variable manufacturing cost and limitations.
- Reconciliation of profit/loss: Manufacturing overhead-period and product cost, fixed manufacturing overhead rate, difference in stock, reconciliation of profit between absorption and variable costing techniques showing the causes of difference.
- Cost Volume profit analysis: Meaning, importance, Contribution margin analysis, contribution margin ratio, Cost Volume ratio, Break-even-analysis: under constant underlying situations: changes on selling price, fixed cost, & variable cost, and under step fixed cost & multi-products situations, margin of safety, assumptions of CVP analysis, advantages, limitations and determination of selling price for realizing desired profit.

Unit 7: Cost Accounting for Planning and Control

LH 40

- Standard costing: Concept, preliminaries to established standard costing system, difference between standard and budget, advantages and limitations.

- **Variance analysis:**
 - ↳ Material variance: Concept and calculation of cost, price, usage, mix and yield variances.
 - ↳ Labour variance: Concept and calculation of cost, efficiency, rate, mix, idle time and yield variances.
 - ↳ Overhead cost variance: Concept and calculation of capacity, efficiency and spending variances Disposal of variances, preparation of Income Statement based on standard cost
- Budgeting for planning: Budget-Concept, importance, and Types-Sales budget: production budget, direct material consumption and purchase budget, direct labour budget, manufacturing overhead budget, cost of goods manufactured budget, selling/distribution and administrative expenses budget and cost of goods sold budget
- Flexible budgeting: Concept and limitations of planning (static budget), importance of flexible budgeting, flexible budgeting for overhead cost control on activity levels and budget allowance for actual level attained

Unit 8: Cost Reduction

LH 6

- Cost reduction and cost control: Cost reduction-pre-requisites, techniques, steps, responsibility & limitations
- Value engineering (analysis): Concept, advantages, tools and techniques for cost reduction
- Value analysis: Concept, objectives, importance, advantages and techniques of value analysis.

Suggested Books

- Dangol, R.M. and et.al, *Cost and Management Accounting*, Taleju Publishing House, Kathmandu
- Garrison, R.H. & Noreen, E.W., *Managerial Accounting*, McGraw-Hill Companies, Inc.
- Koirala, M.R. and et.al, *Cost and Management Accounting*, Buddha Academy Publication House, Kathmandu.
- Koirala, Y.R. and et.al, *Cost and Management Accounting*, Ashmita Publication, Kathmandu.
- Lal, Jawahar, *Cost Accounting*, Tata McGraw Hill Co., New Delhi
- Lucy, T., *Cost Accounting*, Tata McGraw Hill Co., New Delhi.
- Lynch & Williamson, *Accounting for Management Planning & Control*, Tata McGraw Hill Co.
- Munankarmi, S.P. and Shrestha, B.P., *Cost and Management Accounting*, Samjhana Publication House, Kathmandu.
- Nigam, R.S. Narang, S.P. & Sehagal, B.C., *Principles and Practice of Cost Account*, S. Chand and Co., New Delhi.
- Pillai & Bagavathi, *Cost Accounting*, S. Chand and Company Ltd. New Delhi.
- Tamrakar, M.R. and et.al, *Cost and Management Accounting*, Pinnacle Publication, Kathmandu
- Upadhyay, J.P. and et.al, *Cost and Management Accounting*, Khanal Publication, Kathmandu.



Model Question - 2071

Full Marks: 100

Pass Marks: 35

Candidates are required to give their answer in their own words as far as practicable. The figures in the margin indicate full marks.

Attempt All Questions

Brief Answer Questions

[10 x 2 = 20]

1. State any three objectives of cost accounting.
2. Define management accounting.
3. What is value analysis?
4. Mention any two causes of labor turnover.
5. Write any two limitations of volume based costing system.
6. A manufacturing company provides you the following information of material X:
 - Total cost at economic order quantity Rs. 2000
 - Ordering cost per order Rs. 50
 - Cost per unit of material Rs. 20
 - Carrying cost is 10% of inventory value

Required: Annual requirement of material X
7. Manakamana Ltd. is working now at its annual normal capacity of 20000 units. The total cost per unit is Rs. 100. The annual fixed costs are Rs. 50,000.

Required: Total cost at 60% of the normal capacity.
8. Following particulars of a worker are provided:
 - Standard time allowed 15 hours
 - Actual time spent 12 hours
 - Wage rate per hour Rs.20

Required: Effective wages under Rowan Premium Plan
9. The following information of a manufacturing company are provided:
 - Annual requirement 36000 units
 - Safety stock 10 days consumption
 - Re-order period is 5 days

Required: Re-order level
10. The following particulars are extracted from the records of a company:
 - Beginning and ending number of employees were 200 and 250 respectively
 - Number of employees quit and discharged was 25 and 10 respectively
 - Employees replaced during the period were 30

Required: Labour Turnover Rate under Separation Method

Descriptive Questions Answer

[5 x 10 = 50]

11. PQ Ltd is a manufacturing company having three production departments A, B and C and two service departments X and Y. The operating conditions of the departments are given below:

Particulars	Production Departments			Service Departments	
	A	B	C	X	Y
Direct Materials (Rs.)	1000	2000	4000	2000	1000
Direct Wages (Rs.)	5000	2000	3000	1000	2000
Area in sq. ft.	500	250	500	250	500
Capital value of assets (Rs.in Lakhs)	20	40	20	10	10
Machine hours	1000	2000	4000	1000	1000
Horse Power of Machine	50	40	20	15	25
Service rendered by Service departments	50%	30%	20%	-	-

The overheads extracted from the books of the company are as under:

Factory Rent	Rs. 4000	Power	Rs. 2500
Depreciation	Rs. 1000	Other overheads	Rs. 9000

Required:

[8+2 = 10]

- a. A statement showing overheads distribution to departments
- b. Machine hour rate of the production departments.

12. Bright manufacturing company with normal capacity of 25000 units provides the following particulars for the year ending:

Production units	30000
Sales units	35000
Variable manufacturing cost per unit	Rs. 6
Fixed manufacturing cost per unit	Rs. 3
Closing stock units	2500
Variable selling and administrative cost per unit	Rs. 2
Fixed selling and administrative cost	Rs. 45000
Selling price per unit	Rs. 15

Required:

[7+3=10]

- i. Income statement under external reporting system
- ii. Reconciliation statement showing the profit of internal reporting

13. The sales revenue and earned profit of a special industry during two years were as follows:

Year	Sales Revenue (Rs)	Profit (Rs)
2011	1000000	60000
2012	120000	80000

Required:

[2+2+2+2+2 = 10]

- i. Profit volume ratio
- ii. Fixed cost
- iii. Break even point (Rs)
- iv. Required sales amount to earn desired profit of Rs.25000 after tax. The corporate tax rate is 20%
- v. Profit when sales are Rs. 800000

14. a) Nepal transport company provides you the following information for the month of Baishakh:

Cost of truck	Rs. 2500000	Kilometer runs in Baishakh	10000 kms
Salary and wages	Rs. 18000	Diesel and lubricants	Rs. 10 per km
Repairs per month	Rs. 6000	Garage rent	Rs. 2000 per month
Insurance and road tad Rs. 48000 per annum			
Depreciation @ 10% per year under SLM			

Required:

[4+1=5]

- i) Total cost showing standing and running charges
- ii) Profit if the company charges 30% profit on cost

- b) Distinguish between Joint product and By-product with suitable example. [5]

15. a) The following information is provided to you relating to a product M:

Estimated sales	120,000 units
Closing stock	10% of sales
Opening stock	24,000 units

For making product M two types of materials are used – material A and material B.

Other details are as follows:

- 2 units of materials A and 3 units of material B are required to produce one unit of product M.
- Closing stock for two types of material are 10% of each material needed for current production.
- The opening stock of materials was 30,000 units and 26,400 units for material A and material B respectively.
- The purchase price of materials is Rs. 10 and Rs. 15 per unit for material A and material B respectively.

Required: Production Budget, Material Consumption Budget and Material Purchase Budget [2+1+2=5]

- b) What are the preliminaries to establish standard costing system? Explain briefly. [5]

Analytical Questions Answer

[2 x 15 = 30]

16. The following details are given to you:

Particulars	Process A	Process B	Process C
Raw Material used 10000 kgs	Rs. 20000		
Indirect Material	Rs. 10000	Rs. 15000	Rs. 30000
Labour Cost	Rs. 10000	Rs. 20000	Rs. 40000
Factory Overhead 50% of labour			
Miscellaneous Expenses	Rs. 7000	Rs. 9400	Rs. 13090
Actual output kgs	8500	6100	4660
Output transferred to warehouse	20%	20%	100%
Scrap on input	20%	10%	5%
Sale of scrap per kg.	Rs. 2	Rs. 5	Rs. 10

Required:

[11+2+2=15]

(i) Process Accounts (ii) Abnormal Gain Account (iii) Normal Loss Account

17. A company adopts standard cost practices for its direct labour cost and factory overhead cost. The activities level and cost per direct labour hour are summarized below:

Activities level in DLH	25000	50000
Direct labour cost (Rs.)	(Rs.)	(Rs.)
Skilled labour No. 4 @ Re: 1 per hour	100,000	200,000
Unskilled labour No. 6 @ Re. 0.50 per hour	75,000	150,000
	<u>175,000</u>	<u>350,000</u>

Factory overheads (Rs.)	(Rs.)	(Rs.)
Indirect material	25,000	50,000
Indirect labour	37,500	75,000
Supervision cost	22,500	35,000
Heat, light and power	17,500	30,000
Depreciation	53,000	53,000
Rent and Taxes	12,000	12,000

Other data:

Normal capacity	40,000	DLH
Hours worked	42,000	DLH
Actual hours produced	38,000	DLH
Actual cost incurred	Rs. 203,000	
Actual wages paid:		
Skilled labour No. 5 @ Rs. 1.10 per hour	Rs. 231,000	
Unskilled labour No. 5 @ Rs. 0.40 per hour	Rs. 84,000	
	<u>Rs. 315,000</u>	

Required:

[5+5+5 = 15]

- Direct labour cost and factory overhead budget for the activity level of 40,000 DLH.
- Analysis showing direct labour efficiency, mix, rate and cost variances.
- Three overhead variances i.e. capacity, efficiency and spending.

Model Set Question - I

Brief Answer Questions

[10 x 2 = 20]

- Define financial accounting system.
- State any three limitations of cost accounting.
- Explain the advantages of cost control.
- What do you understand by the term "labour turnover"?
- Write about controllable and uncontrollable overhead.
- Consider the following inventory records :

Annual demand	72000 units
Lead time	6-10 days
Safety stock requirement	20 days
Days in a year	360 days

Required: (a) Reorder Level (b) Minimum stock Level

[Ans: 5600 units, 4000 units]

- A company has the following cost structure for producing product.

Normal Capacity	10,000 units
Fixed cost	Rs. 20,000
Variable cost per unit	Rs. 12

Required: Flexible budget for 4000 units and 9000 units

[Ans: Rs. 68,000 and Rs. 1,28,000]

- The following particulars are given
 Wages rate Rs. 20 per hour
 Time required per unit 0.50 hour
 Actual output produced by the worker
 Suman 30 units
 Hari 20 units

Required: Total wages of the workers under Time Rate System.

[Ans: Rs. 1,200; Rs. 800]

- From the following particulars, compute Economic Order Quantity
 Annual consumption = 8, 10, 000 units
 Order placing and receiving costs: Rs. 10 per order
 Annual stock holding stock: 20% of inventory value

[Ans: 9000 units]

- Following information is available:
 Total preventive cost = Rs. 17,000
 Total replacement cost = Rs. 8,000
 No. of labour at the beginning of the year = 200
 No. of labour at the end of the year 250

Required: Labour turnover cost per employee

[Ans: Rs. 111.11]

Descriptive Questions Answer

11. Calculate labor hour rate for production department I and II working 8 hours a day for 25 working days reporting departmental total cost, allocations of service department cost:

	Total	Service Dept. (Work Shop)	Production Department	
			I	II
Number of workers	50	10	15	25
Space occupied	100	20	20	60
Service received by production department (in %)	100	-	40	60
Supervisor's salary (in Rs.)	13,000	2,000	5,000	6,000
Power and lighting (in Rs.)	1,000	300	300	400
Rent (in Rs.)	5,000	-	-	-
Welfare (in Rs.)	1,000	-	-	-

[Ans: Rs.2.67 and Rs.2.40]

12. Sonu Ltd. provides you the following information

Production	300,000 units
Beginning stock	50,000 units
Sales	280,000 units
Normal capacity	350,000 units
Selling price	Rs.200 per unit
Direct materials:	
A	4 kg @ Rs.6 kg
B	10 litre @ Rs.4 litre
Direct labour:	
Skilled	2 DLH @ Rs.10/DLH
Unskilled	6 DLH @ DLH @ Rs.8/DLH
Variable manufacturing overhead	1 MH @ Rs.20/MH
Fixed manufacturing overhead	Rs.2,800,000
Variable selling and adm. overhead	10% of selling price
Fixed selling and administrative overheads	Rs.700,000

Required: Prepare Income Statement Using:

- (i) Absorption costing (ii) Reconciliation Statement

[Ans: (i) Rs.4,500,000 (ii) Rs.160,000]

13. Following information are given to you:

Fixed costs	Rs.8,000
Breakeven point	Rs.40,000

Required: (a) P/V ratio (CM Ratio)

(b) Sales required to earn a profit of Rs.4,000

(c) Profit when sales are Rs.80,000

(d) New Breakeven point if selling price is reduced by 10%.

[Ans: (a) 20%; (b) Rs. 60,000; (c) Rs. 8,000; (d) Rs. 72,000]

14. Nepal Yatayat Co. gives you the following information:

i. Cost of bus Rs.600,000 with expected	100,000 kms run
ii. Annual registration renewal charged	Rs.12,000
iii. Garage charges per month	Rs.5,000
iv. Annual repair	Rs.24,000
v. Driver's salary	Rs.14,000 per month
vi. Conductor's salary	Rs.8,000 per month
vii. Diesel and oil	Rs.14 per kilometre

The bus will run 25 days in a month with 40 passengers in 10 round trips of 20 kms long route.

Required: (a) Operating cost statement showing standing charges & running charges separately. (b) Cost per passenger kilometer.

[Ans: (a) Rs.130,000 (b) Rs.0.65]

15. The production plan of a company for 3 months is given below:

Months	Production (units)
Baisakh	10,000
Jestha	15,000
Ashad	20,000

Each unit of product requires 2 units materials @ Rs. 5 per unit. The company has policy to maintain raw materials ending inventory equal to 40% of next month consumption. Estimated opening inventory and closing inventory of materials are 8,000 units and 16,000 units respectively.

Required: (i) Material consumption budget (ii) Material purchase budget

[Ans: (i) Rs.20,000, Rs.30,000, Rs.40,000 (ii) Rs.120,000, Rs.170,000, Rs.200,000]

Analytical Questions Answer

[2 x 15 = 30]

16. A product passes through three processes P, Q and R. The details of expenses incurred during the month were as follows;

	Process P	Process Q	Process R
Units issued	10,000	-	-
Cost per unit	Rs.100	-	-
Sundry materials (Rs.)	10,000	15,000	5,000
Labours	30,000	80,000	65,000
Direct expenses	6,000	18,150	27,200
Sales price of output per unit	Rs.120	Rs.165	Rs.250
Normal loss	5%	15%	20%
Value of normal loss per units	Rs.2	Rs.5	Rs.10
Output (costs)	9,300	5,400	2,100

Additional information:

- Management expenses Rs.80,000 and selling expenses Rs.50,000 are not allocable to process.
- 2/3 of output of process P and one 1/2 of the output of process Q passed on the next process and balance was sold. The entire output of process R was sold:

Required: (i) Process P Account (ii) Process Q Account (iii) Process R Account (iv) Profit and Loss Account (vi) Normal loss a/c (vii) Abnormal loss a/c

[Ans: (i) Gross profit Rs.31,000; Transfer to Q: 6200 unit, Rs.628,000 (ii) Gross profit Rs.40,500, Transfer to R: 2700 unit, Rs.405,000 (iii) Gross profit Rs.42,000, Sales a/c Rs.525,000]

17. RST Department Store uses standard costing system for labour cost and factory overhead cost which are as follows in two different activity level:

Activity level	10,000 DLH	20,000 DLH
Direct labour cost:		
Skilled labour: 5 men @ Rs.2.....	Rs.100,000	Rs.200,000
Unskilled labour: 4 men @ Re.1	40,000	80,000
	Rs.140,000	Rs.280,000
Factory overhead:		
Indirect materials	Rs.400,000	Rs.500,000
Maintenance and repairs	Rs.300,000	Rs.500,000
Rent and tax	Rs.100,000	Rs.100,000
Depreciation	Rs.200,000	Rs.200,000

Normal capacity 15,000 DLH Hours worked 17,000 DLH
 Hours produced 14,000 DLH Actual overhead paid Rs.1,250,000

Actual labour cost:

Skilled labour: 6 men @ Rs.1.50 per hour

Unskilled labour: 4 men @ Rs.1.50 per hour

- Required: (a) Direct-labour cost for 18,000 DLH
 (b) Factory overhead budget for 16,000 DLH
 (c) Labour cost, rate, efficiency, mix and yield variance
 (d) Three overhead variances

[Ans: (a) Rs. 252000; (b) Rs. 1180000; (c) LYV = 5143 (U); LMV = 1943 (F); LEV = 3200 (U); LRV = 1700 (F); LCV = 1500 (U) (d) CV = 46620 (U); EV = 90000 (U); SV = 40000 (U)]

Model Set Question - II

Brief Answer Questions

[10 x 2 = 20]

- What is management accounting?
- State any three limitation of cost accounting?
- What do you mean by cost reduction?
- What are the remedial steps in minimizing labour turnover? Explain.
- What are the major problems of Activity based costing?
- Mr. Arbind is inventory controller for Office Supplies, Inc., a large office supply warehouse. The annual demand for paper purchase is 20,000 units. The ordering cost is Rs. 100 per order, and the carrying cost is Rs.5 per unit per year. Calculate the economic order quantity
 [Ans: 894 units]
- The difference in cost of maintenance between the highest activity level of 10,000 unit and lowest activity level of 6000 units is Rs. 4000. If the total maintenance cost at 4000 units is Rs. 10,000. Calculate the following:
 - Fixed and variable cost components.
 - Total maintenance cost at 6000 units.
 [Ans: (a) Rs.1 and Rs.600 (b) Rs.12,000]
- Use the piece rate system, and calculate the Labour cost of Mr. Saroj and Mr. Prajal from the following information:

Standard rate = Rs. 12 per piece
 Time required = 30 seconds for one unit
 Time spent by Saroj 50 hours and by Prajal 40 hours

 [Ans: Rs.9,000; Rs.7,200]
- Calculate ROL and ROQ from the following information:

Maximum Stock Level = 20,000 units
 Minimum Reorder Period = 2 weeks
 Maximum Reorder Period = 4 weeks
 Maximum Consumption = 5000 units
 Minimum Consumption = 3000 units

 [Ans: 12,000 units; 14,000 units]
- The following particulars are given:

Wages rate Rs. 20 per hour
 Time required per unit 0.50 hour
 Actual output produced by the worker
 Suman 30 units
 Hari 20 units

 Required: Total wages of the workers under Time Rate System.
 [Ans: Rs.1,200; Rs.800]

Descriptive Questions Answer

[5 x 10 = 50]

11. A manufacturing company having following production departments provided you the information mentioned as follows:

	Totals	A	B
Departments			
Space occupied (sq.ft)		400	500
No. of workers engaged		50	100
HP of the machine		100	50
Expenses and Charges are:			
Depreciation	Rs.19,000	11,000	8,000
Rent and rate	Rs.27,000	-	-
Power expenses	Rs.36,900	-	-
Welfare and canteen expenses	Rs.15,600	-	-
Other overheads cost	Rs.4,800	2,800	2,000
Labour hours worked	2,800 hrs	16,000 hrs	1,200 hrs

Required: (a) Statement showing apportionment of overhead

(b) Overhead rater per direct labour hour

[Ans: (a) Rs.55,600, Rs.47,700 (b) Rs.34.75, Rs.39.75]

12. The following is the income Statement of Rishab and Keshab Pvt. Ltd. prepared on the basis of absorption costing approach:

Particulars	Amount (Rs.)	Amount (Rs.)
Sales Revenue		940,000
Less: Cost of goods sold:		
Opening stock of finished goods		
(variable cost Rs.84,000)	140,000	
Total Manufacturing cost.....	512,000	
Total manufacturing cost of goods available	652,000	
Less: Closing stock of finished goods		(548,000)
(variable costs Rs.62,400).....	(104,000)	
Gross profit before adjustment		392,000
Less: Underabsorption of fixed manufacturing overhead ..		(64,000)
Gross profit after Adjustment		328,000
Less: All other non-manufacturing overheads:		
Office and administrative overhead	44,000	
Selling and distribution overhead	40,000	(84,000)
Net profit		244,000

Addition Information:

Total Fixed manufacturing overheads budgeted as well as actual is Rs.268,800

Required: Net income statement under marginal costing approach

[Ans: Rs.258,400]

13. The following figures are related to LM Ltd. for the year ending 31st March 2014.

Sales	48000 units @ Rs.400 per unit
P/V ratio	25%
BEP	50% of sales

- Required: (a) Fixed cost for the year
 (b) Profit earned for the year
 (c) Units to be sold to earn a target net profit of Rs.2,200,000 for a year
 (d) No. of units to be sold to earn a net income of 25% on cost
 (e) Selling price per unit if Breakeven point is to be brought down by 4,000 units.

[Ans : (a) Rs. 24,00,000; (b) Rs. 24,00,000; (c) 46,000 units; (d) 1,20,000 units (e) Rs. 420]

14. From the following data you are required to ascertain the cost of running the motor lorry per tonne, mile.

Total tonnage carried in a week = 30 tonne

Total millage in a week = 600 km

Details below:

	KM	Tonnes
Sunday	120	6
Monday	125	5
Tuesday	110	4
Wednesday	100	5.5
Thursday	80	4.5
Friday	65	5.0
	<u>600</u>	<u>30</u>

Expenses details for the week are as follows:

Driver's salary	Rs.600 per month
Cleaner's salary	Rs.200 per month
Petrol, oil	Rs.1 per km
Repair and maintenance	Rs.300 per month
Depreciation	4,800 per annum
Other expenses	500 per month

[Ans: Rs.1,100; Rs.0.3642 per tone]

15. Sales budget for the first five months of a product manufactured by Kantipur Co. Ltd. is as under:

Months	Sales unit
Baisakh	10,000
Jestha	12,000
Ashad	14,000
Shrawn	12,000
Bhadra	10,000

The inventory of finished product at the end of each month is to be equal to 50% of next month's sales. On 1st Baisakh, there were 5,000 units of product on hand. Each unit of product requires single material at the rate of 2 units. The beginning inventory of materials on 1st Baisakh were 5,500 units. The inventory of materials at the end of each month will be equal to 25% of following month requirement.

Required:

- Production budget for 3 months ended Ashad.
- Materials usage budget for 3 months ended Ashad.
- Materials purchase budget for 3 months ended Ashad.

[Ans: (a) 11,000, 13,000, 13,000 (b) 22,000, 26,000, 26,000 (c) 23,000, 26,000, 25,000]

Analytical Questions Answer

[2 x 15 = 30]

16. A product passes through three processes I, II & III. The following information is given to you regarding the processes:

Items	Process I	Process II	Process III
Opening stock (Based on prime cost)	6,000	36,000	30,000
Closing stock	15,000	18,000	96,000
Direct materials	39,000	60,000	120,000
Direct labour	30,000	31,500	150,000
Production overhead	30,000	7,500	75,000

Inter process profit included were as follows:

From Process I to Process II	20% transfer price
From Process II to Process III	25% on transfer price
From Process III to Finished stock	10% on transfer price

Inter process profits included in opening stock were:

In process II	Rs.6,000
In Process III	Rs.8,400
In Finished stock	Rs.30,000

Finished Stock

Opening Balance	Rs.75,000
Closing Balance	Rs.99,000
Sales	Rs.900,000

Required: (i) Process I a/c (ii) Process II a/c (iii) Process III a/c (iv) Finished goods stock a/c, Show inter process profit included in each stage (v) Actual realized profit

[Ans: (i) Cost of closing stock Rs.15,000; Profit Rs.22,500 (ii) Cost of closing stock Rs.15,863; Profit Rs.99,000 (iii) Cost of closing stock Rs.77,550; Profit Rs.75,000 (iv) Cost of closing stock Rs.72,563; Profit Rs.174,000 (v) Rs.367,876]

17. The records of a company indicate the following for the month of October:

<u>Standard</u>	<u>Factors</u>	<u>Unit Cost</u>
Direct material	4 gallon @ Rs.4.20	Rs.16.80
Direct Labour	3 hours @ Rs.7.80	23.40
Factory overhead	Rs.12.50 per labour hour	<u>37.50</u>
		<u>77.70</u>

Month of October Activity

Sales	6,500 units @ Rs.100 per unit
Production	6,500 units with no beginning or ending work-in-progress inventories
Materials	Purchase 32,000 gallons Rs.4.18 used in production 25,600 gallons
Labour	Hours worked 20,000
	Average hourly wages rate Rs.7.57
Factory OH	Total overhead cost incurred Rs.244,500

Assume that factory overhead rate of Rs.12.50 per labour hour is based on a normal capacity of 7,000 unit per month and that fixed overhead represents 40% of total overhead at the level of activity.

Required: (a) Material variances (b) Labour variances (c) Overhead variances

[Ans: (a) MPV = 512 (F); MUV = 1,680 (F); MCV = 2,192 (F); (b) LRV = 1,000 (F); LEV = 3,900 (U); LCV = 2,900 (U) (c) Spending 10,500 (F); Efficiency 3,750 (U); Capacity 7,500 (U)]

Unit 1: Conceptual Foundation

Theoretical Questions

1. 2072 Q.No.1

Write any two objectives of Management Accounting.

[2]

2. 2072 Q.No.16

"Management accounting is concern with accounting information that is useful to management." Discuss.

[10]

3. 2072 Q.No.1 (Old)

Distinguish between Cost Accounting and Management Accounting

[5]

4. 2071 Q.No.1

"Cost Accounting is an unnecessary luxury for Business Establishment." Do you agree with this statement? Justify?

[5]

5. **2071 Q.No.1 OR**
"Management Accountancy is concerned with Accounting information" Give your view. [5]
6. **2070 Q.No.1**
Write in short what you know about cost accounting. Give any two advantages of cost accounting. [3+2]
7. **2070 Q.No.1 OR**
Enumerate any five advantages of management accounting. [5]
8. **2069 Q.No.1**
Define Management Accounting. Mention any three importance of management accounting [5]
9. **2069 Q.No.1 OR**
Define Cost Accounting. Mention any three objectives of cost accounting. [5]
10. **2068 Q.No.1**
"Management accounting uses various tools and techniques to provide business information for taking correct decision." Comment. [5]
11. **2068 Q.No.1 (OR)**
Write about the limitations of cost accounting. [5]
12. **2068 Q. No 4**
What are the reasons of making dissimilarity between the net profits reported by financial and cost accounting? [5]
13. **2067, Q. No. 1**
"Management accounting is concerned with accounting information that is useful to management for decision making". How would you justify this statement? [5]
14. **2067, Q. No. 1, OR**
State briefly the advantages of Cost Accounting. [5]
15. **2066, Q. No. 1**
"Management accounting provides relevant information to make correct decisions for business organization" Comment briefly. [5]
16. **2066, Q. No. 1, OR**
Write in brief, about the importance of cost accounting. [5]
17. **2065, Q. No. 1**
"Management Accounting provides information for future forecasting." Comment briefly. [5]
18. **2065, Q. No. 1, OR,**
Mention any five objectives of Cost Accounting. [5]
19. **2064, Q. No. 1**
"The objectives of Managing Accounting are far wider than that of Financial Accounting." Briefly comment on this statement. [5]
20. **2064, Q. No. 1, OR**
Write briefly any five objectives of Cost Accounting. [5]
21. **2063 Q. No. 1**
"Cost Accounting is a tool for managerial planning and control." Comment briefly. [5]
22. **2063, Q. No. 1, OR**
State, in brief, any five limitations of Management Accounting. [5]
23. **2062, Q. No. 1**
"Management Accounting helps management in running the business efficiently and economically." Comment briefly. [5]

24. 2062 Q. No. 1, OR
Write in briefs any five advantages of cost accounting. [5]
25. 2061, Second, Q. NO. 1
"A good costing system serves the needs of a large section of people." Comment on this statement briefly. [5]
26. 2061, Second, Q. No. 1, OR
Differentiate between cost and management accounting. [5]
27. 2061, Q. No. 1
"Financial Accounting is historical in nature and Management Accounting is futuristic in its approach." Justify the statement precisely. [5]
28. 2061, Q. No. 2
Write in brief any five advantages of Cost Accounting. [5]
29. 2060, Q. No. 1, Second
"Management accounting serves as a tool for management decisions." Comment briefly. [5]
30. 2060, Q. No. 2, Second
Write in brief any five objectives of Cost Accounting. [5]
31. 2060, Q. No. 1, First
"Management accounting better serves management in decision-making." Comment in 5 to 7 effective sentences. [5]
32. 2060, Q. No. 1, First, OR
Explain, briefly, the reasons for gaining popularity by the management accountancy in modern business world. [5]
33. 2059, Q. No. 1, OR
Write in brief any five functions of Management Accounting. [5]
34. 2059, Q. No. 2
"Cost Accounting is a tool of managerial planning and control." Comment this statement briefly in about 7 to 10 sentences. [5]
35. 2058, Q. No. 1
"Management Accountancy provides monetary and non-monetary information. Comment briefly. [5]
36. 2058, Q. No. 10
Cost can not be defined without the purpose for which it is been defined briefly discuss. [5]
37. 2057, Q. No. 1
"Management Accounting provides necessary information for decision making." Justify the statement precisely. [5]
38. 2057, Q. No. 2
Cost accounting is more concerned with cost accumulation, classifications, and analysis." Comment in five to seven sentences. [5]
39. 2056, Q. No. 11
Write in brief, any five importance of Management Accounting. [5]
40. 2055, Q. No. 1, OR
Management Accounting is concerned with accounting information." Give your view in about 7 to 10 sentences. [5]
41. 2054, Q. No. 1
State any five objectives of cost accounting. [5]

42. 2054, Q. No. 1 OR.
State any five advantages of cost accountancy. [5]
43. 2054, Q. No. 1
State, in brief any two scopes of management accounting in the light of cost control parameters. [5]
44. 2054, Q. No. 1, OR.
"Management accounting is more than a shift from record keeping." Comment in 5 to 7 effective sentences. [5]
45. 2054, Q. No. 1, Cancelled.
"Business planning is one of the basic functions of management accounting." Comment within 5 to 7 effective sentences. [5]

Unit 2: Cost Concept and Classification

Theoretical Questions

1. 2072 Q.No.2 (Old)
Write short notes on (i) Fixed cost (ii) Opportunity cost [2.5+2.5]
2. 2071, Q. No. 2
What do you mean by relevant and irrelevant cost? Explain with suitable examples. [3+2]
3. 2070, Q. No. 2
Define fixed and variable cost giving two examples of each. [2.5+2.5]
4. 2069, Q. No. 2
Write the meaning of fixed overhead cost. How it differ from variable overhead cost? Write briefly with suitable example. [2+3]
5. 2067, Q. No. 2
Write the meaning of cost and differentiate between direct and indirect costs with suitable examples. [2 + 3]
6. 2066, Q. No. 2
Write, in brief, about controllable and uncontrollable costs. [2.5 × 2 = 5]
7. 2065, Q. No. 2
Define fixed cost. Differentiate between fixed cost and variable cost with suitable examples. [2+3]
8. 2064, Q. No. 2
Make notes on segregation of costs and write in brief about any one method of segregation of costs. [2.5 + 2.5]
9. 2063, Q. No. 2
What do you mean by cost? Differentiate between direct and indirect cost. [5]
10. 2062, Q. No. 2
Write briefly about fixed and variable costs with the suitable examples. [5]
11. 2061, Q. No. 3
"The classification of costs as controllable and non-controllable depends upon a point of reference." Briefly explain this statement. [5]
12. 2061, Q. No. 2, Second
What do you mean by Relevant Cost? How does it differ from Irrelevant Cost? [2.5 × 2]
13. 2060, Q. No. 2, first
Comment the effect of avoidable and unavoidable costs on decision-making process by giving two examples of cost of each type. [5]

14. 2060, Q. No. 2, Second, OR

Define "variable cost". How does it differ from fixed cost? [5]

15. 2059, Q. No. 2

Differentiate between Relevant and Irrelevant costs with suitable examples. [5]

16. 2058, Q. No. 1, OR

Write the importance of relevant and irrelevant costs for managerial decisions. [5]

17. 2057, Q. No. 2, OR

Why semi-variable cost needed to be segregated into variable and fixed cost for managerial decisions? [5]

18. 2056, Q. No. 2

What do you mean by variable cost? How it differs with semi-variable cost? Write with two suitable examples. [5]

19. 2056, Q. No. 2, OR

Briefly write about controllable and uncontrollable cost. [5]

20. 2055, Q. No. 2

Write the characteristics of Fixed Cost. [5]

21. 2054, Q. No. 2

What is mixed cost? State less complicated tool you know to segregate mixed cost with suitable illustration. [5]

22. 2054, Q. No. 2, Cancelled

Make notes on relevant and irrelevant costs. Give few costs of each type. [5]

Numerical Problems

1. 2072 Q. No 8

The following information is provided:

Output (units)	10,000	20,000
Cost (Rs.)	100,000	160,000

Required: Variable cost per unit

[2]

Ans: Rs.6

2. 2071 Q. No 14

You are given the following information:

Machine hours	200	300	400	500
Overheads costs (Rs.)	300	400	500	600

Required: Segregation of overhead cost into variable and fixed by using least square method.

[5]

Ans: VCPU (b) = Rs.1; TFC (A) = Rs.100

3. 2068 Q. No 14

The following information were extracted from the records of a company:

Months	Production units	Repairs & maintenance cost (Rs.)
January	500	800
February	600	900
March	700	1000
April	800	1100
May	900	1200

Required: Segregation of repairs and maintenance cost into variable and fixed components by using least square method.

[5]

Ans: VCPU = Rs. 1; FC = Rs. 300

4. 2067 Q. No. 14

The total cost at different levels of output are follows:

Months	Baishak	Jestha	Ashad	Shrawan
Output units	400	500	800	1000
Total cost (Rs.)	500	600	900	1100

Required: Segregation of cost using least square method. [5]

Ans.: Variable cost per labour hour = Re.1 and Fixed cost =Rs.100

5. 2066 Q. No. 14

The repair and maintenance expenses of a workshop along with operating machine hours are as follows:

Operating machine hours	Repair and maintenance expenses (In Rs.)
150	350
250	450
350	550
450	650
550	750

Required: (i) Variable cost per machine hour

(ii) Fixed cost of the workshop

(iii) Estimated repair and maintenance expenses for 475 operating machine hours by using $y = a + bx$. [5]

Ans.: (i) $b = \text{Rs.}1$; (ii) $a = \text{Rs.}200$, (iii) $\text{Rs.}675$

6. 2064 Q. No. 14

The indirect wages and labor hours of a workshop are given below:

Labor hours	Indirect wages
100	Rs.600
200	Rs.700
300	Rs.800
400	Rs.900
500	Rs.1,000

Required: Segregation into variable and fixed indirect wages by applying method of least squares. [5]

Ans.: VCPU = Rs.1; Fixed cost = Rs.500

7. 2059 Q. No. 4

The semi variable cost at different levels of output are as follows:

Output Units	500	1,000	1,200	1,500
Semi Variable cost (Rs.)	12,500	15,000	16,000	17,500

Required: Variable cost per unit and total fixed cost by using Least Square Method of segregation of cost. [3+2]

Ans.: VCPU = Rs.5; fixed costs = Rs.10,000

8. 2055 Q. No. 4, First

The following are the maintenance cost in a factory for 4 months with corresponding machine hours:

Month	Baishakh	Jestha	Ashadh	Shrawan
Machine Hours	400	500	600	700
Maintenance cost (Rs.)	600	700	780	920

Required: Segregation of cost using least square method. [3+2]

Ans.: VCPU Rs.1.04; Fixed Cost Rs.178

Unit 3: Accounting for Material

Theoretical Questions

1. 2072 Q. No. 2
What is ABC analysis in stock control system? [2]
2. 2072 Q.No.3 (Old)
What do you understand by Economic Order Quantity? Discuss the factors to be taken into consideration while deciding this quantity. [2+3]
3. 2071 Q. No. 5
Explain the system of ABC analysis with reference to effective inventory control. [4]
4. 2070 Q. No. 2
"ABC system of stock control is also known as control by importance and exception." Comment briefly in about 5 to 7 effective sentences. [5]
5. 2069 Q. No. 3
How do you understand the meaning of Inventory Management? Write briefly any two objectives of inventory management. [2+3]
6. 2068 Q. No. 5 OR
Mention the assumptions on which economic order quantity computation is based. [5]
7. 2067, Q. No. 3
"ABC system of stock control enables the management to exercise a selective control of inventory and concentrate on more important items." Explain briefly. [5]
8. 2066, Q. No. 3
Write, in short, about the objectives of inventory management. [5]
9. 2065, Q. No. 5
What do you mean by ABC Analysis and how the stock is controlled under it? [2+3]
10. 2064, Q. No. 3
Briefly write about the meaning and objectives of inventory management. [5]
11. 2063, Q. No. 3
Define Perpetual Inventory system. Give any two advantages of perpetual inventory system. [3+2]
12. 2062, Q. No. 5
What do you mean by ABC control system? Write your answer in 7 to 10 sentences. [3+2]
13. 2061, Q. No. 5
What is meant by stock control through ABC Analysis and how the stock is controlled under it? [5]
14. 2061, Q. No. 5, Second
What do you mean by Inventory Management? Write in short its two objectives. [3+2]
15. 2060, Q. No. 3, First Times
Make notes on control of inventory by Selective Inventory Control System. [5]
16. 2060, Q. No. 3, Second time
State the advantages of Perpetual Inventory system. [5]
17. 2059, Q. No. 3, OR
What is perpetual inventory system? Write your answer briefly in about 7 to 10 sentences. [5]
18. 2057, Q. No. 3, OR
"The objective of inventory management is to have optimum investment in inventory". Justify the statement precisely considering the other objectives of inventory management. [5]

19. 2055, Q. No. 3, OR

What is Two-bin system? Write the advantages of Two-bin system. [5]

20. 2054, Q. No. 4, Cancelled

What motives guide an undertaking to process inventory? Explain, in brief each. [5]

21. 2054, Q. No. 5

"An effective inventory control requires system design." Comment. [5]

Numerical Problems**1. 2072 Q. No. 6**

Following information are given:

EOQ = 4,000 (units)

Ordering cost per order = Rs.160

Carrying cost per unit = Rs.2

Required: Annual requirements.

[2]
Ans:100,000 units

2. 2072 Q.No.5 OR (Old)

A manufacturing company purchases 2000 units of a particular item per year at Rs.20 per unit, the ordering cost per order is Rs.50 and the inventory carrying cost 25 percent on inventory value. Find out the optimal order quantity and the total cost at that quantity.

Should the company accept an offer of a discount of 3 percent at the purchase of 1,000 items at a time? [2+2]

Ans: (i) 200 units (ii) Rs.1,000 (iii) Rs.1,400, not accepted

3. 2071 Q. No 5 OR

Following information is available:

Maximum stock level: 8,000 units

Consumption per month: 1,000 to 1,200 units

Estimated delivery period: 2 to 4 months

Required: (1) Re-order level (2) Re-order quantity

[2+3]
Ans:(1) 4,800 units (2) 5,200 units

4. 2070 Q. No 5 OR

The annual consumption of raw material of factory is 50,000 kg. The cost price per kg is Rs.5. The estimated expenses for each purchase is Rs.125. The overall storage cost estimated is 10 percent of unit inventory cost.

The supplier of the raw material has made a special offer of 0.2 percent price off on 10,000 kg lot purchased.

Required: Suggestion for the purchase of raw material by showing comparative total cost including cost of raw material for optimal purchase and a special offer [2+2+1=5]

Ans:TC : Optimal purchase = Rs.252,500 and Special offer Rs.252,625; Suggestion: Optimal purchase (EOQ)

5. 2069 Q. No 5 OR

Following information are provided:

i. Annual requirement of raw material.	50,000 units
ii. Ordering cost per order	Rs. 500
iii. Opportunity cost	Rs. 1 per unit
iv. Cost of deterioration, insurance and taxes	Rs. 1 per unit

Required: (1) Economic order quantity (EOQ) (2) Cost of ordering 5 times, if Rs. 2,000 discount avails from supplier. [3+2]

Ans:(1) 5,000 units (2) Rs. 10,500

6. 2068 Q. No 5

The standard consumption of raw material in a biscuit factory is 2.50 kg of flour for the production of one packet of biscuits. The factory purchases flour on lot basis for which it

incurs purchase expenses of Rs. 1,250 on each purchase. The total storing cost is Rs. 0.50 per kg per year. The factory has recently finalized 50,000 packets of biscuit of production plan for the coming year.

Required: Economic purchase quantity of flour by using trial and error method. [5]
 Ans: 25,000 kg

7. 2067. Q. No. 5, OR

A Factory buys certain components at Rs.40 per unit. Total annual needs of components are 5,000 units. Carrying cost of inventory is 10% per annum and ordering cost is Rs.100 per order. If the factory orders 5,000 units at a time, the factory will get a 4% discount from the supplier. The discount policy does not affect the inventory carrying cost.

Required: (i) Economic Order Quantity, [2+3]
 (ii) Advise whether the discount can be accepted.

Ans.: (a) 500 units (b) Total cost of EOQ = Rs.2,000 and Total cost of discount offer = Rs.2,100; not accepted.

8. 2066. Q. No. 5, OR

ABC manufacturing company buys its annual requirements of 18,000 units in three installments. Each unit costs Re.1 and the ordering cost is Rs.25. The inventory carrying costs is estimated at 10% of unit cost.

Required: (i) Total cost of the existing inventory policy (ii) Total cost of EOQ [2+3]

Ans.: (a) Rs.375 (b) Rs.300

9. 2065. Q. No. 5, OR

The following information are provided:

Re-order level 80,000 units

Re-order period 8-10 days

Minimum consumption per day 4,000 units

Required: (a) Maximum consumption per day (b) Minimum stock level. [2+3]

Ans.: (a) 8,000 units (b) 26,000 units

10. 2064. Q. No. 5, OR

A volt guard supplier is working for minimizing investment in inventory. The supplier is confident that the annual demand of volt guard will be 10,000 units for the current year. The cost estimated for placing and receiving delivery is Rs.10,000. The estimated storage costs including the opportunity costs of the investment in inventory and store related are Rs.50 per unit per year.

Required: EOQ by using trial and error method. [5]

Ans.: 2,000 units

11. 2063. Q.No. 5, OR

The normal consumption of material of an industry for 250 working days is 1,50,000 kg and minimum consumption per day is 400 kg.

The purchase period normally ranges from 6 days to 10 days.

The level of safety stock is 2,000 kg and maximum stock level is 10,000 kg.

Required: (a) Re-order level (b) EOQ (c) Average stock level [5]

Ans.: (a) 8000 kg or 6800 kg; (b) 4400 kg or 5600; (c) 5400 kg or 4800 kg.

12. 2062. Q. No. 5

Following information for inventory requirement were given:

Yearly demand for use 40,000 units Re-ordering quantity 4,000 units

Procuring cost per procurement Rs.100 Cost per unit of material Rs.2

Required: (i) Holding cost per unit per year [3+2]

(ii) Total cost at order size of 8,000 units after two percent discount.

Ans.: (i) Rs.0.50 (ii) Rs.900 (without material cost)

13. 2061. Q. No. 5, OR

The following constraints to inventory procurement have been establishment for XYZ Ltd.

- (a) Annual requirement is 3,00,000 units
 (b) Unit purchase price Rs.8
 (c) Holding cost is 25% of the purchase price
 (d) Economic order quantity is 6,000 units.

Required: (a) Ordering cost per order (b) Total cost at EOQ. [2.5+2.5]

Ans.: (a) Rs.120 (b) Rs.12,000

14. 2061. Q. No. 5, OR, 2nd time

Consider the following information:

Re-ordering quantity of a part	2,000 units
Holding cost per units per year	Rs.2.5
Cost per unit of part	Rs.12.5
Estimated working days in a year.	250 days
Procuring cost	Rs.250 per order

Required: (a) Annual demand for a part in units.

(b) Average period between the orders

[3+5+1.5]

Ans.: (a) 20,000 units (b) 25 days

15. 2060 Q. No. 7, 1st time

A trading house has been procuring 80,000 units costing Rs.100 each in 20 installments. The procurement cost is Rs.500 per procurement and the estimated storing cost is 20% of inventory value.

Required (by applying formula where necessary): (a) Total cost of the existing purchasing policy (b) Total cost of optimum purchasing policy (c) Saving if optimum purchasing policy is adopted. [2+2+1]

Ans.: (a) Rs.50,000; (b) Rs.40,000; (c) Rs.10,000

16. 2060 Q. No. 4, 2nd time, OR

A company has been procuring in a lot size of 2,000 (EOQ) units. Material cost per unit is Rs.25. Ordering cost is Rs.200 and estimated holding cost is 20% of unit cost per unit.

Required: (a) Determine the annual requirement in units. (b) EOQ units if the ordering cost increases to Rs.250 and cost per unit decreases to Rs.20. [2.5+2.5]

Ans.: (a) 50,000 units (b) 2,500 units

17. 2059 Q. No. 3

Following information are provided:

Carrying cost per unit	Rs.50
Economic order quantity	400 units
Ordering cost per order	Rs.2,000

Required: (a) Annual requirement of the material in units (b) Minimum average yearly cost (c) Optimum number of order per year [2+2+1]

Ans.: (a) 2,000 units (b) Rs.20,000 (c) 5 times

18. 2058 Q. No. 3

Following information were given to you:

Estimated annual demand 27,000 units @ Rs.2.50 per unit	
Cost to process a purchased order	Rs.200
Holding cost	Rs.1.20 per unit per year
Safety stock	10% of EOQ units
Daily uses	150 units
Lead-time	8 days

Required: (a) Total cost at EOQ (b) Length of inventory cycle. [3+2]

Ans.: (a) Rs.3,600 (b) 20 days

19. 2057 Q. No. 3

The following information were extracted from the store ledger of a factory.

Reordering level	3,000 units
Minimum level	1,500 units
Average stock level	4,000 units

Minimum consumption during minimum re-order period is 700 units.

Required: (a) Maximum stock level (b) Re-order quantity [2+3]

Ans.: (a) 7,300 units (b) 5,000 units

20. 2056 Q. No. 3

The following information was provided to you:

Yearly demand for the materials	10,000 units
Procurement cost per procurement	Rs.50.00
Cost per unit of material	Rs.2.00
Carrying cost per unit per year	Re.0.16

Required: (a) Optimum number of orders (b) If yearly operating day are 250 days procurement time is 10 days and safety stock is 300 units, find the reordering level. [2+3]

Ans.: (a) 4 times (b) 700 units

21. 2055 Q. No. 3

The following information is available in respect of a material:

Reorder level	1,800 units	Re-order period	4 to 6 days
Reorder quantity	4,000 units	Normal consumption	250 units

Required: (a) Maximum consumption; (b) Maximum level [2+3]

Ans.: (a) 300 units (b) 5,000 units

22. 2054 Q. No. 3, Cancelled

Annual requirement of raw materials as reported were 4,80,000Kgs. Procurement activities to be undertaken required expenses of Rs.10,000. Monthly processing cost of raw materials per kg. will be Rs.2. Suggested by applying relevant formula:

- Monthly optimum quantity to be procured
- Number of procurement to be made during the month.

Ans.: (a) 20,000 Kgs. (b) 2 times

23. 2054 Q. No. 3

Calculate maximum inventory and ordering level with the help of the following details:

- Weekly demand of raw materials 900 units for 6 working days.
- Delivery of raw materials required 2 to 4 days
- Deviation of plus and minus 60 units during weekly (average) consumption.
- Re-order quantity is 500 units.

Ans.: 860 units and 640 units [3+2]

Unit 4: Accounting for Labour Cost

Theoretical Questions

1. 2072 Q. No. 3

Write any two effects of labour turnover. [2]

2. 2072 Q.No.4 (Old)

What are the essential characteristics of a good wage system? Explain in short. [5]

3. 2071 Q. No. 3

Define time rate system of wage payment and state its disadvantages. [3+2]

4. 2069 Q. No 5
Briefly explain the meaning of labour turnover with two causes of labour turnover. [5]
5. 2068 Q. No 3
What time wage? Write any three advantages of time wage system. [2+3]
6. 2067, Q. No. 4
State the meaning of idle time. How the normal and abnormal idle time are treated in cost account? [2 + 3]
7. 2066, Q. No. 4
What do you mean by cost of labor turnover? Write, in brief, the types of costs incurred by employer with regard to labor turnover. [2 + 3 = 5]
8. 2065, Q. No. 3
Define Incentive Wage System and state any one method of incentive wage system. [2.5 + 2.5]
9. 2064, Q. No. 4
What do you understand by Preventive and Replacement cost of labor turnover? How are these costs treated in cost accounting? [3 + 2]
10. 2063, Q. No. 4
Write the meaning of 'idle time'. How is it treated in cost accounting? [2 + 3]
11. 2062, Q. No. 3
What do you understand by labor turnover? Point out any two causes of labor turnover. [3+2]
12. 2061, Q. No. 3, OR
What do you understand by labor turnover? Point out its main causes. [5]
13. 2061, Q. No. 3, 2nd
Write about the preventive and replacement cost with suitable examples. [2.5+2.5]
14. 2060, Q. No. 5
What do you understand by "ideal time"? How is it treated in cost account? [5]
15. 2059, Q. No. 5
What is idle time wages? What are its causes? [5]
16. 2058, Q. No. 5
"Labor in an undertaking is crucial, without which no sector can function." Comment in five to seven effective sentences. [5]
17. 2057, Q. No. 5
Write, in brief, about labor turnover. Highlight the remedial measures that minimize labor turnover. [5]
18. 2056, Q. No. 5
Mention the focal points required to be considered in choosing system of wages payment. [5]
19. 2055, Q. No. 6
What is preventive cost and what types of labor incentive costs are included in it? [5]
20. 2054, Q. No. 4, OR
Write, in short about piece rate system and its merit. [5]
21. 2054, Q. No. 5, Cancelled
Why Gantt's Task and Bonus plan is called as "Progressive rate system"? State its advantages. [5]

Numerical Problems**1. 2072 Q. No 7**

Following particulars are provided:

Average No. of workers	2,000
Cost of selection (Rs.)	25,000
Training cost (Rs.)	20,000
Medical services (Rs.)	30,000
Cost of machine break down (Rs.)	25,000
No. of workers replaced	100

Required: Replacement cost per replacement

[2]

Ans: Rs.700

2. 2072 Q. No 10

The following information of a XYZ company is provided:

Actual time taken by a worker	: 7 hours
Time allowed for the work	: 8 hours
Rate per hour	: Rs.30

Required: Total wages earned by the worker under Rowan plan

[2]

Ans: Rs.236.25

3. 2072 Q.No.6 (Old)

A worker takes 80 hours to do a job for which time allowed is 100. hours. His rate is Rs.6/hour. Calculate the worker's remuneration under (i) Halsey plan (ii) Rowan plan

[2.5+2.5]

Ans: (i) Rs.540 (ii) Rs.576

4. 2071 Q. No 6

A worker completes a job in a certain number of hours. The standard time allowed for the job is 20 hours and hourly wage rate is Rs.20. The workers earns Rs.350 under Halsey Plan.

Required: (i) Time saved by the worker (ii) Total wages under Rowan Premium Plan

[3+2]

Ans: (i) 5 hours (ii) Rs.375

5. 2070 Q. No 6

Assume the following data concerning the earning of a worker under Halsey Premium Plan.

Total earning	Rs.440
Guaranteed wage rate per hour	Rs.40
Standard pre-fixed for the job	12 hours

Required: (1) Time taken by the worker for the job (2) Bonus earned by the worker

[3+2=5]

Ans: (1) 10 hrs (2) Rs.40

6. 2069 Q. No 6

A worker receives an ordinary day rate of Rs. 160 per day of 8 hours. The standard output has been fixed at 8 units per hour for premium bonus. On a certain day, the output completed by the worker in 80 units.

Required: Total wages payable to the worker under Halsey and Rowan Premium Plan.

[2.5+2.5]

Ans: Rs. 22.5 and Rs. 24

7. 2068 Q. No 6

A worker takes 6 hours to complete a job under a scheme of payment by result. The standard time allowed for the job is 9 hours. The wage rate is Rs. 15 per hour.

Required: Total earning of the worker under

(i) Halsey and (ii) Rowan incentive plans

[2.5 + 2.5 = 5]

Ans: (i) Rs. 112.50 (ii) Rs. 120

8. 2067. Q. No. 6

Following information are supplied to you:

Standard time allowed for a job is 16 hours. The hourly rate of guaranteed wage is Rs.12.

A worker saved time and he gets total wages of Rs.255 under Halsey premium plan.

Required: (i) Time saved by the worker, (ii) Total wages under Rowan Plan [2.5 + 2.5]

Ans.: (a) Nil (b) Rs.255

9. 2066. Q. No. 6

During a month, Amber and Bishow, the workers of a manufacturing concern were involved in certain works. They were paid incentive bonus under Rowan system. The time allotted to the product is 45 hours. The time spent and wages earned were as under:

Worker	Time spent	Total wages earned
Amber	30 hrs	Rs.80.00
Bishow	35 hrs	Rs.85.56

Required: (i) Hourly wage rate. (ii) Worker's earning under Halsey plan. [2+1.5+1.5 = 5]

Ans.: (i) Rs.2 (ii) Rs.75 and Rs.80

10. 2065. Q. No. 6

The details contained in the job card of a productive worker of a factory are as follows:

The time needed to produce one unit of output is 20 seconds.

The standard wage per hour is Rs.9.

The actual time spent by the worker in the job is 140 hours in the last two weeks.

Required: (a) Wage earned under piece rate system if the worker realized actual output without loss of the time allowed.

(b) Wage expected to earn under Rowan Premium Plan if the worker realizes 27,000 units during the period. [2.5 + 2.5]

Ans.: (a) Rs.1,260 (b) 1,344

11. 2064. Q. No. 6

The standard production pre-fixed by a company per day per worker is 16 units and working hours per day is 8 hours. The guaranteed piece work rate is Rs.5 per unit. The piece rate above the standard has been fixed at Rs.6.50. The standard job cards of the three workers for a day reported the following details.

Mr. A 12 units; Mr. B 16 units; Mr. C 20 units

Required: Wages of each worker under the Gantt task and bonus plan. [5]

Ans.: A = Rs.80; B = Rs.96; C = Rs.130

12. 2063. Q. No. 6

The differential price rate applied by a company is as under.

For below standard = 80% of piece rate

For above standard = 120% of piece rate

The working hour per day is 8 hours and normal rate of wages per hour is Rs.40. The standard time per unit is 30 minutes. The work completed by a worker is 20 units for one day.

Required: Earning of the worker under Straight Piece Rate and Taylor's Differential Piece Rate. [2+1]

Ans.: Rs.400 and Rs.480

13. 2062. Q. No. 6

The standard time output ratio is one hour for 5 units. The wage of Rs.16 is payable to workers. The output realized by a worker working for 36 hours during last week is 200 units.

Required: Wages payable to the worker under Halsey and Rowan premium Plan. [2.5 + 2.5]

Ans.: Rs.608 and Rs.633.60

14. 2061. Q. No. 6

The standard working hours fixed for a job was 18 hours, while time taken by a worker was only 12 hours. The worker received Rs.60 as bonus under Rowan Premium Plan.

Required: Labor rate per hour and total wages earned by the worker under Rowan Premium Plan of wage system.

[2 + 3]

Ans.: Rs.15 and Rs.240

15. 2061. Q. No. 6, 2nd time

A worker employed for 150 hours at a wage of Rs.20 per hour has produced 1,440 units. The standard output per hour is 9 units.

Required: Wage payable to the worker based on Taylor's differential piece rate system ranging 83% and 125% and Gantt Task Bonus System.

[2.5 + 2.5]

Ans.: Rs.4,000 and Rs.3,840

16. 2060. Q. No. 6, 1st time

A worker under Halsey premium plan earned a bonus of Rs.50. He took the total of 35 hours to complete his task. The wages rate per hour is Rs.10.

Required: (a) Time saved by the worker
(b) Total wages earned under Rowan premium plan, if applied.

[2 + 2]

Ans.: (a) 10 hours (b) Rs.427.78

17. 2060. Q. No. 6, 2nd time

The standard job card in a factory contains the following particulars:

Standard product per hour	10 units
Wages rate per hour	Rs.10
Working hours per day	8 hours

The time card of two workers worked for one day reported the following details:

Workers	Output in units
A	100
B	120

Required: (a) Wages earned by A under Halsey Premium Plan
(b) Wages earned by B under Halsey Premium Plan.

[2.5 + 2.5]

Ans.: (a) Rs.90 (b) Rs.100

18. 2059. Q. No. 6

Following information are supplied to you:

Standard time allowed for the job	10 hours
Guaranteed wage per hour	Rs.20
Wage rate per hour under Rowan Premium Plan	Rs.24

Required: (a) Actual time taken by the worker
(b) Actual remuneration earned by the worker.

[4 + 1]

Ans.: (a) 8 hours (b) Rs.192

19. 2058. Q. No. 4

(i) 0.25 labor hour is needed to produce in 8 units.
(ii) Wage rate per hour is Rs.18

(iii) 1,600 units were produced in 40 hours of work

Required: Wages payable under: (a) Halsey premium plan (b) Rowan premium plan.

[2.5+2.5]

Ans.: (a) Rs.810 (b) Rs.864

20. 2057. Q. No. 4

The time cards of two workers working in a factory for 100 hours reported the following details:

Workers	Mr. A	Miss X
Output in unit	1,200	900

The pre-fixed standard time for one unit of output is 6 minutes. The prevailing wages rate per hour is Rs.19.
Required: Wages earned by the workers Mr. A and Miss X under Gantt's Task bonus system.

[3+2]

Ans.: Mr. A: Rs.2,736, Miss X: Rs.1,900

21. 2056. Q. No. 4

Take home pay proposed under Halsey premium plan to a worker (not in tax bracket) is Rs.2,000. The pay was determined at an hourly wage rate of Rs.16. The specification of normal time for the job was 150 hours.

Required: (a) Time spent by the worker to complete the job (b) Time saved by the worker
(c) Bonus offered

Ans.: (a) 100 hours (b) 50 hours (c) Rs.400

22. 2055. Q. No. 5

The standard time fixed for a job is 10 hours. The hourly rate of guaranteed wage is Rs.16. Mahila, worker saved time and he gets Rs.144 under Halsey Plan.

Required: (i) Time saved by the worker (ii) Bonus under Halsey Premium Plan

Ans.: (i) 2 hour (ii) Rs.16

23. 2054. Q. No. 4

Find effective hourly rate of earnings under Halsey premium plan on the basis of the following particulars:

Standard time allowed	30 hours	Actual time spent	25 hours
Wages per hour	Rs.25	Bonus 60% of the time saved	[3 + 2]

Ans.: Total wages Rs.700 and effective rate Rs.28 per hour

24. 2054. Q. No. 5. Cancelled

Determine total earnings of the following two categories of workers under Gantt's task and bonus scheme assuming standard production per worker per month was 2,000 units with Rs.1 per unit of output.

Actual performance of workers:
First category 1,800 units;

Second category 2,400 units

Ans.: Rs.2,000, Rs.2,880

Unit 5: Accounting for Overhead Cost

Theoretical Questions**1. 2072 Q. No. 4**

Write briefly any two methods of absorption of overhead. [2]

2. 2060, Q. No. 4

"Sensitive classification of overhead facilities effective control of overhead." Explain, briefly. [5]

Numerical Problems**1. 2072 Q. No 11**

XYZ Company is a manufacturing company having three production departments A, B and C and two service departments X and Y. The operating conditions of the departments are given below:

Particular	Production Department			Service Department	
	A	B	C	X	Y
Direct materials (Rs.)	2,000	3,000	4,000	2,500	1,500
Direct wages (Rs.)	6,000	4,000	3,000	1,500	2,500
Area in sq. ft.	400	300	500	300	500
Capital value of assets (Rs. in Lakhs)	30	40	15	5	10
Light points	20	20	30	10	10
Service rendered by service departments	40%	30%	30%	-	-
Machine hours	100	120	110		

The overheads extracted from the books of the company are as under:

Building	Rs.12,000
Depreciation	Rs.10,000
Store overheads	Rs.26,000
Lighting	Rs.2,700

Required: (i) A statement showing overheads distribution to productions and service departments (ii) Machine hour rate of the production departments

Ans: (i) 19, 160; 19,270; 20,270 (ii) 191.6; 160.58; 184.27

2. 2072 Q.No.8 (Old)

A manufacturing company has two production departments P₁ and P₂, and one service department. Following information are available in respect of three departments:

Items	P ₁	P ₂	Service
Area occupied in sq. ft.	400	300	300
No. of employees	100	50	30
H.P. of machines	80	60	40
Value of plant	Rs.70,000	Rs.50,000	Rs.30,000
Value of stock	Rs.50,000	Rs.30,000	Rs.20,000
Direct wages	Rs.80,000	Rs.60,000	Rs.10,000
Output units	20,000	10,000	-
Service provided	60%	40%	-

Details of overhead cost for the period:

Rent Rs.12,000	Supervision Rs.18,000	Repairs Rs.1,500
Depreciation Rs.15,000	Lightening Rs.2,000	Power Rs.5,000
Indirect wages Rs.30,000	Fire insurance of stock Rs.3,000	

Required: (1) Distribution of overhead cost into different departments (2) Re-distribution of service department cost into production departments (3) Overhead cost per unit

Ans: (2) Total Overhead: P₁ 57,549; P₂ 38,951; (3) Overhead cost per unit: P₁ Rs.2.877; P₂ Rs.3.895

3. 2071 Q. No 8

Calculate the machine hour rate from the following information of a workshop for the month of Asadh

Cost of machine (10 years life)	Rs.110,000
Installation charge	30,000
Scrap value after 10 years	20,000
Cost of maintenance	6,000
Working hours per year	12,864
Salary of the supervisor	Rs.1,600
Cost of consumable	Rs.4,800
Electricity charges	Rs.1,440
	Rs.6,000

4. 2070 Q. No 8 OR

The table given below contains the position of processing divisions:

	I	II	III
Space used (sq. mt)	5,000	4,000	2,000
Machines cost (Rs.)	500,000	300,000	200,000
Number of employees	30	20	20
H.P. of machines	50	30	20
DLH production	4,000	2,500	2,500

Ans: Rs. 20

The overheads incurred during last month are as follows:

Fuel consumed	Rs. 20,000
Lighting and heating expenses	Rs. 16,000
Miscellaneous expenses	Rs. 18,000
Rent and rates	Rs. 22,000
Supervision costs	Rs. 14,000

The rate of depreciation applied on all the machine is 12% p.a.
Required: Overhead per DLH of each processing division.

[2+2+2+2=8]
 Ans: Rs.11.625; Rs.12.8; Rs.8.8

5. 2069 Q. No 8

The expenditures extracted from the books of a factory are as under:

	(Rs.)
Motivate power	20,000
Lighting power	7,000
Ammenities to staff	20,000
Depreciation	30,000
Repairs and maintenance	6,000
Rent	32,000

The factory has three Production Departments (P.D.) and one Service Department (S.D).
 The operating positions of these departments are provided below:

	P.D. I	P.D. II	P.D. III	S.D.
Light points	10	15	5	5
No. of employees	100	150	100	50
Area occupied (sq. ft)	400	600	500	100
Electricity (kws)	4,000	3,000	2,000	1,000
Assets value	Rs. 140,000	Rs. 80,000	Rs. 60,000	Rs. 20,000
Machine operating hours	5,000	3,000	3,500	-
Service rendered by service department	50%	20%	30%	-

Required: Overhead Analysis Sheet by showing Total Overhead Rate per hour.

[2+2+2+2=8]
 Ans: Rs. 8.95; Rs. 3.30; Rs. 7.53

6. 2068 Q. No 8

A company having two production departments provides actual cost for a period as follows:

Rent of building	Rs. 20,000
Supervision of workers	15,000
Depreciation of plant	10,000
Insurance (Stock)	13,000
Power	20,000

The following information is available in respect of two departments

Production departments	'A'	'B'
Area of square metre	2,500	1,500
No. of employees	30	20
Value of plant (Rs.)	75,000	25,000
Value of stock (Rs.)	14,000	12,000
Working hours	240	240

Required: (i) Apportionment of overhead cost to production departments A and B (ii) Overhead per labour hour

[6 + 2 = 8]
 Ans: (i) Rs. 46,000 and 32,000 (ii) Rs.191.67 and Rs.133.33