15. BUDGET AND BUDGETARY CONTROL

Question 1

Calculate efficiency and activity ratio from the following data:

Capacity ratio	75%
Budgeted output	6,000 units
Actual output	5,000 units
Standard Time per unit	4 hours

Question 2 HOMEWORK SUM Date:

Kukko Co. Ltd manufactures two products viz., X and Y and sells them through two divisions. East and West. For the purpose of Sales Budget to Budget Committee, following information has been made available for the year 2014-15

Product	Budgeted Sales		Actual Sales	
	East Division	West Division	East Division	West Division
X	400 units at Rs. 9	600 units at Rs 9	500 units at Rs 9	600 units at Rs 9
Y	300 units at Rs. 21	500 units at Rs. 21	200 units at Rs. 21	500 units at Rs. 21

Adequate market studies reveal that product X is popular but under priced. It is expected that if the price of X is increased by Rs. 1, it will find a ready market. On the other hand, Y is overpriced and if the price of Y is reduced by Rs. 1 it will have more demand in the market. The company management has agreed for the aforesaid price changes. On the basis of these price changes and the reports of salesmen, following estimates have been prepared by the Divisional Managers:

Percentage increase in sales over budgeted sales

Product	East Division	West Division
X	+ 10%	+ 5%
Y	+ 20%	+ 10%

With the help of intensive advertisement campaign, following additional sales (over and above the above mentioned estimated sales by Divisional Mangers) are possible:

Product	East Division	West Division
X	60 units	70 units
Y	40 units	50 units

You are required to prepare Sales Budget for 2015-16 after incorporating above estimates and also show the Budgeted Sales and Actual Sales of 2014-15

Question 3

Raees Ltd. is drawing a production plan for its two products Mini max (MM) and Heavy high (HH) for the upcoming year. The company's policy is to hold closing stock of finished goods at 25% of the anticipated volume of sales of the succeeding month. The following are the estimated data for two products:

	Mini max (MM)	Heavy high (HH)
Budgeted Production units	1,80,000	1,20,000
	(Rs.)	(Rs.)
Direct material cost per unit	220	280
Direct labour cost per unit	130	120
Manufacturing overhead	4,00,000	5,00,000

The estimated units to be sold in the first four months of the year 2013-14 are as under

HBA	April	May	June	July
Mini max	8,000	10,000	12,000	16,000
Heavy high	6,000	8,000	9,000	14,000

Prepare production budget and production cost budget for the first quarter in month - wise.

Question 4

Following is the sales budget for the first six months of the current year in respect of Ghungroo Ltd. :

Month	Jan	Feb	March	April	May	June
Sales (units)	10,000	12,000	14,000	15,000	15,000	16,000

Finished goods inventory at the end of each month is expected to be 20% of budgeted sales quantity for the following month. Finished goods inventory was 2,700 units on January 1 of current year. There would be no work-in-progress at the end of any month.

Each unit of finished product requires two types of materials as detailed below

Material X: 4 kg. @ Rs. 10/kg
Material Y: 6 kg. @ Rs. 15/kg
Material on hand on January 1 of current year was 19,000 kg. of material X and 29,000 kg. of material Y. Monthly closing stock of material is budgeted to be equal to half of the requirements of next month's production.
Budgeted direct labour hour per unit of finished product is 4 hour.
Budgeted direct labour cost for the first quarter of the current year is Rs.10,89,000.
Actual data for the quarter one, ended on March 31 of current year is as under:

Actual production quantity	40,000 units
Direct material cost (Purchase cost based on materials actually issued to production)	
Material X: 1,65,000 kg. @ Rs. 10.20 / kg.	
Material Y: 2,38,000 kg. @ Rs. 15.10/ kg.	
Actual direct labour hours worked :	32,000 hours
Actual direct labour cost:	Rs.13,12,000

Required: Prepare the following budgets:
(i) Monthly production quantity for the quarter one.
(ii) Monthly raw material consumption quantity budget from January to April of current year.
(ii) Materials purchase quantity budget for the quarter one.

Question 5 HOMEWORK SUM Date:
Ali Baba Limited produces and sells a single product Sales budget for current year by a quarters is as under:

Quarters	I	II	III	IV
No. of units to be sold	16,000	22,000	25,000	27,000

The year is expected to open with an inventory of 6,000 units of finished products and close with inventory of 8,000 units. Production is customarily scheduled to provide for 70% of the current quarter's sales demand plus 30% of the following quarter demand. The budgeted selling price per unit is Rs. 40. The standard cost details for one unit of the product are as follows:
Variable Cost Rs. 34.50 per unit
Fixed Overheads @Rs. 2 per hour based on a budgeted production volume of 1,10,000 direct labour hours for the year. Fixed overheads are evenly distributed

through-out the year.
You are required to:
(i) Prepare Quarterly Production Budget for the year.
(ii) In which quarter of the year, company expected to achieve bread-even point

Question 6 HOMEWORK SUM Date:

Bahubali Ltd a single product company estimated its sales for the next year quarter-wise as under:

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

The opening stock of finished goods is 10,000 units and the company expects to maintain the closing stock of finished goods at 16,250 units at the end of the year. The production pattern in each quarter is based on 80% of the sales of the current quarter and 20% of the sales of the next quarter.
The opening stock of raw materials in the beginning of the year is 10,000 kg & the closing stock at the end of the year is required to be maintained at 5,000 kg. Each unit of finished output requires 2 kg. of raw materials.
The company proposes to purchase the entire annual requirement of raw material in the first three quarters in the proportion and at the prices given below:

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

The value of the opening stock of raw materials in the beginning of the year is Rs. 20,000. You are required to present the following for the next year, quarter wise :
(1) Production budget (in units).
(2) Raw material consumption budget (in quantity).
(3) Raw material purchase budget (in quantity and value).

Question 7

Prepare a cash budget for three months ending on 30th June of current year from the information given below:-

(a) Months	Sales (Rs.)	Materials (Rs.)	Wages (Rs.)	Overheads (Rs.)
February	14,000	9,600	3,000	1,700
March	15,000	9,000	3,000	1,900
April	16,000	9,200	3,200	2,000
May	17,000	10,000	3,600	2,200
June	18,000	10,400	4,000	2,300

(b) Credit items are:

Sales / Debtors : 10% sales are on cash, 50% of the credit sales are collected next month and the balance in the following month

Creditors : Materials 2 months
Wages 1/4 month
Overheads 1/2 month

(c) Cash and Bank balance on 1st April of current year is expected to be Rs.6,000

(d) Other relevant information is :

1. Plant and machinery will be installed in February of current year at a cost of Rs.96,000. The monthly instalment of Rs.2,000 is payable from April onwards.
2. Dividend @5% on preference share capital of Rs.2,00,000 will be paid on 1st June.
3. Advance to be received for sales of vehicles Rs.9,000 in June.
4. Dividends from investments amounting to Rs. 1,000 are expected to be received in June.
5. Income Tax (advance) to be paid in June is Rs.2.000.

Question 8 HOMEWORK SUM Date:

From the information given below, prepare a Cash Budget of Bablu Ltd. for the quarter January - March, 2017:

		Dec., 16	Jan.,17	Feb.,17	March.,17	April.,17
a.	Sales Budget Units	60	60	65	75	80
b.	Selling price per unit Rs.	1,000	1,000	1,000	1,000	1,000

c.	Off-season discount	20%	20%	10%	-	-
d.	End of Month Inventory Units	10	120	15	25	25

e) Half the sales proceeds are collected in the month of sale and the other half in the month following.
f) Materials amounting to Rs. 300 per unit manufactured are purchased one month in advance of manufacture and paid for in cash earning 5% cash discount on half of the material purchased.
g) Direct Labour Budget was Rs.50 per unit and variable overheads Rs. 100 per unit
h) Indirect Labour Budget was Rs.6,000 per month.
i) Depreciation was provided uniformly at Rs.3,000 per month.
j) The fixed overheads budget was Rs.6,000 per month during off-season and Rs.7,000 during the season. Out of this, the quarterly premium for fire insurance amounting to Rs.600 was payable in the first month of each quarter.
k) Dividends for the year 2016, amounting to Rs.2,000 were expected to be declared in March, 2017 and payments were to be spread between March and April.
i) A machine was sold for Rs. 10,000 in December, 2016 on 3 months Credit. The cash balance as on January 1, 2017 is Rs.1,000.

Question 9

Chammak Challo Ltd. has furnished the following information for the month ending 30th June of current year

	Master Budget	Actual	Variance
Units produced and sold	80,000	72000	
Sales (Rs.)	320000	280000	40000 (A)
Direct material (Rs.)	80000	73600	6400 (F)
Direct wages (Rs.)	120000	104800	15200 (F)
Variable overheads (Rs.)	40000	37600	2400 (F)
Fixed overhead (Rs.)	40000	39200	800 (F)
Total Cost	280000	255200	

The Standard costs of the products are as follows:

	Per unit (Rs.)
Direct materials (1 kg, at the rate of Rs. 1 per kg.)	1.00

Direct wages (1 hour at the rate of Rs. 1.50)	1.50
Variable overheads (1 hour at the rate of Rs. 0.50)	0.50

Actual results for the month showed that 78,400 kg. of material were used and 70,400 labour hours were recorded.

Required:

(i) Prepare Flexible budget for the month and compare with actual result.

Question 10

Rotadi Ltd. is currently operating at 75% of its capacity. In the past two years, the levels of operations were 55% and 65% respectively. Presently, the production is 75,000 units. The company is planning for 85% capacity level during 20X3-20X4. The cost details are as follows:

Particulars	55% (Rs.)	65% (Rs.)	75% (Rs.)
Direct Material	11,00,000	13,00,000	15,00,000
Direct Labour	5,50,000	6,50,000	7,50,000
Factory Overheads	3,10,000	3,30,000	3,50,000
Selling and Distribution Overheads	3,20,000	3,60,000	4,00,000
Administrative Overheads	1,60,000	1,60,000	1,60,000
Total	24,40,000	28,00,000	31,60,000

Profit is estimated @ 20% on sales.

The following increases in costs are expected during the year

Particulars	In percentage
Direct Materials	8
Direct Labour	5
Variable Factory Overheads	5
Variable Selling Overheads	8
Fixed Factory Overheads	10
Fixed Selling Overheads	15
Administrative Overheads	10

Prepare flexible budget for the period 20X3-20X4 at 85% level of capacity Also ascertain profit and contribution.

Question 11 HOMEWORK SUM Date:

Dadda Ltd. has prepared budget for the coming year for its two products Bade and Chote.

	Product Bade (Rs.)	Product Chote (Rs.)
Production & Sales unit	6,000 units	9,000 units
Raw material cost per unit	60.00	42.00
Direct labour cost per unit	30.00	18.00
Variable overhead per unit	12.00	6.00
Fixed overhead per unit	8.00	4.00
Selling price per unit	120.00	78.00

After some marketing efforts, the sales quantity of the Product Bade& Chote can be increased by 1,500 units and 500 units respectively but for this purpose the variable overhead and fixed overhead will be increased by 10% and 5% respectively for the both products.

You are required to prepare flexible budget for both the products:

a) Before marketing efforts

b) After marketing efforts.

Question 12 HOMEWORK SUM Date:

A department of Company Shakira attains sale of Rs. 6,00,000 at 80 per cent of its normal capacity and its expenses are given below:

	(Rs.)
Administration costs:	
Office salaries	90,000
General expenses	2 per cent of sales
Depreciation	7,500
Rates & Taxes	8,750
Selling costs:	
Salaries	8 per cent of sales
Travelling expenses	2 per cent of sales
Sales office expenses	1 per cent of sales
General expenses	1 per cent of sales
Wages	15,000
Rent	1 per cent of sales
Other expenses	4 per cent of sales

Draw up flexible administration, selling and distribution costs budget, operating

at 90 per cent, 100 per cent and 110 per cent of normal capacity.

Question 13 HOMEWORK SUM Date:

Vasooli Ltd, specialized in manufacturing of piston rings for motor vehicle. It has prepared budget for 8,000 units per annum at budgeted cost of Rs. 21,64,400 as detailed below:

	(Rs.)	(Rs.)
Fixed cost (Manufacturing)		2,28,000
Variable costs:		
Power	18,000	
Repairs, etc.	16,000	
Other variable cost	6,400	
Direct material	6,16,000	
Direct labour	12,80,000	19,36,400
		21,64,400

Considering the possible impact on sales turnover by market trends, the company decides to prepare flexible budget with a production target of 4,000 and 6,000 units. On behalf of the company you are required to prepare a flexible budget for production levels at 50% and 75%

Assuming the selling price per unit is maintained at Rs. 400 as at present, indicate the effect on net profit. Administration, selling and distribution overheads continue at Rs. 72,000

Question 14 HOMEWORK SUM Date:

The cost accountant of manufacturing company provides you the following details for current year:

	(Rs.)		(Rs.)
Direct materials	1,75,000	Other variable costs	80,000
Direct Wages	1,00,000	Other fixed costs	80,000
Fixed factory overheads	1,00,000	Profit	1,15,000
Variable factory	1,00,000	Sales	7,50,000

During the year, the company manufactured two products A and B and the output

	A	B
Output (units)	2,00,000	1,00,000
Selling price per unit	Rs.2.00	Rs.3.50

Direct materials per unit	Rs.0.50	Rs.0.75
Direct wages per unit	Rs.0.25	Rs.0.50

Variable factory overhead is absorbed as a percentage of direct wages. Other variable costs have been computed as: Product A Rs. 0.25 per unit; and B Rs. 0.30 per unit.

During next year, it is expected that the demand for product A will fall by 25 % and for B by 50%. It is decided to manufacture a further product C, the cost for which are estimated as follows:

	Product C
Output (units)	2,00,000
Selling price per unit	Rs.1.75
Direct materials per unit	Rs.0.40
Direct wages per unit	Rs.0.25

It is anticipated that the other variable costs per unit will be the same as for product A.

Prepare a budget to present to the management, showing the current position and the position for next year. Comment on the comparative results.

Question 15

Mastani & Co is engaged in the manufacture of specialized sub-assemblies required for certain electronic equipments. The company estimates that in the forthcoming month, December, 20X2, the sales will take a pattern in the ratio of 3:4:2 respectively of sub-assemblies, ACB, MCB and DP.

The following is the schedule of components required for manufacture:

Component requirements

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

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

Labour hours per sub-assembly

	Grade A	Grade B	Variable overhead per sub-assembly (Rs.)

ACB	8	16	36
MCB	6	12	24
DP	4	8	24
Direct wage rate per hour (Rs.)	5	4	-

The labours work 8 hours a day for 25 days a month. The opening stocks of sub-assemblies and components for December, 20X2 are as under:

Sub-assemblies		Components	
ACB	800	Base Board	1,600
MCB	1,200	IC08	1,200
DP	2,800	C12	6,000
		IC26	4,000

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

The company is eager for a reduction of closing inventories for December, 20X2 of sub-assemblies and components by 10% of quantity as compared to the opening stock. Prepare the following budgets for December 2012

(i) Sales budget in quantity and value.

(ii) Production budget in quantity

(iii) Component usage budget in quantity.

(iv) Component purchase budget in quantity and value.

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

Question 16

Hasmukh Limited is presently operating at 50% capacity and producing: 30000 units. The entire output is sold at a price of Rs. 200 per unit. The cost structure at the 50% level of activity is as under:

Particulars	Amount (Rs.)
Direct Material	75 per unit
Direct Wages	25 per unit
Variable Overheads	25 per unit
Direct Expenses	15 per unit
Factory Expenses (25% fixed)	20 per unit

Selling and Distribution Exp. (80% variable)	10 per unit
Office and Administrative Exp. (100% fixed)	5 per unit

The company anticipates that the variable costs will go up by 10% and fixed costs will go up by 15%.

You are required to prepare an Expense budget, on the basis of marginal cost for the company at 50% and 60% level of activity and find out the profits at respective levels.

Question 17

Lootera Ltd. manufactures two products using two types of materials and one grade of labour. Shown below is an extract from the company's working papers for the next month's budget:

	Product A	Product B
Budgeted sales (in units)	2,400	3,600
Budgeted material consumption per unit (in kg):		
Material-X	5	3
Material-Y	4	6
Standard labour hours allowed per unit of product	3	5

Material-X and Material-Y cost Rs. 4 and Rs. 6 per kg and labours are paid Rs. 25 per hour. Overtime premium is 50% and is payable, if a worker works for more than 40 hours a week. There are 180 direct workers.

The target productivity ratio (or efficiency ratio) for the productive hours worked by the direct workers in actually manufacturing the products is 80%. In addition the non-productive down-time is budgeted at 20% of the productive hours worked.

There are four 5-days weeks in the budgeted period and it is anticipated that sales and production will occur evenly throughout the whole period.

It is anticipated that stock at the beginning of the period will be:

Product-A	400 units
Product-B	200 units
Material-X	1,000 kg
Material-Y	500 kg

The anticipated closing stocks for budget period are as below:

Product-A	4 days sales
Product-B	5 days sales

Material-X	10 days consumption
Material-Y	6 days consumption

Required:
Calculate the Material Purchase Budget and the wages Budget for the workers, showing the quantities and values, for the next month.

Question 18

Gabbar glass Manufacturing Company requires you to present the Master budget for the next year from the following information:

Sales :	
Toughened Glass	Rs.6,00,000
Bent Glass	Rs.2,00,000
Direct material cost	60% of sales
Direct wages	20 workers @ Rs. 150 per month
Factory overheads :	
Indirect labour -	
Works manager	Rs.500 per month
Foreman	Rs.400 per month
Stores and spares	2.5% on sales
Depreciation on machinery	Rs. 12,600
Light and power	Rs.3.000
Repairs and maintenance	Rs.8,000
Others sundries	10% on direct wages
Administration, selling and distribution expenses	Rs.36,000 per year

Question 19 HOMEWORK SUM Date:

Hutiya Manufacturers normally produce 8,000 units of their product in a month, in their Machine Shop. For the month of January, they had planned for a production of 10,000 units. Owing to a sudden cancellation of a contract in the middle of January, they could only produce 6,000 units in January
Indirect manufacturing costs are carefully planned and monitored in the Machine Shop and the Foreman of the shop is paid a 10% of the savings as bonus when in any month the indirect manufacturing cost incurred is less than

the budgeted provision. The Foreman has put in a claim that he should be paid a bonus of Rs. 88.50 for the month of January. The Works Manager wonders how anyone can claim a bonus when the Company has lost a sizeable contract. The relevant figures are as under:

Indirect manufacturing	Expenses for a normal month	Planned for January	Actual in costs January
	(Rs)	(Rs)	(Rs)
Salary of foreman	1,000	1,000	1,000
Indirect labour	720	900	600
Indirect material	800	1,000	700
Repairs & Maintenance	600	650	600
Power	800	875	740
Tools consumed	320	400	300
Rates and taxes	150	150	150
Depreciation	800	800	800
Insurance	100	100	100
Total	5,290	5,875	4,990

Do you agree with the Works Manager? Is the Foreman entitled to any bonus for the performance in January? Substantiate your answer with facts and figures.

Question 20 HOMEWORK SUM Date:

Gaitonde Limited has prepared its expense budget for 20,000 units in its factory for the year 2017 as detailed below:

Particulars	(Rs per unit)
Direct Materials	50
Direct Labour	20
Variable Overhead	15
Direct expenses	6
Selling Expenses (20% fixed)	15
Factory Expenses (100% fixed)	7
Administration expenses (100% fixed)	4
Distribution expenses (85% variable)	12
Total	129

Prepare an expense budget for the production of 15,000 units and 18,000 units.

Question 21 HOMEWORK SUM Date:

Tequila Motor Vehicle manufacturer has prepared sales budget for the next few months, and the following draft figures are available:

Month	No. of vehicles
October	4,000
November	3,500
December	4,500
January	6,000
February	6,500

To manufacture a vehicle a standard cost of Rs. 2,85,700 is incurred and sold through dealers at an uniform selling price of Rs. 3,95,600 to customers. Dealers are paid 12.5% commission on selling price on sale of a vehicle.

Apart from other materials four units of Part-X are required to manufacture a vehicle. It is a policy of the company to hold stocks of Part-X at the end of the each month to cover 40% of next month's production. 4,800 units of Part-X are in stock! as on 1st October

There are 950 nos. of completed vehicles are in stock as on 1st October and it is policy to have stocks at the end of each month to cover 20% of the next month's sales

You are required to

a) Prepare Production budget (in nos.) for the month of October, November, December and January

(b) Prepare e Purchase budget for Part-X (in units) for the months of October, November and December

(c) Calculate the budgeted gross profit for the quarter October to December.

Question 22

A company is at present working at 90% of its capacity and producing 13,500 Units per annum. It operates a flexible budgetary control system. The following. Figures are obtained from its budget:

	(90%)	(100%)
	(Rs.)	(Rs.)
Sales	15,00,000	16,00,000
Fixed expenses	3,00,500	3,00,600

Semi-fixed expenses	97,500	1,00,500
Variable expenses	1,45,000	1,49,500
Units made	13,500	15,000

Labour and material costs per unit are constant under present conditions. Profit margin is 10%

(i) You are required to determine the differential cost of producing 1,500 Units by increasing capacity to 100%.

(ii) What would you recommend for an export price for these 1,500 units if overseas prices are much lower that indigenous prices?

Solution 22

Sales at 90% capacity utilization	15,00,000
Less: Profits (10%)	1,50,000
Cost of goods sold	13,50,000
Less: Expenses (fixed, semi-fixed and variable)	5,43,000
Cost of materials and labour	8,07,000

Therefore, cost of materials and labour at 100% capacity utilization
= 8,07,000 x 100/90 = Rs.8,96,667

Differential cost analysis will be as follows :

	Capacity utilization	
	90 %	100%
Production (units)	13,500	15,000
Materials and Labour	8,07,000	8,96,667
Variable expenses	1,45,000	1,49,500
Semi-variable expenses	97,500	1,00,500
Fixed expenses	3,00,500	3,00,600
Total cost	13,50,000	14,47,267

(a)Differential cost = 14,47,267 – 13,50,000 = Rs.97,267

(b)Minimum price for export = 97,267/1,500 = Rs.64.84 per unit

At this price there is no addition to revenue. Any price above Rs.64.84 per unit

may be accepted. A price below this may be considered, if other benefits (i.e,other Than mere sales and revenue) are likely to accrue. It is assumed that no capital investment is necessary and no export charges have to be incurred and that the export price will have no effect on the home market where the product will continue to be sold at the old price, it is also assumed that necessary precautions have been taken to ensure that the product is not "dumped" back.

Question 23

As a Cost and Management Accountant of MJK Ltd., prepare a Sales Overhead Budget for the months of January, February and March from the estimates given below:

Expenses per month:	Rs.
Advertisement	2,500
Salaries of the Sales Department	5,000
Expenses of the Sales Department	1,500
Counter Salesmen's Salaries and Dearness Allowance	6,000
Commission Salesmen's Salaries and Dearness Allowance	6,000

Commission to counter salesmen @ 1% on their sales. Travelling salesmen's Commission @ 10% on their sales and expenses @ 5% on their sales.

The sales during the period were estimated as under"

Month	Counter Sales (Rs.)	Travelling Salesmen Sales (Rs.)
January	80,000	10,000
February	1,20,000	15,000
March	1,40,000	20,000

Solution 23

Sales Overhead Budget (for the period ending....)

Estimated Sales (Rs.)	90,000	1,35,000	1,60,000
Fixed Overhead :			
Advertising	2500	2500	2500
Salaries of sales department	5000	5000	5000
Expenses of Sales department	1500	1500	1500
Counter salesman Salaries and			
Dearness Allowances	6000	6000	6000
	15000	15000	15000
Variable Overhead:			
Counter Salesman Commission @			
1% on Sales	800	1200	1400
Traveling Salesman Commission @			
10%	1000	1500	2000
Expenses	500	750	1000
	2300	3450	4400
Total Sales Overhead	17,300	18,450	4,400

Question 24

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

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

Prepare a sales budget and a production budget for June 2022.

Solution 24

Barker Company
(Sales Budget for June 2022)

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

Barker Company
(Production Budget for June 2022)

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

Question 25

Long Beach Tools Corporation has the following direct labour requirements for the production of a machine tool set:

Direct Labour	Required Time (Hours)	Hourly Rate (₹)
Machining	6	10
Assembly	10	8

Forecasted sales of for June, July, August and September are 6000, 5000, 8000, 7000 units respectively. On June 1, beginning Inventory of the tool set was 1500. The Closing inventory (desired) each month is one-half of the forecasted sales for the following month.

Prepare a production budget for the months of June, July and August.

Develop a direct labour budget for the months of June, July and August and for each type of direct labour.

Solution 25

Long Beach Tool Corporation
Production Budget

Particulars	June (units)	July (units)	August (units)
Forecasted Sales	6000	5000	8000
Add : Closing Inventory (Desired)	2500	4000	3500
Total Requirement	8500	9000	11500
Less : Opening Inventory	1500	2500	4000
Number of Units to be produced	7000	6500	7500

Long Beach Tool Corporation
Direct Labour Budget

Particulars	June (units)	July (units)	August (units)
Machining:			
a. Budgeted Production	7000 units	6500 units	7500 units
b. Direct Labour Hours per unit	6 hours	6 hours	6 hours
c. Total direct Labour hours required (a × b = c)	42000 hrs.	39000 hrs.	45000 hrs.
d. Direct Labour Cost [c × ₹ 10)	₹ 4,20,000	₹ 3,90,000	₹ 4,50,000

Particulars	June (units)	July (units)	August (units)
Assembly :			
Budgeted Production	7000 units	6500 units	7500 units
Direct Labour Hours per unit	10 hours	10 hours	10 hours
Total direct Labour hours required (a × b = c)	70000 hrs.	65000 hrs.	75000 hrs.
Direct Labour Cost [c (as calculated) × ₹ 8)	₹ 5,60,000	₹ 5,20,000	₹ 6,00,000

Question 26

ABC Ltd a newly started company wishes to prepare Cash Budget from January. Prepare a cash budget for the first six months from the following estimated revenue and expenses.

Month	Total Sales (₹)	Materials (₹)	Wages (₹)	Overheads	
				Production (₹)	Selling & Distribution (₹)
January	20,000	20,000	4,000	3,200	800
February	22,000	14,000	4,400	3,300	900
March	28,000	14,000	4,600	3,400	900
April	36,000	22,000	4,600	3,500	1,000
May	30,000	20,000	4,000	3,200	900

June	40,000	25,000	5,000	3,600	1,200

Cash balance on 1st January was ₹ 10,000. A new machinery is to be installed at ₹ 20,000 on credit, to be repaid by two equal installments in March and April, sales commission @ 5% on total sales is to be paid within a month following actual sales.

₹ 10,000 being the amount of 2nd call may be received in March. Share premium amounting to ₹ 2,000 is also obtained with the 2nd call may be received in March. Period of credit allowed by suppliers – 2 months; period of credit allowed to customers – 1 month, delay in payment of overheads 1 month. Delay in payment of wages ½ month. Assume cash sales to be 50% of total sales.

Solution 26

Cash Budget for the period January to June (for first 6 month) (in ₹)

Particulars	January	February	March	April	May	June
Opening Balance (A)	10,000	18,000	29,800	27,000	24,700	33,100
Add: Receipts (B)						
Cash Sales [WN 1]	10,000	11,000	14,000	18,000	15,000	20,000
Collection from Debtors [WN 1]	-	10,000	11,000	14,000	18,000	15,000
Share Call Money	-	-	10,000	-	-	-
Share Premium	-	-	2,000	-	-	-
Total (A + B)	20,000	39,000	66,800	59,000	57,700	68,100
Payments (C)						
Creditors for Materials	-	-	20,000	14,000	14,000	22,000
Wages [WN 2]	2,000	4,200	4,500	4,600	4,300	4,500
Production O/H	-	3,200	3,300	3,400	3,500	3,200
Selling & Distribution	-	800	900	900	1,000	900
Sales Commission	-	1,000	1,100	1,400	1,800	1,500
Installment of Machinery	-	-	10,000	10,000	-	-
Total (C)	2,000	9,200	39,800	34,300	24,600	21,100
Closing Balance (A + B – C)	18,000	29,800	27,000	24,700	33,100	36,000

Working Notes :

1. Calculation of Cash Sales and Collection from Debtors

Month	Total Sales (₹)	Cash Sales (50%) (₹)	Credit Sales (50%) (₹)	Collection Month
January	20,000	10,000	10,000	February
February	22,000	11,000	11,000	March
March	28,000	14,000	14,000	April
April	36,000	18,000	18,000	May
May	30,000	15,000	15,000	June
June	40,000	20,000	20,000	July

2. Calculation of Payment of Wages (in ₹)

Month	Wages	Payment Month					
		January	February	March	April	May	June
January	4,000	2,000	2,000	-	-	-	-
February	4,400	-	2,200	2,200	-	-	-
March	4,600	-	-	2,300	2,300	-	-
April	4,600	-	-	-	2,300	2,300	-
May	4,000	-	-	-	-	2,000	2,000
June	5,000	-	-	-	-	-	2,500
		2,000	4,200	4,500	4,600	4,300	4,500

Question 27

A factory engaged in manufacturing plastic toys is working at 40% capacity and produces 10,000 toys per month. The present cost break up for one toy is as under:

Material : ₹ 10
Labour : ₹ 3
Overheads : ₹ 5 [60% fixed]

The selling price is ₹ 20 per toy.

If it is decided to work the factory at 50% capacity, the selling price falls by 3%, at 90% capacity, the selling price falls by 5% accompanied by a similar fall in the price of material. You are required to prepare a statement showing the profits/losses at 40%, 50% and 90% capacity utilizations.

Solution 27

Flexible Budget

At 40%, 50% and 90% Capacity Utilization

Particulars	40% Capacity Utilization	50% Capacity Utilization	90% Capacity Utilization
Production - Units	10,000	12,500	22,500
Selling Price Per Unit	₹ 20	₹ 19.40	₹ 19
Sales Value [units × selling price]	₹2,00,000	₹ 2,42,500	₹ 4,27,500
Variable Costs :			
Material ₹ 10 per unit	₹ 1,00,000	₹ 1,21,250*	₹ 2,13,750**
Labour ₹ 3 per unit	₹ 30,000	₹ 37,500	₹ 67,500
Overheads ₹ 2 per unit (₹ 5 × 40%)	₹ 20,000	₹ 25,000	₹ 45,000
Total Variable Costs	₹ 1,50,000	₹ 1,83,750	₹ 3,26,250
Fixed Costs (₹ 5 × 60% × 10,000)	₹ 30,000	₹ 30,000	₹ 30,000
Total Costs [Variable Cost + Fixed Cost]	₹ 1,80,000	₹ 2,13,750	₹ 3,56,250
Profit/Loss [Sales – Total Costs]	₹ 20,000	₹ 28,750	₹ 71,250

* 12,500 units × ₹ 9.70 per unit = ₹ 1,21,500

** 22,500 units × ₹ 9.50 per unit = ₹ 2,13,750

Question 28

A company manufactures Product A and Product B during the year 31st December, 2021, it is expected to sell 15,000 kg of Product A and 75,000 kg of Product B at ₹ 30 and ₹ 16 per kg respectively. The direct materials P, Q and R are mixed in the proportion of 3 : 5 : 2 in the manufacture of Product A, and Materials Q and R are mixed in the proportion of 1 : 2 in the manufacture of Product B. The actual and budgeted inventories for the year are given below:

	Opening Stock	Estimated Closing Stock	Anticipated cost per kg
	(kg)	(kg)	(₹)
Material P	4,000	3,000	12
Material Q	3,000	4,000	10
Material R	30,000	9,000	8
Product A	3,000	1,500	-
Product B	4,000	4,500	-

Prepare the Production Budget and Materials Budget showing the expenditure on purchase of materials for the year ending 31st December, 2021.

Solution 28

Production Budget for Product A and Product B

Particulars	Product A units	Product B units
Sales	15,000	75,000
Add: Closing Stock	1,500	4,500
	16,500	79,500
Less: Opening Stock	3,000	4,000
Production	13,500	75,500

Material Purchase Budget for the year ending December 31st, 2021

Particulars	P	Q	R	Total
Materials required for Product A in the ratio of 3 : 5 : 2	4,050	6,750	2,700	13,500
Materials required for	-	25,167	50,333	75,500

Product B in the ratio of 1 : 2				
Total requirement	4,050	31,917	53,033	89,000
Add: Closing Stock	3,000	4,000	9,000	16,000
	7,050	35,917	62,033	1,05,000
Less: Opening Stock	4,000	3,000	30,000	37,000
Purchases (in units)	3,050	32,917	32,033	68,000
Cost per kg	12	10	8	
Total Purchase Cost (₹)	36,600	3,29,170	2,56,264	6,22,034

Question 29

The following details apply to an annual budget for a manufacturing company:

Quarter	1st	2nd	3rd	4th
Working Days	65	60	55	60
Production (units per working day)	100	110	120	105
Raw material purchases (% by weight of annual total)	30%	50%	20%	-
Budgeted purchase price / kg (₹)	1	1.05	1.125	-

Quantity of raw material per unit of production 2 kg. Budgeted closing stock of raw material 2,000 kg. Budgeted opening stock of raw material 4,000 kg (Cost ₹ 4,000).

Issues are pried on FIFO Basis. Calculate the following budgeted figures:

(a) Quarterly and annual purchase of raw material by weight and value.

(b) Closing quarterly stocks by weight and value.

Solution 29

(a) Quarterly and annual purchase of raw material by weight and value

Quarter	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Production (units)	65 × 100 = 6,500	60 × 110 = 6,600	55 × 120 = 6,600	60 × 105 = 6,300	26,000
Material Required (kg) (Production × 2 kg p.u) Add: Closing Stock (kg)	13,000	13,200	13,200	12,600	52,000 2,000
Less: Opening Stock (kg)					54,000 4,000
Annual Purchase by weight (kg)					50,000
Quarterly Purchase by weight (kg)	30% × 50,000 = 15,000	50% × 50,000 = 25,000	20% × 50,000 = 10,000	-	
Budgeted Purchase Price per kg (₹)	1	1.05	1.125		
Quarterly and Annual Purchase by Value (₹)	15,000 × 1 = 15,000	25,000 × 1.05 = 26,250	10,000 × 1.125 = 11,250		52,500

(b) Closing quarterly stock by weight and value

Quarter	Receipt			Issue			Balance (Closing Stock)		
	Quantity (kg)	Rate	Amount (₹)	Quantity (kg)	Rate	Amount (₹)	Quantity (kg)	Rate	Amount (₹)
Opening							4,000	1	4,000
1	15,000	1	15,000	13,000	1	13,000	6,000	1	6,000
2	25,000	1.05	26,250	13,200 (6,000 7,200)	(1 1.05)	13,560 (6,000 7,560)	17,800	1.05	18,690
3	10,000	1.125	11,250	13,200	1.05	13,860	14,600 (4,600 10,000)	(1.05 1.125)	16,080 (4,830 11,250)
4	-	-	-	12,600 (4,600 8,000)	(1.05 1.125)	13,830 (4,830 9,000)	2,000	1.125	2,250

Question 30

From the following information relating to 2021 and conditions expected to prevail in 2022, prepare a budget for 2022.

2021 Actual:	Amount (₹)
Sales (40,000 units)	1,00,000
Raw materials	53,000
Wages	11,000
Variable Overhead	16,000
Fixed Overhead	10,000
2022 Prospects:	
Sales (60,000 units)	1,50,000
Raw materials	5% increase in price
Wages	10% increase in wage rate
	5% increase in productivity
Additional Plant:	
One Lathe	25,000
One Drill	12,000
10% Depreciation to be considered	

Solution 30

Budget showing Costs and Profits for the year 2022

	Amount (₹)
i. Sales	
ii. Costs	
Raw Materials [53,000 × $\frac{60,000}{40,000}$ × $\frac{105}{100}$]	83,475
Wages [11,000 × $\frac{60,000}{40,000}$ × $\frac{110}{100}$ × $\frac{105}{100}$]	19,058
Variable Overheads [16,000 × $\frac{60,000}{40,000}$ × $\frac{105}{100}$]	24,000
Fixed Overheads [10,000 + (25,000 + 12,000) × $\frac{10}{100}$]	13,700
Total Cost	1,40,233
iii. Profit (i. – ii.)	9,767