

# MANAGEMENT ACCOUNTING

New Syllabus- 2065

Course No.: ACC 507

Nature of the Course: Core

Duration of the Course: 50 lecture hours

Duration of the Class: 60 minutes

Full Marks: 50

Pass Marks: 20

## CONTENTS

- Unit 1. Management Accounting Concept** **LH 2**  
Concepts and objectives of management and Controllership function and responsibility
- Unit 2. Cost Allocation and Reporting** **LH 5**  
Cost: Concept, accumulation; Classifications, estimation, segregation by two point method and regression analysis and determination and coefficient of determinates, allocation, apportionment and reapportionment of service department cost using step down and reciprocal techniques, and Cost reporting under Traditional Costing and Activity Based Costing (ABC) technique (recap), and Income measurement under variable costing and absorption costing technique and reconciliation of income between variable costing and absorption costing technique (recap)
- Unit 3. Cost Volume Profit Analysis** **LH 5**  
Concepts; objectives of CVP analysis and application of CVP analysis for break even analysis and its sensitivity analysis (recap), and profit planning under multi-products concept; CVP analysis under constrain using graphical and linear programming models for maximizing profit and minimizing cost in single and multiple products condition, CVP analysis under the condition of uncertainty
- Unit 4. Decision regarding Alternative Choices** **LH 7**  
Concepts, need and objectives of decision regarding alternative choices, Decision regarding Make or buy; Drop or continue; Product line and service department, Sales mix, Scarce resource allocation, Accept or reject a special offer, Equipments replacement, processing a joint products and lease or purchase
- Unit 5. Pricing Decision** **LH 5**  
Concepts and objectives of pricing; types of pricing, Full cost and variable cost pricing technique; Target ROI pricing technique; ABC pricing technique; Target cost pricing technique; Internal pricing in decentralized organization- need and objectives; Transfer pricing for decentralized origination; buy-in and buy-out decision.
- Unit 6. Planning and Control System** **LH 6**  
Concepts, need, importance and objectives of budgeting; budgeting for profit planning, Presentations of functional budgets (recap), and Master budget; Standard cost and control for direct material and direct labour under the condition of certainty and uncertainty, Flexible budget and overhead cost control (recap) and responsibility accounting.
- Unit 7. Investment Analysis** **LH 10**  
Concept, need and objectives of capital budgeting; Measurement of profitability and capital investment decision under certainty (recap), risk and uncertainty using (a) Sensitivity analysis-range of discount rate and range of cash flows (b) Standard deviation, Coefficient of variation, probability distribution approach, decision tree; Foreign investment evaluation considering inflation and cost of capital as discounting factor and foreign currency transaction.
- Unit 8. Measuring Organizational Performance** **LH 10**  
Concept, objectives, need and importance of performance appraisals; Tools of performance measurements:  
(a) Analysis and interpretation of ratios for measuring productivity, profitability, activity, stability and possibility, ratios use to appraise the investment worthiness by prospective lenders and investors.  
(b) Measurement and interpretation of return on investment and residual income

- (c) Interpretation of cash-flow analysis based on cash flow statement and  
 (d) Interpretation of value added analysis based on value added statement.

### Basic References

- Drury, C. (1992). **Management and Cost Accounting** (3<sup>rd</sup> Edition). London: ELBS  
 Hilton, R.W. (1991). **Managerial Accounting** International Edition: New York: McGraw-Hill, Inc.  
 Horngren, C.T., Foster, G. and Datar, S.M. (1990). **Cost Accounting: A Managerial Emphasis**. New Delhi: Prentice Hall of India Pvt. Ltd.  
 Lynch, R.M. and Williamson. (1992). **Accounting for Management** (5th Edition: Eight reprint). New Delhi: Tata McGraw: Hill, India Company Ltd.

### Supplementary Readings

- Bajracharya P and others (2000). **Managerial Accounting Nepalese Perspective Vol I & II**, Kathmandu: Asmita Books Publishers and Distributors  
 Dangol, R.M. and Dangol, J. (2065). **Management Accounting**. Kathmandu: Talaju Publication.  
 Garrison and Noreen. (1997). **Management Accounting** (8th Edition). USA: Irwin.  
 Lucey, T. (1988). **Management Accounting** (2th Edition). London: DP Publications Ltd.  
 Munankarmi, S.P. (2060). **Management Accounting** (Latest Edition). Kathmandu: BAPD Ltd.

### Model Questions Set I

Time: 2 hrs

Full Marks: 50 marks

Attempt ALL the questions:

1. The costs predicted for the production and supply of 1,000 sets of two power calculator by a firm are as follows: [2+2+3]

<b>Variable cost:</b>	
Production	Rs. 3,00,000
Non-Production	Rs. 1,00,000
	Rs. 4,00,000
<b>Fixed cost:</b>	
Production	Rs. 2,00,000
Non-Production	Rs. 1,50,000
	Rs. 3,50,000
<b>Total cost</b>	<b>Rs. 7,50,000</b>

The production and supply of the proposed two power calculator needs investment of Rs. 8,00,000 in fixed facilities and Rs. 1,00,000 in working capital in the beginning. The return expected on the investment is 20 percent.

**Required:**

- (a) Mark-up percentage based on ROI pricing system.  
 (b) Ascertain sales price of each set of calculator.  
 (c) "Pricing of manufactured product is an attempt to reach the set goal of a firm." Comment.

Ans: (a) 24% (b) Rs. 930

OR

Company K has three divisions B, C and D. It also deals with two other companies X and Y. Division B can buy a widget from division C or from company X which will meet C's market price Rs. 250 per unit. If B buys from X and X in turn buys a Component from Division D for Rs. 40 per units. The outlay cost to Division D of supplying this components are Rs. 20 each unit. In filling B's order C would incur outlay cost of Rs. 170 per unit. Assume that division C is working in full capacity and can provides the widget to an outside buyer (i.e. Company) at the same market price of Rs. 250 per unit and with the same outlay cost of Rs. 170 per unit.

**Required:**

- i. What alternative would be the best for company K as a whole. B buying company X or division C?

- ii. What transfer price should be to guide the manager of divisions Band C. So as to maximize overall company net income (cash inflow)
- iii. Suppose division C has enough extra capacity to supply the widget to both division B and the outside buyer at the same time. How would this change your answer in part I? [3+2+2]

Ans: (i) Buy from outside, save cash outflow by Rs. 20 (ii) Rs. 270 (iii) Internal transfer, save Rs. 60

2. A note book is currently selling at sales price of Rs. 30. The variable cost of making a set of note book is Rs. 20. The annual fixed cost of the firm is Rs. 250,000.

The sales forecasts of the note book made for the up coming year are as follows: [1+2+2+2]

Sales forecasts	Probability
25,000 note books	0.40
30,000 note books	0.30
35,000 note books	0.20
40,000 note books	0.10

**Required:**

- a. BEP sales volume
- b. Mean sales
- c. Standard deviation of note books sales.
- d. Percentage of sales going up to 33,000 sets of note books.
- Ans: (a) 25,000 books (b) 30,000 books (c) 5,000 books (d) 72.57%
3. Fair view Firm sales its products @ Rs. 100 each. The firm is working at full capacity of 20,000 units of output by incurring the following cost:

Direct material cost	Rs. 30
Component	Rs. 20
Direct labour cost at Rs. 2 per DLH	Rs. 20
Variable overheads	Rs. 10
Fixed overheads	Rs. 15
<b>Total cost</b>	<b>Rs. 95</b>

Each unit of output needs to use a separate component obtain from a regular supplier @ Rs. 20.

The production engineer made as estimation of cost for production of each component if manufactured in the firm's factory.

The detail of the cost estimation for each unit of component is as follows:

Direct material cost	Rs. 7
Direct labour cost at Rs. 2 per DHL	Rs. 4
Variable overheads	Rs. 3
<b>Total cost per component</b>	<b>Rs. 14</b>

**Required:**

- a. Decision on by or make action to be taken for the component by showing relevant cost.
- b. Impact on profit of the firm if the additional 48,000 labour hours can be made available by incurring fixed cost of Rs. 40,000. [4+3]
- Ans: (a) Make, save cost by Rs. 33,342 (b) Make, save cost by Rs. 80,000
4. Lake Auto Company manufactures wheels nuts to be used in automobiles. The company is operating at 50 percent capacity realizing 10,000 wheel nuts.

The standard cost for 50 percentage capacity utilization is as follows:

Labour cost for 5 DHL @ Rs. 6 per DLH	Rs. 30
Alloy steel for 0.5 kg @ Rs. 40 per kg	Rs. 20
Maintenance for 5 DLH @ Rs. 2 per DLH	Rs. 10
Suppliers	Rs. 8
Depreciation on equipment	Rs. 10
Insurance & tax on equipment	Rs. 4

**Required:**

- a. Flexible Budget for 70,000 and 80,000 DLH

- b. Three overhead variances of the company for 1500 wheel nuts realized during the last year for which a total of 74,000 DLH was used with a total of Rs. 41,8000 actual manufacturing overhead. [4+3]

Ans: (a) Rs. 10,92,000, Rs. 12,28,000 (b) CV = Rs. 35,000 (U); EV = Rs. 3,600 (F), SV = Rs. 11,600 (U)

5. Sole manufacturing Firm Balance Sheet as on Chaitra 31, 20 × 6 is as follows:

Equities	Rs.	Asset	Rs.
Share capital	600,000	Fixed Asset (dep. @ 20% pm BV)	600,000
Profit and loss account	120,000	Investment	100,000
Accounts payable	80,000	Stock:	
Bank loan	230,000	Raw material @ Rs. 2 per kg	80,000
(matures on Baishak 1, 2067)		Finished goods @ Rs. 16 per kg	80,000
			150,000
		Accounts Receivable	20,000
		Cash	
	1,030,000		1,030,000

The forecasted sale revenue for Baishak, Jestha and Aashd of 20 × 7 and raw material purchase to enforce the forecasted sales revenue were endorsed by the technical committee of Sole Manufacturing Firm.

	Baishak	Jestha	Aashad
The forecasted sales revenue @ Rs. 25 per unit	Rs. 500,000	Rs. 500,000	Rs. 500,000
Raw material purchases @ Rs. 2 per kg	Rs. 160,000	Rs. 160,000	Rs. 160,000

The ending inventory of raw materials of Aashad would be 40000 kg @ Rs. 2 per kg and ending inventory of finished goods of the same date would be 5000 units @ Rs 16 per unit. The firm's policy of selling 70 percent of finished goods in cash and 30 percent on credit will continue at least for the up coming six months. The credit sales will fall due with next month for which 10% of credit sales amount will have to be set aside as provision for discount.

Unlike that raw material purchases will be on credit. Half of the credit purchases will mature within the month of purchases and the remaining half in the next month.

The direct wages of Rs. 1.50 kg of raw material used in manufacturing the products need to be paid in the same month.

The variable manufacturing overheads will be 25 percent of the value of raw material used and selling and distribution expenses will be 10 percent of sales revenue. The annual overall fixed overheads will be Rs. 240,000 including depreciation on fixed assets. The overheads will have to be paid in the same month.

The previous negotiation with the local commercial bank that allows borrowing in the multiples of Rs. 5,000 @ Rs. 12 percent interest per annum and repayment in the multiple of Rs. 1,000 plus interest would remain valid till the next six months.

**Required:**

- Cash receipt and disbursement budget for Baishak, Jestha and Aashad ending
- Budgeted income statement for the same period.
- Budgeted Balance sheet as on Aashad end. [5+3+2]

Ans: (a) Cash balance- Aashadh = Rs. 102,270 (b) NIBT = Rs. 282,270 (c) Rs. 10,82,270

6. The CEO of Jelly manufacturing firm was surprised since cash position of 20X6 went into negative. Therefore, to reveal the matters, the CEO asked the financial manager to prepare each cash flow of 20X5 and 20X6.

	20X5	20X6
<b>Cash from operation activities:</b>		
Sales revenue @ Rs. 60 per unit	6,00,000	900,000
Beginning account receivable	80,000	60,000
Ending account receivable	(60,000)	(120,000)
Value of raw material used @ Rs. 30 per unit	(300,000)	(450,000)
Beginning inventory value @ Rs. 30 per unit	30,000	90,000
Ending inventory value @ Rs. 30 per unit	(90,000)	(150,000)

Beginning account payable	(20,000)	(120,000)
Ending account payable	12,000	15,000
Direct wage Rs. 10 per unit	(100,000)	(150,000)
Payment of general overhead	(50,000)	(50,000)
Payment of selling expenses	(90,000)	(135,000)
Payment of tax @ 25% on income	(10,000)	(28,750)
Interest on debentures	(12,000)	xx
<b>Net cash from operating activities</b>	<b>98,000</b>	<b>(138,750)</b>
<b>Cash from financing activities:</b>		
Equity share capital	-	400,000
Dividend on equity share capital @ Rs. 15%	(60,000)	(120,000)
Debenture retired	(150,000)	-
<b>Net cash from financing activities</b>	<b>(210,000)</b>	<b>280,000</b>
<b>Cash from investing activities:</b>		
Sales on investing	40,000	-
Sale of plant @ a p @ a profit of Rs. 10000	120,000	-
Purchase of plant	-	(180,000)
<b>Net cash from investing activities</b>	<b>160,000</b>	<b>(180,000)</b>
Net increase/decrease in cash flow	28,000	38,750
Beginning cash balance	30,000	58,000
<b>Ending cash balance</b>	<b>58,000</b>	<b>19,250</b>

**Required:**

- What are the reasons of negative flow from operating activities in 20X6 despite remarkable increase in sales revenues during the year?
- What effect did the increase in sales revenues made on net income after tax of 20X6?
- Comment on the operating activities of 20X5 and 20X6 of the firm.
- Inventory turnover ratios of 20X5 and 20X6 and their interpretations
- What do you conclude from the cash flow statement of the firm?
- Why preparation of cash flow statement is essential along with balance sheet preparation? [2+2+2+2+2]

**OR**

The uncorrelated cash flow from operation along with their chances of relation from a proposed investment project that needs capital investment of Rs. 50,000 in fixed facilities and additional investment of Rs. 6,000 on net working capital over the project period are as follows:

Year 1		Year 2		Year 3	
Cash Flows	Probability	Cash Flows	Probability	Cash Flows	Probability
Rs. 20000	0.20	Rs. 25,000	0.30	Rs. 30,000	0.35
Rs. 23000	0.60	Rs. 26,000	0.40	Rs. 31,000	0.30
Rs. 26000	0.20	Rs. 27,000	0.30	Rs. 32,000	0.35

The fixed facilities are expected to realize not after tax cash value of Rs. 5,000 upon the lapse of the project period.

The investment needs to meet minimum return of 15 percent.

**Required:**

- Expected annual cash flows
- NPV
- Standard deviation
- The percentage of NPV falling to the limit of Rs. 9,000
- Give suitable reasons for using cash flows in appraising capital investment instead of their net incomes. [2+2+2+2+4]

Ans: (a) Rs. 23,000; Rs. 26,000; Rs. 31,000 (b) Rs. 11,272.1 (c) 1,842.20 (d) 10.93%

## Model Questions Set II

Time: 2 hrs

Full Marks: 50 marks

Attempt ALL the questions:

1. Following information is given:

## Budgeted cost

Direct labour hours	6,000	7,000	7,400	8,000	9,000
Supervisory Salary	15,000	15,000	15,000	15,000	15,000
Indirect labour	30,000	35,000	37,500	4,000	4,500
Utilities	5,200	5,450	5,575	5,700	5,950
Maintenance	8,600	9,200	9,500	9,800	10,400
Selling & General administration	5,450	5,550	5,600	5,650	5,750
Depreciation	2,950	2,950	2,950	2,950	2,950

**Standard:** Direct material per unit of output: 2 units at Rs. 3.20 per unit.

Direct Labour per unit of output: 0.5 hour at Rs. 6.50 per hour.

Normal Level of activity: 7500 DLHs

**Actual:** Production Volume: 12500 units

Unit sold: 11800 units

Material consumed: 24000 units costing Rs. 81600

Actual DLHs: 6300 hours at Rs. 6.75 per hour.

**Required:** i. Material price variance, labour cost variance and volume variance.

ii. Flexible Budget allowance for budgeted DLHs for actual activity level attained.

iii. Mention the advantages flexible budgeting Technique [2+3+2]

Ans: (i) Rs. 4,800 (U); Rs. 1,900 (U), Rs. 325 (U) (ii) Rs. 68,687.5

2. A company has estimated that an investment of Rs. 20,00,000 is necessary to produce and market 50,000 units of a product each year. The Rs. 20,00,000 investment would cover purchase of equipment and provide funds needed to carry inventories and account receivable. The company's accounting department estimated that the following costs would be associated with the manufacturing and sales of the product.

Anticipated annual units sales; 50,000 units

Required investment in assets: Rs. 20,00,000

Unit manufacturing cost: Rs. 30

Selling, general and administrative expenses: Rs. 700,000

The company desires a 25% return on investment (ROI)

**Required:**

i. Target unit selling price for the product showing mark up percentage based absorption cost

ii. Budgeted absorption cost income statement...

iii. Reasons for absorption cost pricing policy [3+2+2]

Ans: (i) SPPU = Rs. 54; Mark up = 80% of manufacturing cost (ii) Net profit before tax = Rs. 500,000

3. Electronics Inc, produces an electronic part, the cost of which at the company's normal volume of 4,000 units per month is shown as follows:

<b>Unit manufacturing costs:</b>	
Variable materials	Rs. 200
Variable labour	150
Variable overhead	50
Fixed overhead	120
Total unit manufacturing cost	Rs. 520
<b>Unit non manufacturing cost:</b>	
Variable	Rs. 150
Fixed	140
Total unit non-manufacturing cost	Rs. 290
<b>Total unit costs</b>	<b>Rs. 810</b>

Unless otherwise stated, a regulars selling price of Rs. 940 per unit should be assumed.

- a. On March 1, a contract offer is made to Electronics Inc., by the Government to supply 1000 units of an electronic part. The company plans to produce and sell 5000 units which will use all available capacity because of unusually large number orders from regular customers. If Government order is accepted, 1000 units normally sold to regular customers would be lost to a competitor. The Government offer would reimburse the variable manufacturing costs plus pay a fixed fee of Rs. 140,000. There would be no variable non manufacturing costs incurred on Government offer units. What impact would accepting Government offer have on company's profit?
- b. a proposal is received from an outside contractor who will make and ship 1000 units at Rs. 400 per unit directly to the company's customers as orders are received from Electronics Inc.'s sales force's. Electronics Inc.'s fixed non manufacturing costs would be unaffected but its variable non manufacturing costs would be cut by 20 per cent for these 1000 units produced by the contractor. Electronics Inc.'s plant would operate at three fourth of its normal level and total fixed manufacturing cost would cut by 10 per cent.
- Should the proposal be accepted for a payment to the contractor of Rs. 400 per unit?

[3.5 + 3.5]

Ans: (a) Profit decreased by Rs. 250,000

4. The following data are available for two departments in the company.

Department	East	West
Department operating profit	Rs. 75,000	Rs. 500,000
Department investment	Rs. 200,000	Rs. 20,00,000

The cost of capital for the company is 20 per cent.

**Required:**

- Which Department had the better performance? Why? use ROI and RI approach for revaluation.
- Mention the advantages of using an ROI type measure rather than the absolute value of division's profits as a performance evaluation technique.

[4 + 3]

Ans: (i) East department has better performance based on ROI,  
West department has better performance based on RI.

**OR**

The cash flow statement of a firm is given below:

**Cash Flow statement of XY Company for the year ended**

Operating activity:	December Current year	
Cash sales & collection from customers:		
Net sales	300,000	
+ Opening account receivable	30,000	
- Closing account receivable	(20,000)	310,000
Cash purchase and payment to suppliers:		
Cost of sales	200,000	
+ Opening account payable	40,000	
+ Opening bills payable	20,000	
+ Closing inventory	100,000	
- Opening inventory	(80,000)	
- Closing account payable	(50,000)	
- Closing bills payable	(10,000)	(220,000)
Payment to employees & operating expenses:		
Operating expenses		(40,000)
<b>Net cash flow from operating</b>		<b>50,000</b>
<b>Investing activity:</b>		
Sales of plant (BSV - loss = 20,000 - 5,000)	15,000	
Investment purchased	(15,000)	
Plant purchased	(100,000)	
<b>Net cash flow from investing activities</b>		<b>(100,000)</b>
<b>Financing activities:</b>		
Issue of shares	100,000	

Redemption of debentures	(20,000)	
Premium on debentures redemption	(1,000)	
Dividend paid	(14,000)	
<b>Net cash flow from financing activities</b>		<b>65,000</b>
Net increase in cash and cash equivalent		15,000
Add opening cash & cash equivalent		10,000
<b>Closing cash &amp; cash equivalent</b>		<b>Rs. 25,000</b>

**Required:**

- a. Calculate the following rates
- Cash flow from operation to sales.
  - Cash flow from operation to cash flow from investment.
  - Cash flow from investment activity to cash flow from financing activity.
  - Net increase in cash & cash equivalent to sales.
- b. Give picture of the financial affairs of the company based on the above rates. [4 + 3]  
 Ans: (a) (i) 16.67% (ii) 50% (iii) 153.8% (iv) 5%

5. A Trading company provides the following information required for preparing master subject for the coming period.

Month	January	February	March	April
Budgeted sales Units	20,000	25,000	30,000	35,000
Budgeted purchase units	25,000	30,000	35,000	

Budgeted unit selling price Rs. 8.00 & Margin on sales is 50%.

The company has a policy of maintaining sufficient inventory of merchandise to meet the following months' sales need and has opening inventory of 20000 units of Rs. 4 per unit. The company has also policy of maintaining a minimum cash balance of Rs. 10,000 and opening cash balance matched with minimum cash balance requirement.

Company's sales are mostly on credit and 50% of credit sales are collected in the month of sales and remaining 50% are collected on following two months of sales equally. Last two months Account Receivable amounted to Rs. 30,000 for November and Rs. 80,000 for December. Share capital stood Rs. 120,000.

All purchases are paid on the following month of purchase. Account payable for December purchase amounted to Rs. 80,000. Operating and distribution expenses are 30% of month's sales value and payable in the month of their being due.

The company have plan to buy a computing machine in the month of January at a cost of Rs. 60,000 with cash down of Rs. 20,000 and balance remaining in next two months in equal installment. The company will also purchase the furniture costing Rs. 60,000 in the month of January.

The company has an agreement with Nabil Bank to soft loan at 12% cost. Bank loans are received in multiple of Rs. 5,000 and repayment are made in Rs. 2000. Amount of interest due are paid for the loan repaid with the repayment amount to a nearest of Rs. 100.

- Required:**
- Cash received of disbursement budget for three months ending March
  - Budgeted income statement for a quarter ending March
  - Budgeted Balance sheet at the end of March. [4 + 3 + 3]

Ans: (i) Cash balance = Rs. 10,000 (ii) NIBT = Rs. 118,200 (iii) B/S = Rs. 440,000

6. XY Co. of Finland a multinational company, is considering an investment proposal in Nepal involving an outlay of Euro 1200 today with an expected life of 3 years having an after tax salvage value of Rs. 9000 at the end of third year of the life of the project proposal. The investment proposal is expected to generate net cash flow at the year end as follows:

Year 1		Year 2		Year 3	
Cash flow	Probability	Cash flow	Probability	Cash flow	Probability
50,000	0.2	50,000	0.3	50,000	0.4
70,000	0.7	70,000	0.5	70,000	0.3
100,000	0.1	100,000	0.2	100,000	0.3



Today's exchange rate remained Rs. 120 for one Euro.

Assume that the probability distributions of cash flow for future periods are independent, the company's cost of capital is 10% and the company can invest in 5% treasury bills. The annual inflation rate in Nepal has been expected to remain 4% in the coming three years from now.

- Required:**
- Internal rate of return of the investment proposal.
  - NPV and standard deviation of the expected cash flow.
  - Probability of NPV being greater than zero.
  - Probability of NPV being Rs. 39,000 and Rs. 45,000.  $[2 + 4 + 3 + 3 = 12]$

Ans: (i) 24.67% (ii) Rs. 39,324.20; Rs. 24,611.22 (iii) 94.74% (iv) 9.53%  
(Note: Note: Since the 9.2% discount factor is not available in PVIF and PVIFA table, here we have considered 9% cost of capital. Otherwise, use 9.2% getting value from calculator using the formula of PVIF and PVIFA.)

**OR**

A multi product factory in BID Kathmandu produced two products X and Y using same raw material and specialized Direct Labour Hours which are not available sufficiently. The contribution margin uses and availability of raw material & labour hours are given below.

Product	X	Y
Total contribution margin	Rs. 18,000	Rs.45,000
Yearly factory fixed cost	Rs. 12,000	Rs. 160,000
Unit produced & sold	400	600
Unit selling price	Rs. 180	Rs. 300
Raw material per unit	1.125 sq.ft.	2.25 sq.ft.
Specialized DLH per unit	2.25 hrs	3.00 hrs
Cost per DLH	Rs. 30	Rs. 30
Cost per sq. ft of raw material	Rs.60	Rs. 60

Availability of resources: Raw material: 1755 sq. ft

Specialized DLHs: 2700 DLHs

- Required:**
- BE sales volume in units  $[2 + 2 + 4 + 4]$
  - BE sales units if the sales mix is change to one to one.
  - Use linear programming model to maximize profit under existing resource constraints
  - Probability of at least reaching break even under probabilities of sales for two products as given below:

Probability distribution for product		
Units sold	X	Y
300	0.2	0.1
500	0.3	0.3
700	0.2	0.4
900	0.3	0.2

Ans: (i) 445 units (ii) 467 units (iii) X = 480 units; Y = 540 units (iv) 96.64%; 95.45%

### Model Questions Set III

Time: 2 hrs

Full Marks: 50 marks

Attempt ALL the questions:

- The main duty of a controller is to prepare and interpret the statistical records and reports of the corporation. Comment briefly.
  - A company is planning to have a return of the Rs. 40000. The unit cost for 1000 unit outputs is as under:

Variable manufacturing cost	Rs. 110
Fixed manufacturing cost	Rs. 10
Variable selling and administrative cost	Rs. 30
Fixed selling and administrative cost	Rs. 10
<b>Total</b>	<b>Rs. 160</b>

- Required:** i. Mark up percentage to earn required return.  
ii. Price per unit by using formula

[4 + 3]

Ans: (i) 25% (ii) Rs. 200

## OR

A manufacturer company manufactures a product having variable cost of Rs. 200 per unit. Sales manager forecast that 2500 product can be sold next year. The fixed cost of the company is Rs. 50,000 and company desires to obtain a return of 20% before tax on total capital employed amounting to Rs. 10,00,000.

**Required:** a. Selling price per unit.

- b. Do you think it is the better method for entering into market?

[4 + 3]

Ans: (a) Rs. 300

2. a. 'Activity based costing is superior to volume based costing system.' Comment.  
b. Manufacturing company has two production departments and three service departments. The service departments' costs are distributed to production departments using step method distribution. Estimates of factory overheads costs to be incurred by each department in the forthcoming period and data required to distribution are as under:

Departments	Factory overheads	No. of employees	No. of requisitions	Machine Hours
Production X	32,000	40	24	2,400
Y	20,000	30	20	1,600
Service S <sub>1</sub>	8,000	—	—	—
S <sub>2</sub>	10,000	20	—	—
S <sub>3</sub>	6,000	10	6	—

**Required:** A schedule showing distribution of overhead costs of the three service departments to the two production departments.

[3 + 4]

Ans: X = Rs. 45,683.20; Y = Rs. 30,316.80

3. A company products two production X and Y. The projected income statement for the camping period for 5,000 units of output of each product is as under:

	Product X	Product Y	Total
Sales revenue (Rs.)	150,000	200,000	350,000
Less: Variable cost:			
Raw material Rs. 4/unit	40,000	80,000	120,000
Labour @ Rs. 4 per DLH	60,000	40,000	100,000
Fixed cost:			
Joint fixed cost	—	—	25,000
Departmental fixed cost	20,000	20,000	40,000
Total cost			285,000
Net income			65,000

Due to political reasons company expects some short supply of raw materials and skilled manpower for the coming period. The company expects the maximum available of raw materials and labour forces are as under:

Raw material: 250,000 units

Labour: 22,500 DLH

**Required:** i. Overall company break even units

- ii. Use of Linear Programming model to maximize profit under constraint. [3 + 4]

Ans: (i) 5,000 units (ii) X = 5,000 units; Y = 3,750 units

4. The summary of cash flow statement of the current year for the different companies are given below:

	X Co. Ltd.	Y Co. Ltd.	Z Co. Ltd.
Cash collection from customers	20,000	30,000	18,000
Cash paid to suppliers	(18,000)	(13,000)	(16,000)
Cash paid to employees and other expenses	(10,000)	(5,000)	(14,000)
Cash from operating activities	(8,000)	12,000	(12,000)
Cash from investing activities	(24,000)	(2,400)	(1,600)
Cash from financing activities	36,000	(1,600)	(12,000)
Net increase (decrease) in cash	4,000	8,000	(25,600)

The cash flow pattern for these companies differs. One company is expanding rapidly; another is in danger of bankruptcy, whereas another company is expanding slowly.

- Required:**
- Identify the company in danger of bankruptcy, expanding rapidly slowly.
  - Calculate cash flow margin ratio and cash flow adequacy ratio of each company, if the sales of X Co., Y Co., and Z Co. are Rs. 25000, 50000 and Rs. 20000 respectively.

[4 + 3]

5. a company with a normal capacity of Rs. 25000 direct labour hours (DLH) is utilizing 80% of its capacity at present. The company is approached by an overseas company to supply 30000 units of output @ Rs. 25 per unit. The company at present selling its output @ Rs. 35 each. The overseas company has made it clear that it will not accept less than 30000 units, therefore if its offer is accepted it will be necessary for the company to give some portion of local sales. The manufacturing costs per unit at present are as under:

Direct material	Rs. 10
Direct labour (0.25 hour)	Rs. 10
Manufacturing overhead cost (0.25 hour)	Rs. 6

The selling and distribution cost would be Rs. 2 per unit and budgeted fixed manufacturing cost for the normal capacity volume would be Rs. 300000.

- Required:**
- Differential cost analysis
  - Desirability of offer
  - Selling price per unit of especial offer for earning same amount of profit equal to current sale.

Ans: (b) Profit decreased by = Rs. 40,000 if accepted (c) Rs. 26.33 per unit

6. The capital budgeting department of a multinational corporation of UK is planning to set up a plant in Nepal. The initial project cost is estimated to be Pound 700 it would last 3 years. It is estimated that if the demand for the product is favorable in the first year then it is certain to be favorable in the subsequent years. And if it is low in the first year, it would remain low in year 2 and 3. The company thus feels appropriately that cash flow overtime perfectly correlated.

The current exchange rate between Nepal and UK has remained at Rs. 140 for Pound 1 subsidiary company country has an expected inflation rate of 5% per annum. The value of rupee in term of UK will also decline gradually at par with inflation rate. The possible cash flow for three years in terms of rupees is:

Year 1		Year 2		Year 3	
Cash flow	Probability	Cash flow	Probability	Cash flow	Probability
0	0.10	10,000	0.15	0	0.10
20,000	0.20	40,000	0.20	15,000	0.10
40,000	0.40	70,000	0.30	30,000	0.10
60,000	0.20	100,000	0.20	45,000	0.10
80,000	0.10	130,000	0.15	60,000	0.10

Assume a risk free rate of 5%

- Required:**
- Net present value of expected cash flows.
  - Co-efficient of variation.
  - Probability of NPV of expected cash flow being zero or less
  - Probability of NPV of expected cash flow being more than Rs. 25000

[3 + 4 + 1 + 2 + 2]

Ans: (i) Rs. 18,751 (ii) 3.3931 (iii) 38.59% (iv) 46.41%

(Note: The discount rate 10.25% is not available in the PVIF table, the discount factor is considered as 10%)

OR

A factory maintaining minimum cash balance of Rs. 20000 has been audited balance sheet as on 31<sup>st</sup> Chaitra, last year:

Capital & Liabilities	Rs.	Assets	Rs.
Capital	150,000	Fixed asset	160,400
Revenue profit	85,100	Inventory merchandise	6,250
Outstanding variable overhead	13,800	Finished goods	24,000
Accounts payable (Raw material)	11,750	Accounts receivable	24,000
12% bank loan		Sales of Falgun	66,000
(Due on Baishak 31 <sup>st</sup> )	40,000	Sales of Chaitra	20,000
	300,650		300,650

The sales and production volume for 6 months are:

Months	Sales in unit	Closing stock in unit	Opening stock in unit	Production in units
Falgun	1,000	550	500	1,050
Chaitra	1,100	600	550	1,150
Baishak	1,200	650	600	1,250
Jestha	1,300	700	650	1,350
Aashad	1,400	625	700	1,325
Shrawan	1,250	575	625	1,200

Each unit of finished product would consume 4 kg of materials @ Rs. 5 per kg. The factory has a policy of maintaining material inventory equal to 25% of the next months' requirement. Each unit of finished goods need 2 DLH and wage rate per DLH will be Rs. 4 payable in the same month. Variable factory overhead per unit of output will be Rs. 12 payable in the next month.

Annual fixed overhead will be Rs. 156,000 payable in the same month.

Sales policy: 20% is cash sales and 80% will be credit sale. Credit sales collection will be 60% in the first month following sales and 40% in the second month following sales.

Payment for procurement: 50% in the same month and 50% in the next month.

The factory has entered into agreement with bank for stand by credit facilities to meet temporary fund need at an interest rate of 12% per annum. The agreement further provides that loan obtained would be cleared as borrowed on first day of the month and repayments on the last day of the month.

**Required:** a. Material purchase budget      c. Income statement in composite form  
b. Cash Budget                                      d. Balance sheet as on 31<sup>st</sup> Aashad.

[2 + 5 + 3 + 2]

Ans: (a) Total purchased for 3 months = Rs. 78,250 (b) Cash balance - Aashad = Rs. 54,035.5  
(c) NIBT = Rs. 96,698 (d) B/S = Rs. 360,835.5

## 1. MANAGEMENT ACCOUNTING CONCEPT

### 1. 2070 Q.No. 1

"Management Accounting aims at providing financial results of business to the management for taking decisions." Explain. [7]

### 2. 2070 Old Q.No. 1

"Management Accounting provides necessary information for decisions making." Justify the statement. [6]

### 3. 2069 (Old) (Old) Q.No. 1

"Management accounting offers relevant information to make management up-to-date in decision making." Comment. [6]

### 4. 2068 (Old) Q.No. 1

"Management accounting is a tool available to management in planning and control." Explain. [6]

### 5. 2067 (II) (Old) Q.No.1

"Management accounting involves the preparation and use of accounting information for planning and controlling the operation of business." Justify the statement. [6]

**6. 2066 Partial Q.No. 1**

"Management accounting technique is helpful to the management of organization." Explain why and how. Also mention in brief the limitations of the management accounting. [3+3]

**7. 2065 Q.No. 1**

"Management Accounting techniques are concerned with forecast of future course of action." Discuss. [6]

**8. 2064 Q.No. 1**

"The controllership is more than a caretaker of the organization he is attached with to protect from possible derailment from the right track." Comment. [6]

**9. 2063 Q.No. 1**

"The basic objectives of Management Accounting are to help the management to realize its goal." Explain. [6]

**10. 2063 Q.No. 1 OR**

Management accounting is a tool available of the management in planning and control. Discuss. [6]

**11. 2062 Q.No. 5**

"The basic objective of management accounting is to increase the net present value of shareholders wealth." Justify the statement in the light of objectives of management accounting. [6]

**12. 2061 (I) Q.No. 6**

"The management accounting functions are to collect data from various units, analyze them and feed forward to the concerned unit for their management actions." Explain it. [6]

**13. 2061 (I) Q.No. 6 OR**

"Controllership function of a management accountant has put him in precarious position." Discuss them in length. [6]

**14. 2061 (II) Q.No. 4**

Critically examine the functions of management accounting. [6]

**15. 2060 Q.No. 1**

Management accounting and its scopes are so large that it can be used in any area of management. Comment on it [6]

**16. 2060 Q.No. 1 OR**

Management Accounting's scope has made it reliable and dependable tool for management decisions. Discuss. [6]

**17. 2059 Q.No. 6**

Over the years the Accountant's function have changed from stewardship to whole economic affairs of business. Elucidate. [6]

**18. 2059 Q.No. 6 OR**

"Controller functions incorporate the whole ranges of financial accounting cost accounting, internal auditing and management accounting". Write in brief about the role of controller in managerial function. [6]

**19. 2058 Q.No. 1**

Management accounting functions involve itself in the task of convening the raw cash and other data (historic and projected) into yardsticks capable of serving as effective guides for decision-making. 'Elucidate this statement. [6]

**20. 2058 Q.No. 1 OR**

Enumerate the up-dated functions of controller: Are these functions disturbed in the multi-divisional structure of an organization? [4+2]

**21. 2057 Q.No. 6**

Management accounting has added third function to the existing two functions of financial accounting. Identify and write in minimum possible words about these functions. [6]

**22. 2057 Q.No. 6 OR**

"Controller has only advisory role for the management." Throw light in this statement and also point out the situation of conflict between them. [6]

## 2. COST CLASSIFICATION AND COST ESTIMATION

### MBS

#### 1. 2070 Q.No. 2

The following information of ABC Company are

DLH	Overhead costs (Rs.)
100	200
200	300
300	400
400	500
500	600

Selling price per unit = Rs. 5.

- Required: i. Predict cost for 600 DLH using least square method.  
 ii. Requires sales if desired profit is Rs. 1,000.  
 iii. Coefficient of variance ( $r^2$ ).

[3 + 2 + 2]

Ans: (i) FC = Rs. 100; VCPU = Rs. 1 and TC = Rs. 700 (ii) 275 units @ Rs. 5 (iii) 100%

#### 2. 2070 Old Q.No. 3

The following information of XYZ Company are

DMH	Overhead costs (Rs.)
100	300
200	400
300	500
400	600
500	700

Selling price per unit = Rs. 5.

- Required: i. Predict cost for 700 DMH using least square method.

- ii. Requires sales, if after tax profit is Rs. 1,200 and tax rate is 40%.

[3+3=6]

Ans: (i) FC = Rs. 200; VCPU = Rs. 1 and TC = Rs. 900 (ii) Rs. 2,750; 550 units

#### 3. 2068 Q.No. 1

The production manager of a factory, despite his rigorous effort, could not put repair expenses of machines to an acceptable limit. Therefore for analysis of ranges of deviations, the repair expenses and machine operation hours of the last five years were collected.

Machine hours (000)	Repair expenses Rs. (000)
40	600
90	730
120	780
100	750
200	990

- Required: i. Variable repair expenses per MH and annual fixed repair expenses by using regression analysis.

- ii. Standard error of the estimates

- iii. "Segregation of semi-variable costs facilitates in projecting costs for future course of action of a firm." Comment.

[2+2+3=7]

Ans: (i) Rs. 2.41 and Rs. 504,900 (ii) Rs. 10,832.05

#### 4. 2067 (II) (Old) Q.No.1 OR

The following data have been collected on costs and output.

Output units:	7000	5000	4000	2000	1000
Cost in Rs.	31,000	28,000	23,000	17,000	15,000

- Required: ① Estimating cost at 4,500 and 8,000 output level (Apply Least Square Method)

- ② "Cost behaviour pattern helps to predict the cost for different level of activities." Justify the statement.

[3+3]

Ans: (1) Rs. 24,789 and Rs. 34,736

**5. 2060 Q.No. 3**

An overhead cost observation of a manufacturing company and other related information have been presented below:

DLH (100)	Overhead Cost (1000)
100	Rs. 300
200	400
300	500
400	600
500	700

**Other information:**

Normal capacity	20,000 DLH.
Actual hours worked	19,000 DLH.
Actual hours produced	21,000 DLH.
Actual overhead cost incurred.	
Variable manufacturing overhead	Rs.2,00,000
Fixed manufacturing overhead	Rs.2,00,000
<b>Total</b>	<b>Rs.4,00,000</b>

**Required:** a. Segregation of cost by using least square technique.

b. Coefficient of determination c. Overhead cost three variances [2+1+3]

Ans: (a) FC = 200,000 \* VC = Rs. 10 per DLH (b) 1 or 100% (c) SP = Rs. 10,000 (U); EV = Rs. 20,000 (F); CV = Rs. 10,000 (F)

**6. 2059 Q.No. 2**

The details of the costs of goods sold at various levels of production activities of a manufacturing company have been presented below:

Production in units (100)	Cost of goods sold (in Rs. '000)
100	200
200	300
300	400
400	500
500	600

Selling price per unit will be Rs. 20 per unit.

**Required:** a. Segregation of the costs of goods sold by using the least square method.

b. Sales volume required to earn after tax profit of Rs.150,000 (tax rate 50%)

c. Co-efficient of determination ( $r^2$ ). [2+2+2]

Ans: (a) FC = Rs. 100,000; VC = Rs. 10 per unit (b) Rs. 800,000 (c) 1 or 100%

**MBA****1. 2060 Q.No. 7 b**

The DLH and repair costs are reported below:

DLH	Repair costs
500	Rs. 450
600	Rs. 500
700	Rs. 550

**Required:** Variable cost per unit and fixed cost by applying least square method. [5]

Ans: Rs. 0.5/unit; Rs. 200 per period

**2. 2053 Q.No. 7 a**

Cost structure of Nepal Metal work at different volumes of production have been given below:

Production in 1,000 units	Cost Rs. 1,000
100	Rs. 300
200	Rs. 500
300	Rs. 690
400	Rs. 895
500	Rs. 1,100

**Required:** Segregation of cost into variable and fixed component using least square method. [5]

Ans: VCPU = Rs. 1.995 and FC = Rs. 98,500

### 3. COST ALLOCATION

#### 1. 2067 (I) Q.No.1 OR

The scenario of divisions of a factory are as follows:

	Production Divisions		Service Divisions	
	Casting	Making	Time-keeping	Power plant
Properties in Rs.	500,000	400,000	100,000	500,000
Area used in square meter	5,000	3,000	1,000	1,000
Labour hours	4,000	2,000	1,000	1,000

The financial records of the cash outlay made for different expenses for the last month are as follows.

Diesel for power plant was Rs. 2,000

General overheads were Rs. 4,000

Rent was Rs. 5,000

Tax on properties was Rs. 3,000

The technical assessments of service divisions are as follows:

	Casting	Making	Time-keeping	Power plant
Time-keeping	50%	40%	-	10%
Power plant	40%	40%	20%	-

Required: (i) Distribution of overhead by using primary distribution method.

(ii) Secondary distribution by using simultaneous method.

[3+4=7]

Ans: (i) Rs. 5,500; Rs. 3,300; Rs. 1,200; Rs. 4,000; (ii) Rs. 8,202; Rs. 5,798

#### 2. 2063 Q.No. 3

The Nepal Electronics Ltd; has been producing two leading brands of component, Band and Switch. The cost and other data relating to production have been summarized below:

Particulars	Production Department		Service Departments	
	Band	Switch	Electricity	Stores
Production units	10,000	10,000	-	-
Selling price per unit	Rs. 50	Rs. 60	-	-
Direct costs:				
Direct material cost per unit	Rs. 10	Rs. 15	-	-
Direct labour cost per unit	Rs. 20	Rs. 25	-	-
Total direct cost	Rs. 30	Rs. 40	-	-
Overhead cost as per primary distribution	Rs. 40,000	Rs. 50,000	Rs. 30,000	Rs. 10,000
Service rendered by				
Service Department: Stores	40%	40%	20%	-
Electricity	40%	50%	-	10%

Required: a. Reapportionment of service departments cost to production by using simultaneous equations.

b. Sales volume of products for company Break even

[4+2]

Ans: (a) Band = Rs. 58,367; Switch = Rs. 71,633 (b) 6,500 units



#### 4. PROFIT MEASUREMENT AND RECOGNITION [ABSORPTION AND VARIABLE COSTING]

##### MBS

##### 1. 2071 Q.No. 1 OR

A manufacturing company manufacture 40,000 units supplied the following information for the year end.

Opening stock (units)	20,000
Sales (units)	50,000
Over absorption of fixed manufacturing cost at Rs. 2 per unit (Rs.)	20,000
Fixed selling expenses (Rs.)	40,000
Direct material cost per unit	Rs. 10
Direct labour cost per unit	Rs. 6
Variable manufacturing cost per unit	Rs. 6
Variable selling expenses per unit	Rs. 2
Selling price per unit	Rs. 30

- Required: a. Income statement under absorption costing.  
 b. Explain briefly the reasons for difference in profit under absorption costing and variable costing method.

[4+3=7]

Ans: (a) NI = Rs. 180,000

##### 2. 2070 Old Q.No. 1 OR

The following information are related to the year 2069/070:

Opening stock:	1000 units Valued at Rs. 72,000
Fixed cost:	Rs. 120,000
Variable cost:	Rs. 60 per unit
Production:	10,000 units
Sales:	7,000 units @ Rs. 100 per unit

- Required: ① Income statement under absorption costing.  
 ② Reconciled profit under marginal costing.

[4+2=6]

Ans: ① Rs. 196,000 ② Rs. 160,000

##### 3. 2069 Q.No. 1 OR

The sales and cost details of Soft Drink Company have been presented below:

	2068	2069
Production units	20,000	18,000
Sales units	18,000	17,000

Other information is:

Normal capacity per year	= 20,000 units	No. of employees	= 20
Selling price per unit	= Rs. 50	Direct material	= Rs.6 per unit
Direct labour	= Rs. 10 per unit		
Variable manufacturing cost	= Rs. 3 per unit	Variable selling expenses	= Rs. 3 per unit
Fixed manufacturing cost	= Rs. 10 per unit	Fixed selling expenses	= Rs. 150,000

- Required: i. Income statement under absorption costing for 2069.  
 ii. Productivity measurement in relation to net value added and wages distribution. [5+2=7]

Ans: (i) NI = Rs. 136,000 (ii) Rs. 15,800 and 56.96%

##### 4. 2069 (Old) Q.No. 5

Ceramics Bowl Making Factory's costs and other details of a year in connection with bowl making are made available.

Direct material costs of Rs. 10 per bowl, direct wages of Rs. 8 per bowl, variable factory overheads of Rs. 5 per bowl and variable selling and distribution overheads of Rs. 4 per bowl were incurred for making 24,000 bowls.

The factory's annual fixed factory overheads were Rs. 160,000 inclusive of depreciation of Rs. 50,000 for 20,000 bowls of annual normal capacity output. The annual fixed administrative and selling and distribution overheads were Rs. 200,000.

The factory has no beginning inventory of bowl and sold 22,000 bowls @ Rs. 45 per bowl during the year.

The factory has 120 employees in its payroll.

Required: ① Income statement based on absorption costing

- ② Productivity scenarios of the factory in terms of sales per employee and net value added per employee

[3+3=6]

Ans: (i) NI = Rs. 52,000 (ii) Rs. 8,250 and Rs. 2,450

5. 2067 (I) Q.No.1

The following is the standard cost data of a manufacturing company.

Manufacturing cost:	
Prime cost	Rs. 26 per unit
Variable cost	Rs. 6 per unit
Fixed cost	Rs. 100,000
Non-manufacturing cost:	
Variable cost	Rs. 5 per unit
Fixed cost	Rs. 50,000

The selling price per unit Rs. 60 and other related information are as under:

Normal capacity	10,000 units
Production	9,000 units
Sales	12,000 units

Required: From the above information prepare,

- (i) Income statement under absorption costing.  
 (ii) The prime cost includes material of Rs. 16 per unit and labour of Rs. 10 per unit. However, the actual incurred for the material was Rs. 15 per unit. Calculate material price variance.  
 (iii) Variable costing income statement is prepared for internal reporting purpose.  
 Comment.

[4+1+2=7]

Ans: (i) Rs. 96,000 (ii) Rs. 9,000

6. 2067 (II) Q.No.1

A manufacturing company provides the following information relating to its product X for the period of a year, just ended.

Normal production volume: 1000 units	
Direct material cost at standard rate of Rs. 30 per unit for actual output Rs. 27,000	
Direct labour cost at standard rate of Rs. 20 per unit for actual output Rs. 18,000	
Variable overhead at standard rate of Rs. 80 per unit for actual output Rs. 72,000	
Fixed overhead cost for the period Rs. 60,000	
Actual production:	900 units
Sales:	1100 units
Unit selling price:	Rs. 200
Ending inventory:	Nil

Required: From the above information prepare,

- i. Income statement showing net income under absorption costing technique  
 ii. Overhead volume variance  
 iii. "Variable costing technique is used for internal managerial decision making."  
 Comment.

[3+1+3=7]

Ans: (i) Rs. 5,000 (ii) Rs. 6,000

7. 2065 Q.No. 1 OR

A manufacturing company with normal capacity of 50,000 units furnished the following information related to two years:

	Year 1	Year 2
Production units	55,000	65,000
Sales units	65,000	70,000
Opening units	15,000	5,000
Fixed manufacturing cost	Rs. 180,000	Rs. 180,000
Variable costing net income	Rs. 337,000	Rs. 385,000

Required: (i) Ascertain Net Income under Absorption Costing

(ii) Absorption costing is not suitable for internal decision making, Comment. [3+3]

Ans: NI: Year 1: Rs 301,000; Year 2: Rs 367,000

8. 2063 Q.No. 5

The Absorption Costing Income Statement of Biscuit Company has been given under:

Production units			25,000
Sales unit			30,000
Sales revenue		@ Rs. 30	9,00,000
Less: Cost of goods sold:			
Direct material cost (made up as follows)		@ Rs. 10	2,50,000
Material A	4 lit	@ Rs. 0.50	2.00
Material B	4 kg	@ Rs. 1.00	4.00
Material C	2 units	@ Rs. 2.00	4.00
Direct labour cost		@ Rs. 8	200,000
Variable manufacturing overhead cost		@ Rs. 2	50,000
Fixed manufacturing overhead cost		@ Rs. 4	100,000
Total manufacturing cost			24
Add: Value of beginning inventory	10,000	@ Rs. 24	2,40,000
Less: Value of ending inventory	5,000	@ Rs. 24	(120,000)
Total cost of goods sold		@ Rs. 24	7,20,000
Gross margin before adjustment			1,80,000
Add: Fixed manufacturing overhead cost over absorbed			20,000
Gross margin after adjustments			200,000
Add: Other cost			
Variable selling and distribution cost		@ Rs. 3	90,000
Fixed selling and distribution cost			80,000
Total other cost			170,000
Net income /BT			30,000

The performance evaluation report revealed the following actual usage of direct material cost.

Material	Unit	Price	Cost
A	80,000 lits	Rs. 0.60	48,000
B	120,000 kgs	Rs. 1.00	120,000
C	60,000 units	Rs. 1.75	105,000
	260,000		273,000

Required: a. Converted income statement under variable costing (ignore variances) [3]

b. Direct material, yield, mix, price and cost variances. [3]

Ans: (a) Rs. 50,000 (b) Rs. 10,000 (U); Rs. 20,000 (U); Rs. 7,000 (F) and Rs. 23,000 (U)

9. 2061 (II) Q.No. 5

The sales and cost details of a Soft Drink Company have been presented below:

Production units		30,000
Sales unit		30,000
Variable costs manufacturing:		
Direct materials		Rs. 5 per unit
Direct labours		Rs. 8 per unit
Variable manufacturing overhead cost		Rs. 4 per unit
Fixed cost:		
Manufacturing repairs and renewals		Rs. 10,000
Rent of factory		Rs. 40,000
Depreciation of equipment at 10% of		
Original cost		Rs. 50,000
Other cost		Rs. 50,000
Administrative, selling and distribution cost		
Sales commission		Rs. 2 per unit
Rent, rates and telephone		Rs. 40,000
Interest cost		Rs. 20,000
Other cost		Rs. 40,000

No. of employee employed 10 labourers.

**Required:** a. Income statement under variable costing. b. Measurement of productivity. [3+3]

Ans: (a) Net profit = Rs. 20,000 (b) Sales per employee = Rs. 75,000; Added value per employee = Rs. 60,000

**10. 2059 Q.No. 4**

The absorption costing income statement of a manufacturing company has been presented below:

Production in units	60,000
Sales in unit	65,000
Sales revenue @ Rs. 10	Rs. 650,000
Less: Cost of goods sold	
Direct material and direct labour @ Rs. 4	240,000
Variable manufacturing overhead @ Rs. 2	120,000
Fixed manufacturing overhead @ Rs. 1	60,000
Total cost of production @ Rs. 7	420,000
Add: Value of beginning inventory 10,000 units @ Rs. 7	70,000
Less: Value of ending inventory 5,000 units @ Rs. 7	35,000
Total cost of goods sold @ Rs. 7	455,000
Gross margin before adjustment	195,000
Add: Fixed manufacturing overhead over absorbed	10,000
Gross margin after adjustment	205,000
Less: Selling & distributed cost	150,000
<b>Net Income/BT</b>	<b>55,000</b>

**Additional Information:**

- Normal capacity 25,000 machine hours
- One unit of output will need 0.5MH
- Actual machine hours worked 28,000 hours
- Actual VMOH paid Rs. 1,19,000

**Required:** a. Conversion of income statement under variable costing  
b. Overhead three variances.

[3+3]

Ans: (a) NP = Rs. 60,000; CV = Rs. 10,000 [F]; EV = Rs. 8,000 [F]; SV = Rs. 7,000 [U]

**MBA**

**1. 2064 Q.No. 7 a**

The difference in net income between absorption and variable costing is Rs. 1,50,000 for the first year. But in the second year the variable costing shows more profit of Rs. 1,00,000 than absorption costing. The closing stock for the first and second year was 60,000 units and 40,000 units respectively. The fixed manufacturing overhead per unit is Rs. 5 and variable Rs. 3 each

**Required:** Reconciliation Statement between Absorption and Variable Costing [5]

**2. 2061 (I) Q.No. 5 a**

A manufacturing company produced a product 4,000 units during a period and sold 3,000 units at Rs. 50 each. The normal level of operations on which the production fixed overhead is based on 3,500 units. Costs for the period were as follows:

Particulars	Fixed Costs	Variable Cost
Direct material	-	Rs. 60,000
Direct labour	-	40,000
Manufacturing overhead	Rs. 35,000	20,000
Selling and administrative overhead	12,000	12,000

**Required:** a. Absorption costing income statement  
b. Reconciled profit under variable costing explaining the reasons for difference in income reporting.

[10]

Ans: (a) Rs. 14,000 (b) Rs. 4,000

**3. 2060 Q.No. 7 d**

The variable costing income statement reported the net profit of Rs. 100,000 with 20,000 beginning inventories and 25,000 unit of ending inventory variable manufacturing cost per unit is Rs. 15 and the total manufacturing cost per unit is Rs. 20.

**Required:** Reconciliation statement showing the profit expected under absorption costing. [5]  
Ans: Rs. 1,25,000

**4. 2059 Q.No. 7 c**

The sales and production of workshop for a year are 25,000 and 30,000 units. There is no beginning inventory.

The sales price per unit is Rs. 10 and variable manufacturing cost per unit is Rs. 4 overall fixed cost of the year is Rs. 50,000.

**Required:** Variable costing income Statement. [5]  
Ans: Rs. 1,00,000

**5. 2058 Q.No. 7 c**

The cost data for preparing an income statement under absorption costing is given below:

	Year 1	Year 2
Beginning inventory	Nil	
Ending inventory	2,000 units	
Fixed manufacturing overhead	Rs. 50,000	
Output	10,000 units	10,000 units
Variable cost per unit	Rs. 10	
Normal capacity	10,000 units	

In second year, it has been found that profit shown by absorption costing is less than variable costing by Rs. 5,000.

**Required:** Reconciliation statement for first year and second year and show the causes of differences in profit. [5]  
Ans: Rs. 10,000; (Rs. 5,000)

**6. 2057 Q.No. 7 c**

A company provides the following information:

Production units	1,100 units
Beginning inventory @ Rs. 16 each	100 units
Ending inventory	Nil
Fixed manufacturing overhead (normal)	Rs. 10 per unit
Fixed office and administrative overhead	Rs. 5,000
Variable factory overhead	Rs. 6 per unit
Fixed overhead over absorbed by	Rs. 1,000
Selling price per unit	Rs. 25

**Required:** Income statement under absorption costing. [5]  
Ans: Rs. 6,800

**7. 2055 Q.No. 7 a**

While converting income statement of variable costing into absorption costing, a company's profit for the first year showed a more profit of Rs. 12,000 with the beginning inventory of 1,000 units. The same costing showed a loss of Rs. 6,000 with an ending inventory of 2,000 units. A variable cost of Rs. 8 and fixed cost of Rs. 6 were used for all these purposes.

**Required:** Reconciliation of profits showing the causes for the differences. [2.5+2.5]  
Ans: 12,000; (Rs. 6,000)

**8. 2054 Q.No. 7 d**

An absorption costing statement showed a less profit of Rs. 8,000 than the variable costing, when the ending inventory was 2,000 units. The same costing system showed an excess profit of Rs. 16,000 with an ending inventory of 4,000 units in the second year. Fixed cost of Rs. 8 and variable cost of Rs. 12 were used for all three two years.

**Required:** Statement of reconciliation to reconcile the differences in profit under two costing systems. [5]  
Ans: Rs. (8,000); Rs. 16,000

**9. 2053 Q.No. 7 c)**

The variable costing statement of a company showed Rs. 12,000 more profit than the absorption costing statement with the ending inventory of 2,000 units in the first year. The same costing system showed a loss of Rs. 6,000 with the ending balance of inventory of 3,000 units. The company used Rs. 10 as variable cost and Rs. 6 as standard fixed cost for both the years.

**Required:** Reconciliation statement to show the causes of differences in profit. [2.5+2.5]  
Ans: Rs. 12,000; Rs. (6,000)

**10. 2052 Q.No. 4 a)**

A Ltd. Company was adopting absorption-costing system for income reporting purpose. To incorporate internal reporting it decided to use variable costing also in the future. As a trial case it converted past three years absorption costing income statement into variable costing statement. Much to its surprise it found differences in net income reporting under these systems as follows:

- First year showed a less profit of Rs. 15,000 with ending inventories balance of 4,000 units.
- Second year showed an excess profit of Rs. 10,000 with 2,000 units as ending inventories.
- The third year showed a profit of Rs. 5,000 with ending inventory of 1,000 units. The standard variable cost of Rs. 5 per unit and standard fixed cost of Rs.5 per unit has been used for all these conversion process.

**Required:** Reconciliation table to explain the reasons for the differences in income reporting. [10]  
Ans: Diff. in inventory valuation: (Rs. 15,000); Rs. 10,000; Rs. 5,000

**11. 2051 Q.No. 5 a)**

A company has followed the full costing method in its pricing policy of the product. The income statement based on absorption costing is given below:

Sales in units		10,000
Sales revenue		Rs. 4,00,000
<b>Less: Cost of goods sold:</b>		
Beginning inventory (2,000 units @ Rs. 25)	50,000	
Direct material (9,000 @ Rs. 10)	90,000	
Direct labour (9,000 @ Rs. 10)	90,000	
Variable overhead (9,000 @ Rs. 2)	18,000	
Fixed overhead (9,000 @ Rs. 3)	27,000	
Total cost of goods available for sales	2,75,000	
Less: Ending inventory (1,000 @ 25)	25,000	
Cost of goods sold		2,50,000
Gross margin before adjustment		1,50,000
Less: Under absorption of fixed mfg. overhead		3,000
Gross margin after adjustment		1,47,000
Less: Other cost		47,000
<b>Net income before tax.</b>		<b>1,00,000</b>

**Required:** a. Conversion of conventional income statement into variable cost statement.  
b. Reconciliation of differences in profit if existed any. [10]  
Ans: Rs. 1,03,000 (b) Rs. (3,000)

**12. 2050 Q.No. 5 a)**

The variable costing income statement of A Ltd. Company is as follows:

Normal capacity in units	25,000
Sales in unit	28,000
Sales revenue in Rs.	Rs. 8,40,000
<b>Less: Variable cost of sales:</b>	
Beginning inventory (3,000 units @ Rs. 18)	Rs. 54,000
Direct materials cost (27,000 @ Rs. 5)	1,35,000
Direct labour cost (27,000 @ Rs. 8)	2,16,000
Variable manufacturing overhead (27,000 @ Rs. 5)	1,35,000