

Profit Planning and Control

New Syllabus

Course Title: Profit Planning and Control

Course No: ACC 611

Nature of Course: Specialization

Duration of Course: 100 Lecture Hours

Duration of Class: 60 minutes

Full Marks: 100

Pass Marks: 40

Course Objectives

The course aims to provide the knowledge of tools and techniques of budgeting and profit planning in a competitive business environment. It also aims to acquaint students with advanced knowledge in the field of accounting in order to help formulate business strategies.

Course Description

The course deals on micro unit of profit planning concept which are necessary for application of tools. It also deals on different tools and techniques for planning and controlling of various business activities like sales, production, purchases, operation of a business firm. The course further deals on advanced concept of zero base budgeting, just-in-time purchases and production in planning of production and inventory determination. The course also focuses on the origin of strategic management accounting and related techniques and informational need to help evolve business strategies.

Course Contents

Unit 1: Conceptual Foundation LH 8

Origin, Fundamental concepts of profit planning and controls, Application of time factor in PPC. Advantages and limitations; PPC process, Behaviour implication, Application of PPC in manufacturing and non-manufacturing enterprise.

Unit 2: Planning and Control of Sales LH 4

Need for sales planning, long and short range sales plan, comprehensive sales plan for manufacturing and non-manufacturing organizations.

Unit 3: Production Planning and Control of a Manufacturing Concern.. LH 7

Inventory level in normal circumstances; Just in time production and inventory level; Production in computer integrated manufacturing; Production planning budget.

Unit 4: Planning of factor of production LH 30

Material consumption; Purchases and material cost budgets. Material inventory and JIT purchase. Merchandise purchase budget of a non manufacturing organization. Open to buy concept and its validity. Planning of direct labour hour; Direct labour cost, Direct labour budget and control; Overhead cost planning and control, Controllable and non controllable overhead cost. Cost and expenses; Cost control and cost reduction. Manufacturing, administrative and selling & distribution overhead cost planning; Apportionment and reapportionment of planned overhead costs to operating divisions.

Unit 5: Zero Base and Activity Based Budgeting LH 6

Concept of zero base and activity based budgeting; Advantages and limitations; Objectives and procedures.

Unit 6: Planning and Control of Cash LH 5

Concept and objectives of planning and control of cash; estimation of cash receipts and payments; Borrowing and other financial need; Use of financial accounting approach in computing cash collections and cash disbursements.

Unit 7: Completion of Profit Plan LH 10

Completion of annual profit plan, alternatives available in developing profit plan, implementation of profit plan and its uses in controlling of operations.

Unit 8: Use of CVP Analysis in Profit Planning LH 10

Break even and contribution analysis, cost validity, sales mix and sales price planning.

Unit 9: Strategic Management Accounting and Profit Planning LH 20

(a) Strategic Management Accounting: Origin and concept of Strategic Management accounting, Strategy implementation and evaluation; (b) Analytical Information: Concept and need for analytical

information; Boston matrix, SWOT analysis, Product life cycle; Tailored financial control measures; Diversification strategies; and experience curve (c) **Profitability Analysis:** Concept, need and objective of profitability analysis; Customer profitability analysis and product profitability analysis. (d) **Competitor Strategy:** Concept and importance of competitor strategy; Economic versus managerial performance; Types of strategic decisions, engineering cost relationship, marketing investment analysis; Current and future competitors

Basic References

Kaplan, R.S. and Alkinson, A.A. (2000). *Advanced Management Accounting* (2nd Edition). New Delhi: Prentice Hall of India.

Welsch, G.A., Hilton, R.W. and Gordon, P.N.. (2000). *Budgeting Profit Planning and Control* (5th Edition). New Delhi: Prentice Hall of India Pvt. Ltd.

Supplementary Readings

Drury, C. (2000). *Management and Cost Accounting*. London: Thomson Learning.

Hansen, D.R. and Mowen, M.M. (2000). *Management Accounting* (5th Edition). Ohio: South-Western Publishing, Cincinnati.

Jakhotia, G.P. (1990). *Budgeting and Budgetary Control*. First Reprint. New Delhi: Tata McGraw Hill Publishing Co. Ltd.

Michael, E.P. (1985). *Competitive Strategy*. Free Press.

Rathnam, P.V. (1994). *Budgeting Bombay*: Himalaya Publishing House.

New Model Questions

Subject: Profit Planning and Control (ACC 611)

Level: MBS 2nd Year,

Faculty: Management

Candidates are required to give their answer in their own words as far as practicable.

Figures in the margin indicate full marks.

Attempt ALL the questions.

Full Marks: 100

Pass Marks: 40

Time: 4 hours

- Define Comprehensive Profit Planning and Control. Can Profit Planning and Control be applied in small enterprises? [4+4]
- A company sells two products- X and Y. These products are distributed in two sales regions - Eastern and Western. The following data have been developed for the coming year budget.
 - Gross sale:

Months	Product X		Product Y	
	Eastern	Western	Eastern	Western
Baisak	8,000	6,000	6,000	4,000
Jestha	6,000	4,000	2,000	4,000
Asadh	10,000	8,000	4,000	6,000

- The selling price per unit of Product X is Rs. 5 and Product Y is Rs. 10.
 - It is estimated that sales return and allowance will be as follows:
Product X- 5% of gross sale.
Product Y- 10% of gross sale.
- Required:** Detailed sales plan by district, by product and by period. [8]
Ans: Total sales: Rs. 433,500; X: Rs. 199,500; Y: Rs. 234,000
- The data regarding the sale of a commodity by a retail shop are as under:

Sales plan for the month	Rs. 6,00,000
Planned reduction for the month	30,000
Ending merchandise for the month	1,20,000

The actual records available are as under:

Beginning merchandise	Rs. 1,00,000
Reduction to date	20,000
Sale to date	4,00,000
Merchandise on the order for delivery	1,10,000
Stock available	2,90,000
Initial mark-up on retail	60%

Required: Open-to-buy at cost, showing merchandise received to date.

[8]
Ans: Rs. 24,000

4. The cost and revenue data for three products of a company are as under:

	Product A (Rs.)	Product B (Rs.)	Product C (Rs.)
Sales revenue	27,000	44,000	20,000
Variable cost of goods sold	14,000	27,000	13,000
Operating expenses:			
Research and development	-	1,000	2,000
Allocated adm. cost	8,000	14,000	6,000

Required: (i) Product line profitability by showing contribution margin ratio and return on sales ratio (ii) Target cost reduction for maintaining 10% target on sales. [6+2]

Ans: (i) CMR: A = 48.15%; B = 38.64%; C = 35%; Return on sales: A = 18.52%; B = 4.55%; C (5%)
(ii) A = 2,300; B = 2,400; C = 3,000

OR

A company is producing and selling two products X and Y. The selling price per unit of X and Y is Rs. 10 and Rs. 22 respectively. The cost data are as under:

	Product X	Product Y
Sales units	12,000	7,000
Cost traced to production:		
Unit level	Rs. 48,000	Rs. 70,000
Batch level	Rs. 4,000	Rs. 10,000
Product level	Rs. 16,000	Rs. 44,000
Customer level	Rs. 2,000	Rs. 5,000
Facility level	Rs. 15,000	Rs. 23,000

Cost not traced to production Rs. 32,000.

Additional information:

- The traditional costing system assumes that the labor cost and overhead cost is 100% of material cost.
- The industry average rate of operating income is 10%.

Required: Product profitability analysis under traditional and ABC system. [8]

5. A company engaged in manufacturing has forecasted its products for four months are as under:

Months	April	May	June	July
Planned production	14,000	16,000	18,000	20,000

Each unit of finished product needs two types of materials- A and B. The standard rate of consumption of these materials for each unit of finished product are one unit of material A and 2 units of material B. The company's raw material policy is to hold sufficient units of raw material required to meet next month's production need. The standard material price for material A and material B are Rs. 10 and Rs. 5 respectively.

The inventory position of raw materials at the end of March is:

A - 14,000 units

B - 28,000 units

Required: Material consumption budget and material purchase budget for three months beginning April. [3+5]

Ans: (i) April: A = Rs. 14,000; B = Rs. 28,000; May: A = 16,000; B = Rs. 32,000; June A = 18,000; B = 36,000 (ii) A and B each: April = Rs. 160,000; May = Rs. 180,000; June = Rs. 200,000

- "Strategic Management Accounting is an extension of Traditional Management Accounting." Explain the statement with the origin and concept of Strategic Management Accounting. [5+5]
- A Company Ltd. manufactures two products- X and Z. Both products are processed through Process I and III and Product X through Process II. The company prepares a quarterly production plan. The planned data developed are as under:

1. Planned production units:

Months	Magh	Falgun	Chaitra
Product X	1,000	2,000	3,000
Product Y	2,000	3,000	4,000

2. Direct labor standard hours planned per unit of product:

Product	Process I	Process II	Process III
X	0.2	0.3	0.4
Y	0.3	-	0.4

3. Average wage rate planned per direct labour hour:

Process I	Rs. 4 per DLH
Process II	Rs. 3 per DLH
Process III	Rs. 2 per DLH

Actual data for Process I for the month Magh, for the product X was:

Production units	900 units
Direct labour hours	190 hours
Direct labour cost	Rs. 855

- Required:**
- (i) Direct labour cost budget

- (ii) Performance report of Process I for the Product X for the month Magh. [7+3]

Ans: (i) DLC Rs. 15,600 (ii) DLC Rs. 5,400 (iii) DLC Rs. 12,000
OR

The overhead of a factory are given below:

Items of overhead	Amount (Rs.)	Cost drivers
Selling cost	24,000	Set ups
Repair and maintenance	13,000	Machine hours
Production scheduling	18,000	Production run
Packing and dispatching	6,000	Dispatched

The planned production and other relevant data are as under:

Products	A	B
Output in units	400	200
Material cost per unit	Rs. 75	Rs. 70
Labor hour per unit	6 hours	8 hours
Machine hour per unit	4 hours	5 hours

Direct labor cost is estimated at Rs. 20 hour. Output is realized in a batch of 25 units per production run. One production run required 2 set ups and output is dispatched in a lot of 50 units.

- Required:**
- (a) Calculation of cost driver rate

- (b) Activity based budget showing total cost and cost per unit. [4+6]

Ans: Cost per unit: A = Rs. 295; B = Rs. 335

8. A company produces three products - A, B and C. The following information is available:

Budgeted	Product A	Product B	Product C
Selling price per unit	Rs. 600	Rs. 500	Rs. 240
Variable cost per unit	Rs. 400	Rs. 400	Rs. 160
Output in units	20,000	2,000	5,000

The marketing manager is confident that he would be able to achieve budgeted sales for products A and B. However, he is unable to estimate correctly the scale of C.

According to his estimates, it can be anything between 5,000 to 12,000 units. The fixed overhead for the period is Rs 50,00,000.

- Required:**
- (i) Units of Product C to be sold to achieve break even sales and sales mix ratio

- (ii) Percentage increase in the selling price of Product A and keep at in original break even sales units if the selling price of Product B decreases by 20%. [5+5]

Ans: (i) 20,000; 2,000; 10,000 units and 10:1:5 (ii) 1.17%

9. The activity base and annual departmental overhead budget of a company are as under:

Departments	Activity-base	Overhead (Rs)
Production Department A	Direct machine hour	14,280
Production Department B	Direct machine hour	20,460
Service Department	Direct repair hour	12,060

The company manufactures two products P and Q. The planned production and direct labor cost for the production are as follows:

Product	Planned Production	Direct Material	Direct Labor
P	3,000 units	Rs. 30,000	Rs. 24,000
Q	2,000 units	Rs. 40,000	Rs. 20,000

The company establishes the following standard for planning purpose:

Production Department A	0.3 Direct Machine Hour for Product P 0.4 Direct Machine Hour for Product Q
Production Department B	0.7 Direct Machine Hour for Product P 0.6 Direct Machine Hour for Product Q
Service Department	0.2 Direct Repair Hour for 1 DMH for Production Department A 0.1 Direct Repair Hour for 1 DMH for Production Department B

Required: (a) Computation of Volume of Work or Activity

(b) Overhead rate for Production Department

(c) Total cost of goods manufactured for each product.

[3+6+6]

Ans: (a) Dept A: 1,700; B = 3,300; C = 670 (b) Dept A = Rs. 12; B = Rs. 8 (c) Rs. 81,600 and Rs. 79,200

10. (a) Write the meaning of Zero Based Budgeting with its advantages.

[4+4]

(b) "If production activity is fluctuating directly to the sales activity, it is better to maintain stable inventory policy rather than stable production policy." Do you agree with this statement? Explain.

[7]

OR

A manufacturing company in a process of compilation of Profit Planning gathered the following information about its assets, liabilities, future sales, production and purchases:

Balance Sheet on 1st Baisakh

Shareholder's equity	4,40,000	Inventory of finished goods	
Accounts payable	60,000	10,000 units	1,00,000
Bank loan (Payable Rs. 2,00,000	2,00,000	Raw material inventory	
10,000 per month with interest @ 12%)		30,000 units	1,20,000
		Accounts receivable	60,000
		Cash	20,000
		Other fixed assets	4,00,000
Total	7,00,000	Total	7,00,000

The sales, production and purchases are:

	Baisakh	Jestha	Ashadh	Total
Sales units	10,000	12,000	12,000	34,000
Production units	12,000	12,000	15,000	39,000
Material purchase units	30,000	37,500	30,000	97,500
Purchases amount (Rs.)	1,20,000	1,50,000	1,20,000	3,90,000

The selling price per unit is Rs. 20. Company's sales are mostly on cash. Experience shows that 80% of sales are in cash and remaining 20% on credit of 30 days. Wages and other manufacturing expenses are Rs. 6 per unit and operating expenses are 10% of gross sales figures. All expenditures are paid for at the time when due. Each unit of finished goods needs 2.5 units of raw materials. 50% of purchases are on cash and credit purchases are paid after 1 month.

The company has a policy of maintaining a minimum cash balance of Rs. 20,000 and it has reached with an agreement with a bank for 12% loan. Amount of interest due are paid for the loan repaid with the repayment amount.

Required: (a) Budgeted Income Statement

(b) Cash Collection and Disbursement Budget, and

(c) Budgeted Balance Sheet for three months ending Ashadh.

[4+6+5]

Ans: (a) NI = Rs. 31,957 (b) Ending cash Rs. 20,000 each month (c) B/S Rs. 738,000

1. INTRODUCTION OF PROFIT PLANNING AND CONTROL

1. 2071 Q.No. 1

"Profit planning and control helps management in evaluation of the alternatives." Discuss. [8]

2. 2070 Q.No. 1

"Profit planning is not an exact science, but it serves as a tool for management control." Discuss. [8]

3. 2070 Old Q.No. 10

"Profit Planning is not exact science, but it serves as a tool for management control." Discuss with some arguments for and against profit planning and control. [16]

4. 2069 Q. No. 1

What do you understand by profit planning? Is it necessary to control the profit? Do you agree that profit planning and control technique is applicable only in big business? [2+2+4]

5. 2069 Q. No. 10a

Write about the advantages and limitations of profit planning and control. [4+4=8]

6. 2068 Q.No. 1

Briefly explain comprehensive Profit Planning and Control with its objectives. [8]

7. 2068 Old Q.No. 10

Write about the managerial uses, benefits and perspectives of profit planning and control. [5+5+6=16]

8. 2067 Q.No. 6

Define Profit Planning and Control. Why is it essential in every business organization? [5+5]

9. 2067 (Old) Q.No. 7 OR

"Profit just not happened, it should be planned." Comment the statement in the light of planning the profit in different business firms. [3+3=6]

10. 2066 Q.No. 10 a

"PPC is not realistic to write out and distribute organization's goals, policies and guidelines to all the supervisors." Discuss this statement by highlighting the arguments for and against Profit Planning and Control. [8]

11. 2066 Q.No. 10b

Write the features of Profit Planning and Control. [8]

12. 2065 Q.No. 9

Define profit planning and control. Write about its objectives and managerial uses. [4+6+6= 16]

13. 2065 Q.No. 10 a

"A long-term plan focuses on enterprise objectives and overall strategies." Comment. [8]

14. 2064 Q.No. 9

"A formal expression of the policies, plans, objectives, and goals established by the management for the concern is profit planning and control." Discuss this statement and also highlight on the features of profit planning and control. [8+8=16]

15. 2063 Q.No. 10 a

"Profit planning and control can be adapted to any organization regardless of size, special circumstances or conditions." Discuss with some arguments for and against profit planning and control.

16. 2063 Q.No. 10 b

What is meant by the time dimension in profit planning and control? Distinguish between periodic and project plans. [4+4]

17. 2062 Q.No. 9

Define comprehensive profit planning and control. Write the features of Profit Planning and Control and also discuss its managerial uses. [5+5+6]

18. 2061 No. 10

"A profit plan is a financial and narrative expression of the expected results form the planning decision." Explain and also highlight on the objectives and limitation of Profit Planning and Control. [6+6+4]

19. 2060 Q.No. 10

"Profit Planning and control can be applied in small as well as large scale enterprises." Discuss this statement by giving the different arguments given for and against profit planning and control. Also state the critical features of profit planning and control. [6+6+4]

20. 2059 Q.No. 10

Write about the objectives of profit planning and control program. Explain managerial use and limitation of profit planning and control. [4+8+4]

21. 2058 Q.No. 1

Define PPC. Comment on the benefits of profit planning and control for making an organization in performance ever better. Write about the managerial use of profit planning and control. [4+8+4]

2. PLANNING AND CONTROLLING REVENUES. SALES AND SERVICES**MBS****THEORETICAL QUESTIONS****1. 2067 Q.No. 2b**

"Market survey method is essential to make sales forecast exact." Comment [4]

2. 2062 Q.No. 8 a

Differentiate between strategic and tactical profit plan. [8]

3. 2061 Q.No. 7

"Comprehensive sales planning provides for the basic management decision about marketing." Comment on this statement and also describe the different points to be considered while preparing a sales budget. [3+3]

4. 2059 Q.No. 6

"If the sales plan is not realistic, all other parts of the overall profit plan are also not realistic." Explain. Also state the primary purpose of the sales plan. [3+3]

NUMERICAL PROBLEMS**5. 2070 Old Q.No. 1**

The sales forecast made by a company for Baisakh to Ashad is 20,000 units. The company has developed monthly sales requirements to meet the sales forecast.

Sales requirement	Baisakh	Jestha	Ashad
		20%	35%

The company adopts stable inventory policy. The inventory in the beginning of Baisakh would be 6,000 units and at the end of Ashad it would be 4,000 units.

A unit of product will realize Rs.10 and it will remain the same through out the year.

Required:

(i) Sales Budget for Baisakh, Jestha and Ashad

(ii) Production Budget for Baisakh, Jestha and Ashad

[2+4=6]

Ans: (i) Sales: Rs.40,000; 70,000; 90,000; (ii) 2,000; 7,000; 9,000 units

6. 2069 Q. No. 2

D.E. Co. Ltd. operates three sales divisions- North, South and West selling three branded products- A, B and C. The company made available the following information for the purpose:

Budgeted sales for the current year			
Product/sales division	North	South	West
A- units @ Rs. 10 each	4,000	6,000	6,000
B- units @ Rs. 20 each	3,000	8,000	4,000
C- units @ Rs. 40 each	2,000	12,000	5,000

Budget Committee of the company met the Divisional Sales Managers and acts the following suggestions:

- Product A is selling at a higher rate than expected because of possibly under priced. So even if the price is increased to Rs. 11 per unit, the product would find a ready market.
 - Product C is not selling at the expected rate possibly because of over priced and market can demand more if price is reduced by Rs. 2 per unit.
- The management has agreed proposed price changes. Accordingly the Divisional Sales Managers have forwarded the following additional information based on budget above.
- Increase/decrease on current year's sale budget in percentage.

Product	North	South	West
A	+30	+20	+10
B	-10	+50	-10
C	+10	+30	+20

Required: (1) Sales budget for the current year (2) Sales budget for the coming year. [4+4=8]

Ans: (1) Total 12,20,000; North: A = Rs. 40,000; B = Rs. 60,000; C = Rs. 80,000; South: A = Rs. 60,000; B = Rs. 160,000; C = Rs. 480,000; West: A = Rs. 60,000; B = Rs. 80,000; C = Rs. 200,000 (2) Total 14,79,400; North: A = Rs. 57,200; B = Rs. 54,000; C = Rs. 83,600; South: A = Rs. 79,200; B = Rs. 240,000; C = Rs. 592,800; West: A = Rs. 72,600; B = Rs. 72,000; C = Rs. 228,000

7. 2068 Q.No. 2

A company produces two products Alpha and Beta. Management expects to sell 100,000 units of Alpha and 100,000 units of Beta in the year 2069. Alpha is sold at Rs. 15 each and Beta at Rs. 25 each. Annual sales are expected to be spread over the twelve months of the year in the following percentage.

Months	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Annual Sales %	6	6	8	8	4	4	8	10	12	14	12	8

Required: Sales budget by months for each product and in total. [8]

Ans: Total Rs. 40,00,000; Alpha Rs. 15,00,000; Beta Rs. 25,00,000

8. 2068 Old Q.No. 1

A company's executive committee has approved the sales estimates made for the coming four months for its two products A and B.

Products	Shrawan	Bhadra	Ashwin	Kartik
A	20%	20%	30%	30%
B	20%	25%	25%	30%

The company adopts stable production policy for both products. The beginning inventory of Shrawan and ending inventory of Kartik along with sales targets and sales price per unit for the period are as follows:

Products	Beginning inventory	Ending inventory	Sales target	Sales price per unit
A	20,000 units	30,000 units	90,000 units	Rs. 20
B	10,000 units	15,000 units	105,000 units	Rs. 25

Required: (a) Sales budget for the four months ended Kartik 31st, for product A (b) Production budget for the four months ended Kartik 31st, for product B. [2+4=6]

Ans: (a) Rs. 18,00,000 (b) Rs. 110,000

9. 2067 Q.No. 7 OR

The sales estimates made by the marketing department of a company are as follows:

Months	Nut bolts		Screws	
	Territory A	Territory B	Territory A	Territory B
Baishak	4,000	5,000	6,000	7,000
Jestha	5,000	4,000	6,000	6,000
Ashadh	7,000	4,000	5,000	5,000

The sales trend shows that return of Nut bolts on its gross sales was 5% and it was 2.5% of gross sales of Screws.

The monthly sales return on gross sales would be of similar percentage for the coming period also.

The selling price per unit of Nut bolts and Screws would be Rs. 15 and Rs. 8 respectively.

Required: Sales plan by product, territory and period for the three months ended Ashadh end. [10]

Ans: Territory A: Nut bolts = 16,000 units of Total Rs. 240,000; Screws = 17,000 units of Total Rs. 136,000; Territory B: Nut bolts = 13,000 units of Total Rs. 195,000; Screws = 18,000 units of Total Rs. 144,000; Net sales = Rs. 686,250

10. 2064 Q.No. 1

A company sells four product - P, Q, R and S. The company is currently developing the budget for three months January to March. Planned net sales for the six month is Rs. 1,200,000 which has been distributed among four products as under:

Products	P	Q	R	S
Sales percentage	20%	40%	30%	10%

Distribution of sales targets by months are:

Months	P	Q	R	S
January	30%	20%	20%	30%
February	40%	40%	30%	30%
March	30%	40%	50%	40%

Required:

- (a) Sales budget summary, by product.
(b) Detailed sales budget, by product, by month

[2+4=6]

Ans: Rs. 600,000

11. 2060 Q.No. 5

The budgeted sales summary for two products are as follows:

Months	Product P ₁		Product P ₂	
	Territory A	Territory B	Territory A	Territory B
January	5000 units	4000 units	6000 units	4000 units
February	3000 units	2000 units	5000 units	5000 units
March	2000 units	2000 units	4000 units	3000 units

The selling price per unit of product P₁ and P₂ is Rs. 10 and Rs. 5 respectively. Past experience has shown that sales return on gross sale was 10% for product P₁ and 5% for product P₂. It is anticipated that the monthly sale return on gross sale will be the same percentage for coming period.

Required: Detailed sales plan by product, territory and period for 3 months ending 31st March. [6]

M B A

12. 2064 Q.No. 1 a

A company manufactures two products P₁ and P₂, and sells them through two divisions- East and West. The budgeted sales units for the current year are as under.

Product	East	West
P ₁	5,000 units @ Rs. 18 each	8,000 units @ Rs. 18 each
P ₂	6,000 units @ Rs. 40 each	10,000 units @ Rs. 20 each

From the information and reports provided by salesmen the following percentage increase in sales over current budget is estimated by divisional sales manager:

Product	East	West
P ₁	+ 20%	+ 5%
P ₂	+ 10%	+ 10%

With the help of an intensive advertisement campaign the following additional sales over the estimated sales of divisional managers are possible.

Product	East	West
P ₁	1,000 units	600 units
P ₂	400 units	1,000 units

Required: (a) Sales budget for current year (b) Sales budget for coming year

[5+5]

13. 2059 Q.No. 1

A Company sells two products A and B and sells them through two division-Purbanchal and Paschimanchal. For the purpose of submission of sales budget to the budget committee, the following information have been made available:

Months	Baishakh	Jestha	Ashadh
A: Eastern	4000	3000	5000
Western	3000	2000	4000
B: Eastern	3000	1000	4000
Western	2000	2000	3000

The selling price per unit of Product A is Rs. 5 and B is Rs. 4. It is estimated that sales return and allowance given out of the gross sales will be 5% and 10% for product A and B respectively.

Required: Detailed sales plan by district, by product and by period.

14. 2058 Q.No. 7(c)

A company produces two products A and B. The company's Market Research Department prepared the following sales forecast.

	Product A	Product B
Industrial total sales	10,000 units	20,000 units
Company's share of market	40%	20%
Sales price per unit	Rs. 5	Rs. 2

The divisional sales manager estimated that the sales unit of A and B for the period will be 6,000 and 3,000 units respectively. To establish an acceptable forecast the budget director averages the two estimates.

Required: Sales budget.

[5]

15. 2055 Q.No. 4(a)

A company sells metal picture frames. The selling price per unit of frame is Rs. 200. The company had prepared sales budget and account receivable collection budget at the same time for the first quarter of the year, but the sales budget was misplaced, and only balance of accounts receivable yet to be collected were available. The company had developed the following account receivable collection procedure.

Collection on sales: $\left\{ \begin{array}{l} 60\% \text{ in month of sales} \\ 30\% \text{ in month following sales} \\ 8\% \text{ in second month following sales} \\ 2\% \text{ uncollectable} \end{array} \right.$

The account receivable showed the balance of Rs. 46,000 at the end of Ashad of which Rs. 4,000 represents Baishakh, Rs. 18,000 for Jestha and remaining for Ashad sales.

Required:

Sales Budget for 3 months Baishakh, Jestha and Ashad showing in units and rupees.

[10]

16. 2054 Q.No. 7(a)

Raykay Company is a manufacturer of best quality of trousers. The sales manager estimated that the sales in the last quarter of coming year will be 1,000 trousers. He also predicts that the sales will grow by 200 trousers each quarter. The selling price will be Rs. 500 per trouser.

Required: A sales budget showing sales revenue for 1st, 2nd, 3rd and last quarter in the coming year.

[5]

17. 2053 Q.No. 6(d)

The annual sales figure divided into equal twelve calendar months for the last year was Rs. 1,200,000. The company expects a general decline in sales for the coming months by 20%. However, the Company has decided to launch special advertisement campaign, which will gradually increase the sales by 5%, 10% and 20% in subsequent three months.

Required: Sales budget of the company for three months.

[5]

18. 2048 (Old) Q.No. 1

Regional sales of Terai Bottlers Ltd. for the year 1992 have been forecast as follows:

Region	Sales
Biratnagar	Rs. 40,00,000
Birgunj	Rs. 20,00,000
Bhairahawa	Rs. 15,00,000

The Bottlers sales three products analysis of past sales records indicate the following normal regional distribution of sales by product.

Region	Coke	Sprite	Fanta
Biratnagar	40%	40%	20%
Birgunj	50%	20%	30%
Bhairahawa	40%	30%	30%

Additional analysis shows the following distribution of sales by months and quarters.

Region	First Quarter			Second Quarter	Third Quarter	Fourth Quarter	Total
	Jan.	Feb.	Mar.				
Biratnagar	6%	6%	10%	30%	25%	23%	100%
Birgunj	8%	10%	12%	28%	22%	20%	100%
Bhairahawa	6%	8%	12%	30%	24%	20%	100%

Required: Sales budget for the year 1992 showing details by region and by product for each quarter and for each month of the first quarter. [20]

19. 2048 (New) Q.No. 3

Nepal Food Corporation sells rice. The product rice is distributed in two sales regions – Butwal and Birgunj. The following data have been developed for the 2048 budget year.

Months	Gross Sales in Tones	
	Butwal	Birgunj
Baisakh	160	120
Jestha	120	80
Ashadh	200	160
2 nd Quarter	380	340
3 rd Quarter	260	160
4 th Quarter	380	320
Total, year	1,500	1,180

Sales price per quintal:

Butwal = Rs. 720

Birgunj = Rs. 760

Selling and Advertising, Promotion Cost are as follows:

	Fixed cost per month		Variable cost per 100 kg	
	Butwal	Birgunj	Butwal	Birgunj
Selling cost	Rs. 4,000	Rs. 5,600	Rs. 80	Rs. 120
Promotion cost	8,000	12,000	40	20

Cost per ton of rice:

Butwal: Rs. 6.50 per kg.

Birgunj: Rs. 7.50 per kg.

Required: Prepare a sales budget summary and a detailed sales budget. [20]

3. PLANNING AND CONTROLLING PRODUCTION

MBS

THEORETICAL QUESTIONS

1. 2071 Q.No. 10b

"Production planning refers the development of policies about efficient production level, use of production facilities and inventory levels." Discuss. [7]

2. 2070 Q.No. 10b)

"Just in Time" manufacturing is a "demand pull" rather than the traditional "push approach". Explain. [8]

3. 2070 Old Q.No. 8 OR

"The cost volume profit analysis is a useful managerial tool in profit planning." Explain. [6]

4. 2070 Old Q.No. 9a

What is production policy? Explain the factors influencing production plan policy. [4+4=8]

5. 2068 Q.No. 10b)

If production activity depends upon the sales activity, what should be adopted – stable inventory policy or stable production policy? Explain with reasons. [7]

6. 2064 Q.No. 8

"Just-in-time" manufacturing is a demand-pull rather than the traditional 'Push' approach" Explain it with the goals of 'Just-in-time' manufacturing. [3+3]

7. 2063 Q.No. 7

"While developing a production plan, the manufacturing executives must resolve the problem of coordinating sales, inventories and production." Discuss. [6]

8. 2059 Q.No. 7

"If production activity is fluctuating directly to the sales activity, it is better to maintain stable inventory policy rather than stable production policy." Do you agree with this statement? Explain.

9. 2058 Q.No. 7

"Production budget is a necessary step in developing the profit plan." Discuss

NUMERICAL PROBLEMS**10. 2071 Q.No. 2**

The sales forecast made by a company for January to June is 50,000 units. The company has developed monthly sales requirements to meet the sales forecast.

Sales requirements	January	February	March	April	May	June
	20%	15%	14%	16%	15%	20%

The company adopts stable production policy.

The inventory in the beginning of January is 8,000 units and closing inventory on June is 6,000 units.

Selling price per unit is Rs. 10.

Required:

- Sales Budget for January to June
- Production Budget for January to June

Ans: (a) Rs. 100,000; Rs. 75,000; Rs. 70,000; Rs. 80,000, Rs. 75,000; Rs. 100,000 (b) Rs. 8,000 each month [4+4=8]

11. 2070 Q.No. 2

The sales forecast made by a company for Baisakh to Ashwin is 40,000 units. The company has developed monthly sales requirements to meet the sales forecast.

Sales requirements	Baisakh	Jestha	Ashad	Shrawan	Bhadra	Ashwin
	18%	16%	14%	16%	16%	20%

The company adopts stable inventory policy.

The inventory in the beginning of Baisakh is 6,000 units and closing inventory on Ashwin is 8,000 units.

Selling price per unit is Rs.10.

Required:

- Sales Budget for Baisakh to Ashwin
- Production Budget for Baisakh to Ashwin

Ans: Sales: Rs.72,000; 64,000; 56,000; 64,000; 64,000; 80,000; [4+4=8]
Production Unit: 9,200; 6,400; 5,600; 6,400; 6,400; 8,000

12. 2067 Q.No. 2a

Star Company manufactures X, Y and Z products and markets them at Rs. 50; Rs. 60 and Rs. 65 per unit respectively.

The planned sale of the company for the coming year is 40,000 units.

The ratio of sales in quantity of X, Y and Z is 1: 1.5: 2.5.

The beginning stock of X, Y and Z would be 500 units, 1,000 units and 1,500 units respectively and the company has planned to maintain ending stock of products equal to 80% of the beginning stock.

Required: Production budget of the company

[4]

Ans: 7,900 units; 11,800 units; 19,700 units

13. 2067 (Old) Q.No. 1

Welcome Company manufactures (large size) balloons. Last year, the company sold 48,000 balloons at a price of Rs. 20 per unit which take place evenly through the year. The company estimates that this volume represents a 20 percent share of market. The market is expected to increase by 5 percent. But the company marketing specialists have determined that as a result of a new advertising campaign and packaging, the company will increase its share of this larger market to 24 percent. Due to change in prices, the new price for the balloons will be Rs. 21.50 per balloon. This new price is expected to be in line with the competition and have no effect on the volume expected. In the past, management has found that inventories of finished goods should be maintained at approximately one and half month's sales need. The inventory at the start of the budget period is 5,400 units.

Required:

1. Sales budget for first three months January, February and March

2. Production budget for three months January, February and March

[3+3=6]

Ans: (1) Rs. 108,360 each month (2) Rs. 7,200; Rs. 5,040; Rs. 5,040

14. 2066 Q.No. 1

A manufacturing company expects to sell 100,000 units of a product in coming year @ Rs. 50 each. Annual sales are expected to be spread over 4 quarters of the year in following percentages:

Quarter	1	2	3	4
% of Annual sales	25%	15%	20%	40%

The beginning and closing units for the year are 12,500 units and 20,000 units respectively. The management has decided to have closing inventory of 50% of the next quarter requirements.

Required: Sales budget and production budget by quarter for the year.

[3+3]

Ans: Sales: Rs. 12,50,000; Rs. 7,50,000; Rs. 10,00,000; Rs. 20,00,000;
Production: 20,000 units; 17,500 units; 30,000 units; 40,000 units

15. 2065 Q.No. 1

The sales forecast made by a company for July to September is 24,000 units. The company has developed monthly sales requirements to meet the sales forecast.

Sales requirements	July	August	September
	25%	35%	40%

The company adopts stable production policy.

The inventory in the beginning of July would be 1,500 units and at the end of September it would be 4,500 units.

A unit of product realized Rs. 15 and it will remain the same till September.

Required: (a) Sale budget for July, August and September (b) Production budget for July, August and September

[2+4=6]

16. 2064 Q.No. 2

Sales Plan Summary for a product of a company is as under:

Months	Baishak	Jestha	Ashadh	Shrawan	Bhadra	Aswin
Sales units	4,000	6,000	5,000	7,000	6,000	8,000

The company has a stable production policy. Additional budget data for inventory is as follows:

- Inventory at the beginning of Baishak is 4,000 units
- Inventory at the end of Aswin is 10,000 units

Required:

Monthly production budget for six months showing beginning and ending inventory each month [6]

Ans: Budgeted units = 7,000 units for each month

17. 2063 Q.No. 2

A company produces and sells two different products namely A and B. The company has made the following sales estimates for the first three months.

Products	January	February	March
A	40%	30%	30%
B	20%	40%	40%

The sales units and selling price per unit for three months are:

Products	Sales units	Selling price per unit
A	50,000	Rs. 10
B	60,000	Rs. 5

The company follows the stable production policy for both products. This inventory at the beginning of January and end of March are as under:

Products	Beginning inventory	Ending inventory
A	5,000 units	15,000 units
B	5,000 units	8,000 units

Required:

Sales budget and production by month, by product for three months ending 31st March. [3+3]

Ans: Rs. 800,000

18. 2062 Q.No. 1

Hetauda Kasha Company has been engaged in profit planning for several years. The company manufactures three products P, Q and R. The management of the company requires sales budget for the next quarter. To meet this objective, the following sales plan summary is given:

Products	Sales unit	Selling price per unit
P	10,000	Rs 10
Q	8,000	Rs 15
R	7,000	Rs 20

Sales of P are seasonal and sales plan showed the following sales by month for product P:

Months	January	February	March
Sales percentage	50%	30%	20%

Because of seasonal nature of sales of P, the management decided to establish a stable inventory policy. The beginning inventory of P was on 1st January 3000 units and ending on 31st January will be 2,800 units.

Required:

- Sales budget summary for three products for coming quarter.
- Production budget for product P for three months ending 31st March.

Ans: (1) Rs. 100,000; Rs. 120,000; Rs. 140,000 (2) 4,800 units; 3,000 units; 2,000 units

19. 2061 Q.No. 2

A finished product of a manufacturing company passes through two departments Processing and Finishing departments. Estimated direct labour hours (DLH) and rate per hour for the products are:

Process	DLH per unit	Labour cost per hour
Processing	1	Rs. 5
Finishing	2	Rs. 3

The sales department has developed the sales budget for the first four months of next year, which are as follows:

Months	January	February	March	April
Sales units	4,000	3,000	5,000	5,000

The company has at present, the policy of having inventory of the product at the end of each month equal to the 50% of sales requirement of next month. The beginning stock on 1st January was 2,000 units.

Required:

Production Budget and Direct Labour cost Budget for three months ending 31st March.

Ans: Budgeted units = 3,500 units; 4,000 units; 5,000 units & Direct labour cost = Rs. 38,500; Rs. 44,000; Rs. 55,000

20. 2059 Q.No. 2

A company manufactures two products. The planning budget is being developed for the coming year. The sales plan prepared by the sales division for six months showed the following:

Product I: 70,000 units; Product II: 100,000 units

Sales are seasonal. The sales plan showed the following sales, by month for product I:

Months	Baishak	Jestha	Ashadh	Shrawan	Bhadra	Aswin
Sales units	10,000	12,000	8,000	10,000	15,000	15,000

The following inventory level have been tentatively planned:

Product	1 st Baishak	30 th Aswin
I	8,000	10,000
II	10,000	20,000

The company at present has been applying stable production policy.

Required:

a. Production Budget, for 6 months, by product.

b. Production Budget for product-1 for 6 months, by months.

[2+4]

Ans: (a) P₁ = 72,000 units; P₂ = 110,000 units (b) 12,000 units each month

M B A

21. 2064 Q.No. 7 a

The sales department has developed the sales budget for the first four months as under.

Months	April	May	June	July
Sales units	8,000	6,000	10,000	10,000

The company has at present, the policy of having inventory of the product at the end of each month equal to 40% of sales of next month. The beginning stock on 1st April was 3,200 units.

Required: Production budget for April, May and June

[5]

22. 2064 Q.No. 7 d

A company is applying stable production policy and following plan for 3 months is given

Months	Sales units	Beginning stock	Closing stock
Baishakh	4,400	7,000	-
Jestha	5,000	-	-
Ashadh	3,600	-	6,000

Required: Planned production for each month and closing stock for Baishakh

[3+2]

23. 2059 Q.No. 3(a)

The budgeted sales summary for the product are as follows:

Months	Baishak	Jestha	Ashadh	Shrawar	Bhadra	Aswin	Kartik	Marg
Sales units	9,000	8,000	7,000	6,000	8,000	7,000	6,000	6,500

It has been decided that sales figures need to be revised by additional 10% in each month. Management decides to have beginning inventory at 2 months supply based on 3 months moving average of planned revised sales. The sales for the month of Chaitra were 8,300 units.

Required: Production budget for 1st six months.

[10]

24. 2057 Q.No. 7(d)

The sales planning of a company for different months are:

Months	Chaitra	Baishak	Jestha	Ashad	Shrawan	Bhadra	Ashwin
Sales units	3,000	4,000	5,000	3,000	4,000	2,000	3,000

Beginning inventory = 2 month's supply based on 3 months average.

Selling price per unit = Rs.10

Required: Beginning inventory in units for each of the five months from Baishak to Bhadra. [5]

25. 2056 Q.No. 7(c)

A company is applying stable production policy and the following plan for 3 month is given:

Months	Baisakh	Jestha	Ashadh
Sales units	2200	2500	1800
Beginning inventory	3500	—	—
Desired ending inventory	—	—	3000

Required: Closing inventory for each month. [5]

26. 2055 Q.No. 6(a)

Horizon Company Ltd. manufactures different types of cosmetic goods. One of them is a body deodorant branded as Horizon – Musk. The management expects to sell 80,000 units in the next year.

The selling price of the products is Rs. 200 per bottle. Annual sales are expected to be spread over the twelve months of the year in following percentage:

Baisakh	20%	Shrawan	5%	Kartik	5%	Magh	10%
Jestha	10%	Bhadra	5%	Marg	10%	Falgun	5%
Ashad	10%	Aswin	10%	Poush	5%	Chaitra	5%

The closing inventory of finished goods as on 31st Chaitra last year was 25,000 bottles. The actual sales of last year was 1,00,000 bottles and average finished goods inventory was 25,000 units. The management decided that the closing inventory of the month would be based on the turnover of the last year.

Required: Production budget for the 1st six months of coming year. [10]

27. 2054 Q.No. 7(d)

The sales planning of a company for different months are as follows:

Months	Chaitra	Baisakh	Jestha	Ashad	Shrawan	Bhadra	Ashwin
Sales (Rs.)	10,000	12,000	8,000	10,000	15,000	8,000	7,000

The policy of management is to budget the finished goods two months supply for the beginning inventory based on 3 months moving average of issued.

Required: Find out the sales value of beginning inventory for each of the five months from Baisakh to Bhadra. [5]

28. 2053 Q.No. 4(a)

Skyline Company manufactures and distributes musk oil. The budgeted sales of the musk oil coming months are as follows:

Month	Sales in bottles	Month	Sales in bottles
January	8,500	May	8,600
February	9,600	June	9,000
March	8,400	July	8,500
April	7,500	August	8,000

However, a rigorous exercise has dictated that the budgeted sales would not yield as much return on investment as desired by the company. So, the sales figures need to be revised with an addition of 10 percent in each month. The company has at present, the policy of having inventory of the product at the end of each month equal to the sales requirement of next month. But in order to provide adequate safety inventory, management decides to increase the inventory level by 5 percent on present policy.

Stock of finished goods on January 1 is 8,500 units.

Required: What production volume would meet the new sales and inventory requirements for the period of first six months? [10]

29. 2052 Q.No. 1(a)

Alpha Company Ltd. has been engaged in producing radio for last several years. The company is interested to use profit planning and control programme for the coming year. The following sales plan for the coming year has already been developed.

Month	Units	Month	Units	Month	Units
Dec. end. (Actual)	5,000	May	6,000	October	6,000
January	7,000	June	7,000	November	7,000
February	6,000	July	8,000	December	8,000
March	6,000	August	7,000	January, 1996	6,000
April	8,000	September	5,000		

The closing inventory of finished goods as on December 1994 was 6,000 units. Management has decided to have closing inventory of finished goods at the level of one and one half month's supply of three months moving average of each month.

Prepare production budget for the next year. [10]

30. 2050 Q.No. 3

Shashi Plastic Company has been engaged in profit planning for several years. The General Manager stated that inventories control and production planning had not been satisfactory.

You are to make a detailed analysis on the problem for the XI profit plan currently being prepared. The following sales data are available for the year XI.

(a) Sales plan summary for XI:

January	25,000 units
February	35,000 units
March	43,000 units
II Quarter	1,05,000 units
III Quarter	1,10,000 units
IV Quarter	1,15,000 units

(b) The January 1, XI finished goods inventory is 70,000 units.

(c) The actual annual sales for IX (last year), including December estimates, were 1,00,000 units

(d) The average finished goods inventory for IX (last year) was 20,000 units.

Prepare the annual production budget assuming the policy of management is to budget the finished goods ending inventory at a standard amount based on the IX (last year) historical sales to inventory turnover ratio. [20]

31. 2046 Q.No. 1

The estimated sales for the first three-month period of the coming year of X manufacturing company are:

Districts	Jan %	Feb. %	March %	Total %
A	50	30	20	100
B	55	30	15	100
C	50	25	25	100
D	50	25	25	100

The estimated unit sales by districts for the three months are:

Districts	Units Sales
A	20,000
B	30,000
C	10,000
D	40,000
Total	1,00,000

The unit sales price is Rs. 2

The company's policy expects an inventory of 10,000 units at the beginning and the end of

each three-month period. The production schedule is:

Jan.	60%
Feb.	30%
March	10%

Required:

- An estimate of sales in units and rupee for each month and district in total.
- A schedule of the end-of month inventories by units. The beginning inventory is 10,000 units. [20]

32. 2046 Q.No. 2

The M. Company's sales forecast for the next quarter ending 30th June indicates the following:

Products	Expected Unit Sales
F	14,000
G	37,500
H	54,300

Inventories at the beginning and desired quantities at the end of quarter are as follows:

Products	March 31	June 30
F	5,800 units	6,200 units
G	10,000 units	10,500 units
H	13,000 units	12,200 units

Because of limiting factor of Raw material on F & H production has been decreased to 75% of each production.

Required: A production budget for the second quarter. [20]

4. PLANNING AND CONTROLLING PURCHASE AND MATERIALS USAGE. MANUFACTURING CONCERN

MBS

THEORETICAL QUESTIONS

1. 2068 Old Q.No. 9a

What is JIT production system? How does it help to minimize costs? [4+4]

2. 2067 Q.No. 10b

"Inventories are purchased as required in just-in-time purchase." Explain and also identify the merits and just-in-time purchase. [4+3=7]

3. 2066 Q.No. 7

What is Material Requirement Planning (MRP) System and how is it related to production budgeting in a PPC program? [3+3]

4. 2066 Q.No. 7 OR

What is meant by JIT? What are its implications for the budgeting process in a PPC program? [3+3]

5. 2066 Q.No. 9 a

What are the principal types of budgets usually required in planning for raw materials? Briefly explain each of them. [8]

6. 2063 Q.No. 9 b

What are the principal budgets usually required in planning for raw materials? Briefly explain each of them. [8]

7. 2062 Q.No. 10 a

Inventories are purchased as required in Just-in-time purchase." Discuss and also write the advantages of just-in-time purchase. [6]

NUMERICAL PROBLEMS

8. 2071 Q.No. 5

A company produces a single product which requires 4 units of raw materials for each product. The projects production plan for the six month is

Months	Baisakh	Jestha	Ashad	Shrawan	Bhadra	Ashwin
Production units	2,000	3,000	4,000	3,000	2,000	3,000

The beginning inventory in Baisakh is 3,000 units and ending inventory in Ashwin is 4,000 units. The company has a stable inventory policy of raw material. The cost of raw material is Rs. 20 for 4 units, which will remain unchanged during the whole planned period.

Required:

① Material consumption budget for 6 months

② Material purchase budget for 6 months

[4+4=8]

Ans: ① Rs. 8,000; Rs. 12,000; Rs. 16,000; Rs. 8,000; Rs. 12,000 ② Rs. 45,000; Rs. 60,000; Rs. 80,000; Rs. 60,000; Rs. 40,000, Rs. 60,000

9. 2070 Q.No. 5

A company uses two raw materials "X" and "Y" to produce the product. The raw material specification is as given below:

Raw materials	Per unit of product	Unit cost of raw material
X	3 units	Rs. 2
Y	4 units	Rs. 3

Production plan estimated by production manager is:

Months	Baisakh	Jestha	Ashad	Shrawan
Production units	3,000	4,000	6,000	5,000

The company's policy to have monthly closing raw material equal to the material requirement of the subsequent month.

Actual data of materials 'X' for Baisakh are:

- ▶ Production units = 3,200 units
- ▶ Raw material purchase units = 11,000 units
- ▶ Unit price of raw material = Rs.1.9
- ▶ Raw material used units = 9,920 units

Required: ① Raw material purchase budget for three months Baisakh, Jestha and Ashad ② Performance report of Material 'X' for the month of Baisakh.

[6+2=8]

Ans: Raw Material Budget : Rs.72,000; 108,000; 90,000

10. 2069 Q. No. 4

A manufacturing company manufactured products X and Y using material A, B and D in equal proportion for X and material B, C and D in 3: 5: 2 proportion for Y. During June it expects to sell 8000 kgs of X and 20,000 kgs of Y.

Actual and budgeted inventories and costs for the month are given below:

Products/Inventories in kg	Opening	Closing	Cost per kg
X	1,000	500	-
Y	5,000	6,000	-
Materials: A	1,500	1,000	Rs. 5.50
B	1,000	2,000	5.00
C	10,000	3,000	1.00
D	5,000	6,000	3.50

Required: ① Production budget for June ② Material purchase budget for June

[3+5=8]

Ans: (1) X = Rs. 7,500; Y = Rs. 21,000 (2) A = Rs. 11,000; B = Rs. 49,000; C = Rs. 3,500; D = Rs. 26,950

11. 2068 Q.No. 5

The production budget of a company is given below:

Months	Shrawan	Bhadra	Aswin
Production (units)	10,000	12,000	8,000

Each units of product requires		
Material	X	Y
Units	3	4
Cost per unit	Rs. 2	Rs. 5

The company's policy is to have enough ending inventory of raw materials to fill 50% of requirement for the following month. Estimated closing stock of raw material X and Y are 18,000 units and 24,000 units respectively.

Required:

- (a) Material consumption budget for three months.
 (b) Material purchase budget for three months.

[4 + 4 = 8]

Ans: (a) Rs. 210,000 (b) Rs. 806,000

12. 2067 Q.No. 5

A Local Furniture Land Centre products Computer tables, Coffee tables and Office tables. It expects to sell 4,000 Computer tables, 5,000 Coffee tables and 6,000 Office tables in the coming first four months period.

The opening inventory level with the centre is equal to 20% of the four months expected sales and closing inventory level expected is 1,000 Computer tables, 1,200 Coffee tables and 1,500 Office tables.

The material requirements of the three products are as follows:

	Computer Tables	Coffee Tables	Office Tables
Timber	0.50 cu.ft per table	1.00 cu.ft per table	1.50 cu.ft per table
Formica	0.25 sq.ft per table	0.50 sq.ft per table	0.75 sq.ft per table

The cost per cubic feet of timber is Rs. 200 and it is Rs. 350 per square feet of formica.

The opening and closing level of timber and formica are as follows:

	Opening Inventory	Closing Inventory
Timber	2,000 cu.ft.	1,500 cu.ft.
Formica	2,500 sq.ft.	2,000 sq.ft.

Required:

- a. Production budget for the first four months ended
 b. Raw material purchase budget for the same period

[2+6=8]

Ans: (a) 4,200 units; 5,200 units; 6,300 units; (b) Rs. 32,50,000; Rs. 27,56,250

13. 2061 Q.No. 1

A company has been engaged in producing a single product for last several years. Two basic raw materials A and B are used to produce the product. The raw materials specification furnished by production engineers are:

Raw material	For a single unit of product
A	3 units
B	2 units

Projected production plan estimated by production manager is:

Months	Baishakh	Jestha	Ashadh	Shrawan
Production units	3,000	4,000	5,000	6,000

However, top management has decided to revise above estimated production with an addition of 20% in each month. The company has at present the policy of having monthly closing raw material equal to the material requirement of the following month. The closing inventory levels of A and B last year were 9,000 units and 6,000 units respectively. The unit cost of A and B are Re. 1 and Rs. 2 respectively which are to remain unchanged during the whole planned period.

Required: Material Usage Budget and Material Purchase Budget for three months Baishakh, Jestha and Ashadh by material and by time.

[2+4]

Ans: Material usage: Baishakh = 7,200; Jestha = 9,600; Asadh 12,000; Material purchase: Baishakh = Rs. 16,200 & Rs. 21,600; Jestha = Rs. 18,000 & Rs. 24,000; Ashadh = Rs. 21,600 & Rs. 28,800

14. 2058 Q.No. 1

The sales plan summary of a company for the first three months of the coming year are:

Baishak	Jestha	Ashadh	Shrawan
30,000 units	40,000 units	32,000 units	36,000 units

The company uses only one raw material to manufacture its product. For each unit of product, three units of materials will be used. The company's policy to have enough finished goods to meet 50% of the next month sale. A stable level of purchases of raw material is strictly preferred by management. The beginning materials on 1st Baishak 60,000 units and closing on 31st Ashadh will be 54,000 units.

Required:

1. Production budget, by month, for 3 months
2. Materials purchase budget, by month, for three months. [3+3]

Ans: Budgeted production units = 35,000 units; 36,000 units; 34,000 units; Material usage = 105,000 units; 108,000 units; 102,000 units and Budgeted purchase = Rs. 103,000 for each month

M B A**15. 2064 Q.No. 1 b**

A company manufactures a high quality of finished goods. The budgeted production units for the next four months are as follows:

Months	Baishak	Jestha	Ashadh	Shrawan
Production in units	3,000	5,000	6,000	8,000

The company's policy is to maintain ending raw material inventories equal to 50% of the amount required for next month's production. The information for the raw materials are as follows:

Raw materials	Standard usage per unit of output	Cost per unit	Beginning stock
A	2 units	Rs. 5	3,000 units
B	1 unit	Rs. 10	1,500 units

Required:

Prepare the following budgets for three months Baishak, Jestha and Ashadh

- (a) Material Usage Budget (b) Material Purchase Budget. [4+6]

16. 2059 Q.No. 7(a)

A company plans to produce 10,000 units of finished product in Baishak. The management anticipates a growth rate in production of 5 percent per month. Each unit of finished product requires 2 units of direct materials at a cost of Rs. 10 per unit.

Required: Material usage budget for 1st three months Baishak, Jestha and Ashadh. [10]

17. 2058 Q.No. 3(a)

The following data on production, materials required for products. Shirt and Trousers pertain to the budget of a Ready-made Garments Company.

Products	Shirts	Trousers
Production units	5,000	4,000
Standard usage per unit	1.5 Mtr.	1.10 Mtr.
Other materials per unit	Rs. 10	Rs. 50

Beginning and ending inventories are:

	For Shirt		For Trousers	
	Cloth	Others	Cloth	Others
Beginning	2,500 Mtr.	Rs. 15,000	2,400 Mtr.	Rs. 75,000
Ending	3,000 Mtr.	Rs. 20,000	3,000 Mtr.	Rs. 100,000

Required: (1) Material usage (required) budget. (2) Material purchase budget. [10]

18. 2057 Q.No. 1(a)

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

Months	Baishak	Jestha	Ashadh	Shrawan	Bhadra
Sales units	10,000	12,000	14,000	12,000	10,000

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

Required:

1. Production Budget, and
2. Material Purchase Budget for 3 months Baishak, Jestha and Ashadh. [10]

19. 2056 Q.No. 6

A Manufacturing Company expects to sell 200,000 units of Product A and 300,000 units of Product B in coming year. Products A and B are sold for Rs. 20 and Rs. 20 each respectively. Annual sales are expected to be spread over the four quarter of the year in following percentage:

Quarter	1	2	3	4
% of annual sales	20	30	25	25

The company's policy is to have enough finished goods each quarter to fill 30% of expected sales in the next quarter. Product 'A' is produced by using 3 units of material X and 'B' is produced by using 2 units of material Y. It is planned that closing inventory of raw material at the end of each quarter should be maintained at a level equal to half the consumption of the following quarter.

The expected sales and production units of Products A & B for 1st Quarter of the coming year should be as in the year under review.

The beginning inventory for the 1st quarter in the budgeted year are:

Product A	12,000 units
Product B	18,000 units
Material X	69,000 units
Material Y	65,000 units

Required:

1. Sales budget by quarter, by product
2. Production budget by quarter, by product
3. Material usage budget by quarter, by material
4. Material purchase budget by quarter, by material [4+6+4+6]

20. 2055 Q.No. 7(a)

The planned production for the first four months is given below:

Units	Baishakh	Jestha	Ashad	Shrawan
	5,000	4,000	6,000	4,000

The product required single type of raw-material costing Rs. 2 per unit. The company's policy is to maintain ending raw materials equal to 50% of the amount required for the next period. The opening inventory Baishak is estimated at 2,500 units.

Required: Material Purchase Budget for Baishakh, Jestha & Ashadh. [5]

21. 2054 Q.No. 1

Nepal Agro Products Ltd. manufactures a high quality of finished goods.

The company has budgeted sales for the next four months as follows:

Months	Shrawan	Bhadra	Aswin	Kartik
Sales in units	4,000	6,000	8,000	7,000

Management decides to have the monthly closing inventory at the rate of 2 times and 3 times of planned requirement of that month for finished goods and raw materials respectively. The company uses three types of basic raw materials for manufacturing the finished goods. The information for the raw materials are as follows:

Raw materials	Standard usage per unit of output	Cost per unit	Beginning inventory in units
X	1.5 kg	Rs. 20 per kg.	10,000
Y	1 litre	Rs. 10 per kg.	9,000
Z	2 litre	Rs. 5 per litre	14,000

The closing inventory of finished goods for the last year was 6,000 units.

Required: Prepare the following budgets for 3 months Shrawan, Bhadra and Aswin:

1. Production budget
2. Material usage budget
3. Material purchase budget

[6+6+8]

22. 2053 Q.No. 6(c)

A manufacturing company has adopted a policy of equal inventory of raw materials based on material need for the current month production as desired ending inventory. Each unit of output consumes $1\frac{1}{2}$ units of materials and each unit of material costs Rs. 4. The budgeted productions for coming four months are given below:

Baishak	10,000 units	Jestha	12,000 units
Ashad	12,000 units	Shrawan	15,000 units

Beginning inventory of material as Baishak 1 was 12,000 units.

Required: Prepare material purchase budget for three months.

[5]

23. 2052 Q.No. 3(a)

Lake Company manufactures two industrial components AX Brass, and Aluminum are basic raw materials used to produce the products. The raw material specification furnished by engineers for AX are as follows:

	Brass	Aluminium
AX	2.5 lb	1.2 lb

Projected production plans for AX are as follows:

Time	Production in units AX
January	5,000
February	7,600
March	6,800

The closing inventory levels of brass, and aluminum last year were 20,000 lb and 70,000 lb, respectively. Management decides to have the monthly closing inventory of brass, and aluminum at the rate of 3 and 2 times of planned requirements of that month. The planned unit cost of the brass and aluminum are Rs. 1.4, and 1.1 respectively which are assumed to remain unchanged during the whole planned period.

Required: Prepare material purchase budget by material and by time.

[10]

24. 2051 Q.No. 7

ABC, Company engaged in manufacturing has forecasted its sales for the first quarter is as under.

Months	Jan.	Feb.	March	April
Sales in units	10,000	15,000	20,000	20,000 (in units)

The company has a policy of maintaining finished goods inventory of 80% of the next month's required sales. Each unit of finished product needs two types of materials i.e. materials A and material B. The standard rate of consumption of these material for each unit of finished product are material A1 unit and material B2 units. The company's raw material policy is to hold sufficient units of raw materials required to meet next month's production need. The standard material price for materials A and material B are Rs. 2 and Rs. 3 respectively.

The inventory positions of finished goods and raw materials at the end of December are:

Finished goods	8,000 units
Raw materials:	
A	14,000 units
B	28,000 units

Required: Production budget, material consumption budget and material purchase budget for three months beginning Jan. [20]

25. 2050 Q.No. 5

Furniture Company manufactures a high quality large, oval oak table. Below are data relevant to the production of an oak table.

Resource	Quantity	Unit cost (Rs.)
Oak lumber	40 ft	3.20 per ft
Stain	5 gallon	12.00 per gallon
Finished compound	1 gallon	19.00 per gallon
Cutting labour	1.5 hour	7.00 per hour
Assembly labour	6 hour	8.00 per hour
Finishing labour	5 hour	9.00 per hour

Expected monthly sales for the first four months of XI year are:

Month	Sales
January	200
February	250
March	300
April	400
May	400

The company policy is to have finished goods ending inventories each month equal to 20% of expected sales for next month and raw materials ending inventory equal to 30% of expected production needs for next month. Expected inventories for January 1, XI are:

Items	Quantity	Unit cost (Rs.)
Oak tables	40 tables	300 per table
Oak number	8,400 ft	3 per ft
Stain	45 gallon	12 per gallon
Finishing compound	120 gallon	19 per gallon

Required:

1. Prepare a materials usage budget for January to March.
2. Prepare a materials purchase budget for January to March?

[20]

5. PLANNING AND CONTROLLING PURCHASE FOR NON-MANUFACTURING CONCERN

MBS

1. 2071 Q.No. 3

Budget goal for department A for the period are as follows: (assume no inventory change)

• Planned sales	Rs. 10,000
• Planned discounts	Rs. 500
• Planned stock shortage	Rs. 200

Required: ① The planned initial mark up % that should be planned to attain gross margin of 60% on sales ② The planned gross margin % assuming a planned initial mark up 70%. [4+4=8]

Ans: ① 167.52%; ② 211.53%

2. 2070 Q.No. 3

The data regarding the sales of commodity by retail shop are as under:

• Planned sales for the month	Rs.700,000
• Planned reduction for the month	Rs.40,000
• Ending merchandise for the month	Rs.90,000