CHAPTER WISE BOARD QUESTION PAPER
MARGINAL COSTING

MARGINAL COSTING - CVP

Q.1. A Company produces and sells a single article at ₹10 each. The marginal cost of production is ₹6 each and fixed cost is ₹400 per annum. **[15]**

Calculate:

1. P/V ratio
2. Break-even sales [in ₹ and Nos.]
3. Sales to earn a profit of ₹500
4. New Break-even point if sales price is reduced by 10%
5. Profit at sales of ₹3,000
6. Margin of safety at sales ₹1,500
7. Selling price per unit if the Break-even point is reduced to 80 units. **(April 2006)**

Q.2. You are given the following information for the next year. **[15]**

Sales [10,000 units]	₹1,20,000
Variable costs	₹ 48,000
Fixed Costs	₹ 60,000

1. Calculate P/V ratio, Break-even point and the Margin of safety.
2. Evaluate the effect of following on P/V ratio, Break-even point and Margin of safety.
   (a) 10% decrease in fixed cost.
   (b) 5% increase in selling price.
   (c) 10% increase in selling price and 10% decrease in physical sales volume.
   (d) 5% decrease in selling price and 10% increase in physical sales volume. **(April 2006)**

Q.3. The following information is obtained from a company for January: **[15]**

Sales	₹ 20,000
Variable Costs	₹ 10,000
Fixed Costs	₹ 6,000

1. Find P/V Ratio, Break-even point & Margin of safety at this level
2. Also find effect of the following individually on BEP sales
   a) 20% decrease in fixed cost
   b) 10% increase in fixed cost
   c) 10% decrease in variable cost
   d) 10% increase in selling price
   e) 10% increase in variable cost & selling price both **(April, 2016)**

Q.4. S. ltd. furnished you the following information relating to the half year ending 30th September, 01 **[15]**

Particulars	₹
Fixed Expenses	50,000
Sales value	2,00,000
Profit	50,000

During the second half of the year the company has projected a loss of ₹ 10,000

Calculate:

1. The P/V Ratio, break-even point & margin of safety for six months ending 30th September, 01
2. Expected sales volume for second half of the year assuming that selling price & fixed expenses remain unchanged in theSecond half year also.
3. The break-even point & margin of safety for the whole year 2001-2002 **(Nov, 2006)**

Commented [u1]: Marginal costing

Commented [u2]: Marginal costing

Commented [u3]: Marginal costing

Q.5. From the following data, calculate: **[5]**
1. Breakeven point expressed in amount of sales in Rupees **(Nov, 2006)**
2. Numbered of unit that must be sold to earn a profit of ₹ 1,68,000 per year

Selling Price	₹ 20 Per Unit
Variable Manufacturing cost	₹ 11 Per Unit
Variable selling Cost	₹ 3 Per Unit
Fixed Factory Overheads	₹ 5,40,000 Per Year
Fixed Selling Cost	₹ 2,52,000 Per Year

Q.6. If margin of safety is ₹ 2,40,000 (40% of sales) and P/V ratio is 30% calculate **[8]**
1. break-even sales. **(May 2007)**
2. Amount of profit on sales ₹9,00,000

Q.7.

(a) **[3]**

Particulars	₹
Ascertain profit when sales	2,00,000
Fixed costs	40,000
BEP	1,60,000

(b) **[4]**

Particulars	₹
Ascertain sales when Fixed Cost	20,000
Profit	10,000
BEP	40,000

Q.8. The following information is obtained from Essar Co. for January. **[15]**

Particulars	₹
Sales	20,000
Variable costs	10,000
Fixed costs	6,000

(a) Find P/V ratio, B. E. P and Margin of safety at this level and the effect of:
(b)
1. 20%decrease in fixed costs.
2. 10% increase in fixed costs.
3. 10% decrease in variable costs.
4. 10% increase in selling price**.** **(May 2007)**

Q.9. Vidya pen manufacturing company produces pen, an analysis of their accounting reveals:- **(May 2009)**

Fixed cost ₹1,50,000 per year
Variable cost ₹50 per pen
Total available
Capacity 60,000 pens per year
Selling price ₹60 per pen

1. Find the break-even points and Margin of safety
2. Find the number of pens to be sold to get a profit of ₹3,00,000
3. What will be your answer for [i] if selling price is reduced to ₹55 per pen. **[15]**

Q.10. Sadari Road lines Ltd. furnishes you the following income information for the year 2010:

	Upto 30/06/2010	From 01/07/2010 to 31/12/2010
Sales	₹16,20,000	₹20,52,000
Total cost	₹15,76,800	₹19,22,400

Commented [u4]: Marginal costing
Commented [u5]: Marginal costing
Commented [u6]: Marginal costing
Commented [u7]: Marginal costing

Calculate the following; **[15]**

1. P/V Ratio
2. Fixed Cost
3. Profit or loss when sales are ₹12,96,000
4. Amount of sales required to earn profit of ₹ 2,16,000

Assume fixed cost remains constant upto 30/06/2010 and from 01/07/2010 to 31/12/2010. **(April 2011)**

Q.11. A.K. Ltd. a company has a fixed cost of ₹3,00,000/-.On sales of 15000 units which is equal to 40% of margin of safety, it earned contribution of ₹60000/-Calculate the following:- **[15]**

a) Break even point in unit.
b) Total present sales in units.
c) Total units sold at which it suffered loss of ₹62, 492.
d) If the present fixed cost is increased by 15%, what is revised Break Even point in units?
e) If the present fixed cost is increased by 15%, how many units should be sold to earn a profit of ₹1,15,000/-? **(April 2012)**

Q.12. From the following data of M/S. ABC LTD:- **[15]**

Year	Sales	Profit
2011	6,00,000	20,000
2012	8,00,000	60,000

Calculate:-

a) P/V Ratio
b) Break Even Point(Value)
c) Margin of safety for both year (Value)
d) Profit when sale ₹ 7,00,000
e) Sale to earn the profit of ₹ 65,000 **(April 2013)**

Q.13. The sales turnover and profit during two years were as follows:-

Year	Sales [₹]	Profit [₹]
2003	3,00,000	40,000
2004	3,40,000	50,000

You are required to calculate:-

a. The P/V Ratio
b. The Break-even point
c. The sales required to earn a profit of ₹80,000.
d. The profit made when sales are ₹5,00,000.
e. The margin of safely at profit of ₹1,00,000.

Q.14. ABC Furnishes you the following information: - **15**

Particulars	First half of year ₹	Second half of year ₹
Sales	8,10,000	10,26,000
Profit	21,600	64,800

From the above you are required to compute the following assuming that the Fixed Cost remains the same in both the periods.

(a) P/V Ratio
(b) Fixed Cost for the year
(c) Amount of profit or loss when sales are ₹ 16,48,000/-
(d) The amount of sales required to earn a profit of ₹ 2,25,000/-
(e) Margin of safety for the year. **(April, 2014)**

Commented [u8]: marginal
Commented [u9]: Marginal costing
Commented [u10]: Marginal costing
Commented [u11]: Marginal costing

Q.15. A firm sells 25,000 units at a selling price of ₹ 5 per unit. Its Fixed cost is ₹ 40,000 and variable expenses ₹ 50,000. Find out the Break – Even point for the firm. Also, find out BEP when; **[15]**

(a) The selling price is increased by 30%
(b) The fixed cost is increased by 15%
(c) The fixed cost is decreased by 25%
(d) The selling price is decreased by 20% **(April, 2015)**

Q.16. The sales and profits of two years were as follows **[15]**

Commented [H12]: Marginal & CVP

Year ending 31st March	Sales Rs.	Profit Rs.
2016	4,00,000	40,000
2017	6,00,000	80,000

Calculate:

a) Profit-volume (P/V) Ratio
b) Fixed Cost
c) Break-even point
d) If the company wants to have a profit of Rs.15,000 what should be the level of sales?
e) Profit when sales are Rs.7,80,000
f) Revised BEP is fixed Cost increase by 25% **(April 2017)**

Q.17. A, B & Cost are three similar plants under the same management who wants to be managed for better operation. **[15]**
The following particulars are available

Commented [H13]: Marginal CVP

Plant	A	B	C
Capacity operated	100%	60%	40%
	Rs. In lakhs	Rs. In lakhs	Rs. In lakhs
Turnover	300	300	80
Variable accost	180	210	60
Fixed	70	50	62

You are required to ascertain

a) The capacity of the merged plant for break even
b) The profit or loss at 80% capacity of merged plant
g) The turnover from the merged plant to give profit of Rs.30 lakhs. **(April 2017)**

MARGINAL COSTING – SALES MIX

Q.18. The following information in respect of Product 'A' and Product 'B' of JMR Ltd. is available. **[15]**

Particulars	Product 'A'	Product 'B'
Selling Price	₹1,000	₹640
Direct Materials	₹400	₹400
Direct Labour Hours [₹5 per hour]	20 hours	20 hours
Variable Overheads	100% of Direct Wages	100% of Direct Wages

Fixed overheads for the company are ₹30,000.

(1) You are required to calculate the marginal product cost and contribution per unit and
(2) State which of the following alternative sales mixes you would recommend and why?
(a) 100 units of Product 'A' and 50 units of Product 'B'.
(b) 50 units of Product 'A' and 100 units of Product 'B'.
(c) 150 units of Product 'A' only.
(d) 150 units of Product 'B' only. **(April 2006).**

Commented [u14]: marginal costing

Q.19. Sapna engineering limited manufactures and sells four products-A,B,C and D. **[15]**

The sales mix in value comprises $33\frac{1}{3}\%$, $41\frac{2}{3}\%$, $16\frac{2}{3}\%$, $8\frac{1}{3}\%$ of A,B,C& D respectively.

The Total budgeted sales (100% are ₹1,20,000 per month)
Operating costs are as thus:
Product A -- 60% of selling price
Product B -- 68% of selling price
Product C -- 80% of selling price
Product D -- 40% of selling price
Fixed costs are ₹29,400 per month. **(May 2009)**
Calculate the break-even sales for the enterprise as a whole along with P/V Ratio.

Commented [u15]: Marginal costing

Q.20. LML Ltd. Manufacturing two products A & B. Their cost records gives you the following information:-- **[15]**

	Product A	**Product B**
Materials	₹ 16	₹ 12
Wages	48 hours @ 50 paise	32 hours @ 50 paise
Other variable Exp.	150% of wages	150% of wages
Selling Price	₹80	₹60

Total Fixed cost for the company ₹1500
Company can manufacture 500 units in total for product A & B with a condition that atleast 150 units of each product should be produced.

Commented [u16]: marginal

Show from the following alternative Sales mix which will be the best for the company:-

a. 250 units of A and 250 units of B
b. 200 units of A and 300 units of B
c. 150 units of A and 350 units of B **(April 2011)**

Q.21. The Following Information in respect of product A and B of XYZ Co.LTD,is obtained:- **[15]**

Particulars	**products**	
	A	B
Sales price	2,000	1,200
Direct material	1,400	8,00
Direct labour hour(₹4 per hr)	20 Hours	40 hours
Variable Overheads	100% direct wages	80% of direct wages

Fixed Overheads are ₹ 50,000 in total .You are require to-

a) Calculate the present the margin product Costs and contribution per unit.
b) State which of the following Alternative sales mixes you would recommend?
   1. 100 units of product A and 50 units of B
   2. 50 unit of product A and 80 Unit of product B
   3. 200 unit of product A only.
   4. 150 unit of product B only. **(April 2013)**

Commented [u17]: marginal costing

MARGINAL COSTING – MERGE PLANT

Q.22. There are two Plants manufacturing the same products under **[5]**
One corporate management which has decided to merge them.
The following Particulars are available regarding the two plants:

Commented [u18]: Marginal costing

Particulars	**Plant I ₹**	**Plant II ₹**
Capacity operation	100%	60%
Sales	6,00,000	2,40,000
Variable Cost	4,40,000	1,80,000
Fixed Cost	80,000	50,000

Calculate

1. Break-Even Point of the merged plant
2. Capacity of the merged Plant to be operated at the Break Even Point? **(Nov, 2006)**

Q.23. A,B & C are three similar plants under the same management who. want them to be merged for operation **[15]**

Commented [u19]: marginal costing

The following particulars are available:

Plant	A	B	C
Capacity operated	100%	70%	50%
	₹ In lacs	₹ In lacs	₹ In lacs
Turnover	300	280	150
Variable cost	200	210	75
Fixed cost	70	50	62

You are required to ascertain:

1. The capacity of the merged plant for break even.
2. The profit or loss at 75% and 50 % capacity of merged plant. The turnover from the merged plant to give profit or ₹ 28 lacs. **(May 2007)**

Q.24. Vijaya Chemicals Ltd. has two factories with similar plants and machines. The Board of Directors of the Company has expressed the desire to merge them and run them as one unit. Following data are available in respect of these factories:- **[15]**

Particulars	Factory A	Factory B
Capacity in operation	60%	100%
Sales	12,00,000	30,00,000
Variable cost	9,00,000	22,00,000
Fixed cost	2,50,000	4,00,000

You are required to find out:-

a. What should be the capacity of the merged factory to be operated for break-even?

Commented [u20]: marginal costing

b. What is the profitability of working 80% of the integrated capacity?
c. What is the sales required to earn a profit of ₹8,00,000? **(May 2008)**

Q.25. A, B & C are three similar plants under same management who want them to be merged for better operation. The details are as under: **[15]**

Plant	A	B	C
Capacity Operated	100%	70%	60%
Turnover (in lakhs)	300	280	180
Variable cost (in lakhs)	200	210	90
Fixed cost (in lakhs)	70	50	62

You are required to find out:

a) The capacity of merged plant for break even.
b) The profit at 85% capacity of the merged plant. **(April, 2015)**
c) The turnover from the merged plant to give a profit of ₹ 38 lakhs.

MARGINAL COSTING – KEY FACTOR

Q.26. M/s. Alok Industries has given the following details, find the most profitable product Mix & prepare a statement of profitability of the product mix. **[15]**

Particulars	Product "X"	Product "Y"	Product "Z"
Units Budgeted to be Produced & sold	1,800	3,000	1,200
Selling Price Per Unit (₹)	60	55	50
Requirement Per Unit:			
Direct Materials	5 kg.	3 kg.	4 kg.
Direct Labour	4 hrs.	3 hrs	4 hrs
Variable Overheads	₹ 7	₹ 13	₹ 8
Fixed Overheads	₹ 10	₹ 10	₹ 10
Cost of Direct Material Per Kg.	₹ 4	₹ 4	₹ 4

Direct Labour Hour Rate	₹ 2	₹ 2	₹ 2
Maximum Possible Units of Sales	4,000	5,000	1,500

(April, 2016)

All the three products are produced from the same direct material using the same type of machines & labour. Direct Material, Which is the key factor, is limited to 36,000 kg.

Q.27. From the following particulars, find the most profitable product mix and prepare a statement of profitability of that product mix. **(May 2009)**

Commented [u21]: DECISION MAKING

Particulars	Product A	Product B	Product C
Unit budgeted to be produced & sold	1800	3000	1200
Selling price per unit ₹	60	55	50
Requirement per unit:			
Direct materials	5 kg	3 kg	4 kg
Direct Labour	4 hrs.	3 hrs.	2 hrs.
Variable overheads	₹7	₹13	₹8
Fixed overheads	₹10	₹10	₹10
Cost of Direct Materials per kg.	₹4	₹4	₹4
Direct Labour Hour Rate	₹2	₹2	₹2
Maximum possible Units of sales	4,000	5,000	1,500

[15]

All the three products are produced from the same direct material using the same types of machines and labour. Direct labour, which is the key factor, is limited to 18,600 hrs.

Q.28. The following Particulars are extracted from the records of a Company. **[15]**

Particulars	Product A	Product B
Sales (Per unit)	₹100	₹120
Consumption of Material	2kg	3kg
Material Cost	₹10	₹15
Direct Wages Cost	₹15	₹ 10
Direct Expenses	₹5	₹6
Fixed Expenses	₹5	₹10
Variable Expenses	₹15	₹20

Direct wages Per Hour is ₹5.

Comment on the profitability of each Product under following conditions When:

Commented [u22]: marginal costing

1. Total Sales Potential in units is limited.
2. Total Sales potential in Value is Limited
3. Labour hours is in Short Supply
4. Assuming Raw Material as the key factor, availability of which is 10,000 kg & maximum Sales potential of each product being 3,500 units, Find the product-mix which will yield the maximum profit. **(Nov,2006)**

Q.29. From the following particulars, find the most profitable product mix and Prepare a statement of profitability of the product mix:- **(May 2008)**

Commented [u23]: Marginal costing

Particulars	Product A	Product B	Product C
Units budgeted to be produced and sold	1800	3000	1200
Selling price per unit [₹]	60	55	50
Requirement per Unit:			
Direct Material	5 kg.	3 kg.	4 kg.
Direct Labour	4 Hrs.	3 Hrs.	2 Hrs.
Variable Overheads	7	13	8
Fixed Overheads	10	10	10
Cost of Direct Material per kg.	4	4	4

Direct Labour Hour rate	2	2	2
Maximum possible units of sales	4,000	5,000	1,500

[15]

All the three products are produced from the same direct material using the same type of machines and labour. Direct Labour, which is the key factor, is limited to 18,600 hours.

MARGINAL COSTING – SHUT DOWN

Q.30. Bajrang Chemicals Ltd. Mumbai, manufacturing three Chemicals namely HN1,CN1 and KN1. **(April 2012)**

The income statement of the Company as under;-(Amt in ₹)

Details	**HN1**	**CN1**	**KN1**
Sales	40lac	30lac	20lac
Variable cost	28lac	15lac	16lac
Fixed cost	5lac	3lac	4lac

Company Management is seriously considering dropping product KN1 as it is not profitable for the company. What will be the impact on the profitability of the company if it is dropped or suggest suitable alternative on the profitability of the company. **[15]**

Commented [u24]: Marginal costing

STANDARD COSTING

MATERIAL LABOUR VARIANCE

Q.31. Following data is available from the records of a manufacturing company: **[15]**

Standard [per unit]

Materials:	6 Kg @ ₹4 per Kg.
Labour:	4 hours @ ₹4 per hour.
Standard Production for the month:	12,000 units
Actual Production for the month:	12,500 units
Actual material price per Kg.	₹4.50
Material consumed during the month:	7,800 kg.
Direct labour hours worked:	48,000 hours.
Actual wage rate per hour:	₹3.50

Calculate:

1. Material Cost Variance.
2. Material Price Variance.
3. Material Usage Variance.
4. Labour Cost Variance.
5. Labour Rate Variance.
6. Labour Efficiency Variance. **(April 2006)**

Q.32. The following details relating to a product are made available to you **[5]**

Standard Cost Per unit :	
Material	50 kg @ ₹40 per kg
Labour	400 hours @ ₹1 per hour
Actual Cost: (for an output 10 units)	
Material	590 kg @ ₹42 per kg
Labour	3,960 hours @ ₹ 1.10 per hour

Calculate following Variances:

1) Material Cost Variance
2) Material Usage Variance
3) Material price Variance
4) Labour Cost Variance
5) Labour Efficiency Variance
6) Labour Rate Variance **(Nov, 2006)**

Q.33. The standard cost card of a product shows the following:- **[15]**

Material Cost: 2 kg @ ₹2.50 per kg. ₹5.00 per unit
Wages : 2 hrs. @ 50p.per hour ₹1.00 per unit

The actual which have emerged from business operations are as follows:-

Production : 8,000 units
Materials consumed: 16,500 kg. @ 2.40 per kg. ₹39,600
Wages paid : 18,000 hrs. @ 40 p. per hr. ₹7,200

Calculate appropriate material and labour variances. **(May 2008)**

Commented [u25]: Standard costing

Commented [u26]: Standard costing

Commented [u27]: standard costing

Q.34. The standard cost of card of a product shows the following :- **[15]**
Material cost: 2kg @ ₹2.5 per kg ₹5.00 per unit
Wages : 2 hours @ 50paisa per hour. ₹1.00 per unit

Commented [u28]: standard costing

The actual which have emerged from the business operations are as follows:
Production: 16,000 units
Material consumed: 33,000 kg @ ₹2.40 per kg ₹79,200
Wages Paid: 36,000 hours @ 40 per hour ₹14,400

Calculate appropriate material and labour variances. **(May 2009)**

Q.35. The Standard Cost of the product reveals: **[15]**
Standard Materials and Labour requirement of 5 units
Materials: 10 kg of 'A' @ ₹5 per kg
15 kg of 'B' @ ₹7 per kg
Labour: 20 Hrs @ ₹ 10 per hour
Actual Data: Actual Production: 2500 units
Actual Material: 4800 kg of 'A' @ ₹ 4.80 per kg
7650 kg of 'B' @ ₹ 7.20 per kg.
Actual Labour: 9800 Hrs @ ₹ 9.50 per hour

Commented [u29]: standard costing

Calculate:
(a) Material cost Variance
(b) Material Usage Variance
(c) Material Price Variance
(d) Labour Cost Variance
(e) Labour Efficiency Variance
(f) Labour Rae Variance **(April 2011)**

Q.36. The standard cost of the product 'SLR' reveals: **(15)**

Commented [u30]: Standard costing

Standard materials:

Particulars	₹
2 kg of S @ ₹2 per kg.	4.00
1kg of L @ ₹6 per kg.	6.00
Direct labour (3 hour @ ₹6 per hour)	18.00

Actual Data:

Direct Materials	₹
19,000 kg of S @ 2.20 per kg.	41,800
10,000 kg of L @ ₹ 5.60 per kg.	56,000
Direct Labour: (28500 hours @ ₹ 6.40 per hour)	1,82,400

Actual production was 9,000 units. Calculate:
1. Material price variance.
2. Material usage variance.
3. Material cost variance.
4. Labour rate variance.
5. Labour efficiency variance. **(May 2007)**

Q.37. Aditya Ltd. produces an article by blending two basic row materials. It operates standard costing system and the following standards have been set for raw materials and labour for one unit of output:- **[15]**

Commented [u31]: standard costing

Material "A":-5kgs @ ₹10per kg
Material "B":-8kgs @ ₹12 per kg
Labour: 4 Hrs @ ₹5per Hr.
Actual output 2,000 units
Actual position of purchases and stock is as under:-
Purchases: Material "A" 9800 Kgs @ ₹9 per kg.

Material "B" 15,500 Kgs @ ₹13 per kgs

Stock position in kgs	opening stock	closing stock
Material A	600kgs	200kgs
Material B	750kgs	150kgs

Actual wages paid: 8200 Hrs @ ₹4.5 per Hr.
Calculate the following variances (Use FIFO Method for materials):-

a. Materials cost variance
b. Materials usage variance
c. Materials price variance
d. Labour cost variance
e. Labour efficiency variance
f. Labour rate variance **(April 2012)**

Q.38. The details are available from the records of Binny Ltd. engaged in Manufacturing Article 'S' for the month ended 31-12-2013. The Standard Data and Actual Data are as follows:**[15]**

	Standard (100 units)		**Actual (1000 units)**	
Material	**Qty** 120 kg	**Rate per kg ₹** 10.00	**Qty** 1250 kg	**Rate per kg ₹** 09.50
Labour	**Hours** 90	**Rate per hrs ₹** 15.00	**Hrs.** 875	**Rate per hrs ₹** 10.00

Calculate: -
(a) Material Cost Variance
(b) Material Price Variance
(c) Material Usage Variance
(d) Labour Rate Variance
(e) Labour efficiency Variance
(f) Labour Cost Variance **(April, 2014)**

FIXED VARIABLE VARIANCE

Q.39. ABC Ltd. has furnished the following information: **[15]**

Particulars	**Budget**	**Actual**
Output [units]	15,000	16,000
No. of working days	25	28
Fixed overheads [₹]	30,000	30,500
Variable overheads [₹]	45,000	47,000

Calculate:
1. Fixed overhead cost variance.
2. Fixed overhead expenditure variance.
3. Fixed overhead volume variance.
4. Variable overhead cost variance.
5. Variable overhead expenditure variance.
6. Variable overhead efficiency variance**.** **(April 2006)**

Commented [u32]: Standard costing

Q.40. The following information is available from the record of Anandsagar Co-LTD for the April 2013.-

Particulars	**Budget**	**Actual**
Fixed Overhead for April 2013	20,000	24,000
Production in unit(April.2013)	4,000	4,200
Standard time per unit (Hours)	10	-
Actual hours worked in April,2013	-	44,000

Calculate:- **[15]**

a) Fixed Overheads Cost variance.
b) Fixed Overhead Expenditure Variance.
c) Fixed Overhead Volume Variance.
d) Fixed Overheads Capacity Variance.
Fixed Overheads Efficiency Variance **(April 2013)**

Commented [u33]: standard costing

Q.41. From the following data, calculate overhead variances:- **[15]**

Commented [u34]: standard costing

	Budgeted	Actual
Output [Units]	15,000	16,000
No. of working days	25	28
Fixed overheads [₹]	30,000	30,500
Variable overheads[₹]	45,000	47,000

There was an increase of 5% in capacity. **(May 2008)**

Q.42. Navin Ltd. has furnished the following information for the month of May,2008. **[15]**

	Budget	Actual
Output (Units)	800	850
Hours	16,000	17,200
Fixed Overheads	₹80,000	₹94,600
Variable Overheads	₹1,28,000	₹1,46,200

Calculate the following variances:

(1) Fixed Overhead Variance
(2) Fixed Overhead Volume Variance
(3) Fixed Overhead Expenditure Variance
(4) Variable Overhead Variance
(5) Variable Overhead Expenditure Variance **(May 2009)**

Commented [u35]: standard costing

FIXED VARIANCE

Q.43. The following information is available from the record of a factory. **[8]**

Particulars	Budget	Actual
Fixed overheads for June (₹)	10,000	12,000
Production in June (units)	2,000	2,100
Standard time P.U. (hours)	10	-
Actual hours Worked in June	-	22,000

Calculate: Fixed Overheads:

1. Cost Variance
2. Expenditure Variance
3. Volume Variance

Commented [u36]: Standard costing

Q.44. The fixed production overhead of producing one unit of an item were ₹ 35. Fixed production overheads were absorbed on the expected annual output of ₹ 13,200 units. **[9]**

The actual production for one month was 1,000 units. The actual fixed overhead for the month were ₹ 39,000.

Calculate:

1. Fixed overhead cost variance.
2. Fixed overhead volume variance.
3. Fixed overhead expenditure variance. **(May 2007)**

Commented [u37]: Standard costing

VARIABLE VARIANCE

Q.45. The following data is given: **[6]**

Commented [u38]: Standard costing

Particulars	Budgeted	Actual
Production I units	400	360
Man-hours to produce above	8,000	7,000
Variable overheads (Rs)	10,000	9,150

The standard time to produce one unit of the product is 20 hours. Calculate:

1. Variable overhead efficiency variance.
2. Variable overhead expenditure variance.
3. Variable overhead cost variance. **(May 2007)**

Q.46. Calculate Variable Overheads:

A. Cost Variance **[7]**
B. Expenditure Variance
C. Efficiency Variance from the following information **(Nov, 2006)**

Particulars	Budget ₹	Actual ₹
Variance overhead ₹	10,000	8,910
Hours	10,000	9,900
Output	5,000	4,500

MATERIAL VARIANCE

Q.47. Gemini chemicals industries provide the following information from their records. For making 10 kgs of GEMCO standard material requirements is **[15]**

Material	Quantity (kg)	Rate per kg ₹
A	8	6
B	4	4

During April 2015, 1,000 kg of GEMCO were produced. The actual consumption of material is as under:

Material	Quantity (kg)	Rate per kg ₹
A	750	7
B	500	5

Calculate all material variances. **(April, 2015)**

Q.48. From the data given below compute all Material variance **[15] (April 2017)**

Commented [H39]: Standard

Product	Budgeted per unit		Actuals per unit	
	Kg	Rate Rs.	Kg	Rates Rs.
L	5	20	7	22
M	8	30	5	28
N	7	40	8	41

SALES VARIANCE

Q.49. The budgeted and the actual sale for a period in respect of three products are given below: **[15]**

Budgeted Figures

Product	Quantity	Price (₹)	Value (₹)
A	1,000	5	5,000
B	750	10	7,500
C	500	15	7,500
	2,250		**20,000**

Actual

Product	Quantity	Price (₹)	Value (₹)
A	1,200	6	7,500
B	700	9	6,300
C	600	14	8,400
	2,500		**21,900**

Calculate all sales variances. **(April, 2015)**

Q.50. The budgeted & the actual sale for a period in respect of three products are given below:

Budgeted Figures

Product	Quantity	Price ₹	Value ₹
A	1,000	5	5,000
B	750	10	7,500
C	500	15	7,500
	2,250		**20,000**

Actual

Product	Quantity	Price ₹	Value ₹
A	1,200	6	7,200
B	700	9	6,300
C	600	14	8,400
	2,500		**21,900**

[15]

Calculate all sales variances. **(April, 2016)**

Q.51. From the following information about sales calculate: **[15]**

a) Sales Value Variance
b) Sales Price Variance
c) Sales Volume Variance
d) Sales Mixed Variance
e) Sales Quantity Variance **(April, 2017)**

Commented [H40]: Standard

	Budgeted		Actuals	
Product	**Units**	**Rates Rs.**	**Units**	**Rates Rs.**
X	25,000	10	48,000	11
Y	35,000	11	36,000	10
Z	40,000	12	36,000	13

LABOUR VARIANCE

Q.52. Calculate all labour variance from the following data. **[15]**

Particulars	Standard	Standard	Actual hours	Actual

	Hours	**hourly rate**		**Hourly rate**
Skilled Labour	2,880	20	1,760	25
Semi-skilled	1920	10	2640	5
Labour Total	4,800		4,400	
Output	108 Kg		90 Kg	

(April, 2016)

BUDGETARY AND BUDGETARY CONTROL

FLEXIBLE BUDGET

Q.53. The following information at 50% capacity is given. Prepare a flexible budget and forecast the profit or loss at 60%, 70% and 90% capacity. **(April, 2006)[15]**

Particulars	Expenses at 50% capacity [₹]
Fixed Expenses	
Salaries	50,000
Rent and taxes	40,000
Depreciation	60,000
Administration expenses	70,000
Variable Expenses	
Materials	2,00,000
Labour	2,50,000
Others	40,000
Semi-variable Expenses	
Repairs	1,00,000
Indirect labour	1,50,000
Others	90,000

It is estimated that fixed expenses will remain constant at all capacities. Semi-variable expenses will not change between 45% and 60% capacity, will rise by 10% between 60% and 75% capacity, a further increase of 5% when the capacity crossed by 75%.

% Capacity	60%	70%	90%
Estimated Sales	11,00,000	13,00,000	15,00,000

Q.54. B Ltd. has furnished the following estimation pertaining to product "A" at 80% of its normal capacity level for the quarter ending March 31, 2005. **(Nov, 2006)[15]**

Sales	₹6,00,000
Administrative costs:	
Office salaries	₹90,000
General Expenses	2% of sale
Depreciation	₹7,500
Rates & Taxes	₹8,750
Selling Costs:	
Salaries	8%of Sales
Traveling Expenses	2%of sale
Sales Office Expenses	1%of sales
General Expenses	1% of sales
Distribution Costs	
Wages	₹15,000
Rent	1%of sales
Other Expenses	4% of sales

Prepare a flexible budget and forecast the profit or loss at 70% and 90% capacity

Commented [u41]: budget
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Commented [u43]: budget

Q.55. ABC manufacturing company produces 7,500 units by utilizing its 75% capacity supplies you the following cost information:- **(May, 2008)**

Commented [u44]: budget

Cost information at 75% capacity utilization [for 7,500 units]

Particulars	₹
Direct materials	7,50,000
Direct labour	6,00,000
Direct expenses	3,00,000
Factory overheads	4,50,000
Office overheads	3,00,000
Selling overheads	1,50,000

Additional Information:-

a. Direct material, direct labour, direct expense are Variable cost.
b. Factory overheads per unit increased by 10% if capacity utilization goes down below the 75% and decrease by 15% if capacity utilization goes up above the 75%.
c. Office overheads are fixed overheads.
d. Selling overheads per unit increase by 20% if capacity utilization goes down below 75% and decreases by 25% if capacity goes up above 75%.
e. If is the policy of the company to change profit at 20% on selling price. **[15]**

You are required to prepare a flexible budget at 50%, 75% and 100% capacity utilization.

Q.56. For production of 10,000 electrical automatic irons the following are the budgeted expenses: **[15]**

Particulars	Per unit (₹)
Direct materials	60.00
Direct labour	30.00
Variable overheads	25.00
Fixed overheads [₹ 1,50,000]	15.00
Variable Expenses (Direct)	05.00
Selling expenses (10% fixed)	15.00
Administrative expenses (₹50,000 rigid for all level of production)	05.00
Distribution expenses (20% fixed)	05.00
Total cost of sales per unit	160.00

Prepare a budget for production of 6,000, 7,000 and 8,000 Irons showing distinctly marginal cost and total cost. **(May, 2009)**

Commented [u45]: budget

Q.57. Suruchi Manufacturing Co. is operating at 75% of normal capacity. It is proposed to offer a price reduction of 5% to 10% depending upon the sales volume desired. Given below are the relevant data: **(May, 2009)**

Commented [u46]: budget

Capacity	75%	85%	100%
Output (Units)	75,000	85,000	1,00,000
Selling price per unit	₹96	5% off	10% off
Material cost per unit	₹40	10% less	15% less
Wages cost per unit	₹10	₹10	₹10

Fixed production Overhead ₹14,00,000 **[15]**
Fixed Selling & Administration overhead ₹5,00,000
Variable Production Overhead ₹14,00,000 at 100% capacity
Variable Selling and Distribution Overhead ₹4,40,000 at 100% capacity
Prepare a statement to show per unit and total profit/loss at above levels of output.

Q.58. The expenses budgeted for production of 10,000 units in a factory are furnished below:- **(April, 2012)**

Particular	₹ per unit
Material	70/-
Labour	25/-
Variable overheads	20/-
Fixed Overheads (₹1, 00,000)	10/-
Variable Expenses (Direct)	5/-
Selling expenses (10% fixed)	13/-
Distribution expenses (20% fixed)	7/-
Administration expenses (₹50, 000)	5/-
Total	155/-

Prepare a budget for production of (a) 8,000 units (b) 6,000 units.
Assume that Administration expenses are fixed for all levels of production. **[15]**

Commented [u47]: budget

Q.59. The Expenses Budget for production of 20,000 Units at 100% capacity in a factory are given: - **[15]**

	Amounts ₹
Material	-5,00,000
Labour	- 4,00,000
Factory Overheads (20% Variable)	- 3,00,000
Office and Administrative (30% Fixed)	- 2,50,000
Selling Distribution (40% Variable)	- 1,50,000

Prepare a Flexible Budget at 70% and 90% Capacity level. **(April,2014)**

Q.60. A factory is currently working at 50% capacity and produces 10,000 units. Prepare a Flexible Budget and estimate the Profits of the Company when it works at 60% and 80% capacity and advice the Company. At 60% working Raw Material Cost increases by 5% and selling price falls by 2%. At 80% Raw Materials cost increases by 6% and selling price falls by 4%. At 50% capacity working the product costs ₹ 180 per unit and is sold at ₹ 200 per unit. **[15]**

The Unit cost of ₹ 180 is made up as follows:

Material	₹ 100
Labour	₹ 30
Factory overheads	₹ 30 (40% Fixed)
Administrative overheads	₹ 20 (50% Fixed)

(April,2015)

Q.61. A Factory produces 20,000 units. The budgeted expenses are given below: **[15]**

Particulars	**₹ Per Unit**
Direct Material Cost	75
Direct Labour Cost	20
Direct Expenses	25
Variable Production Overheads	15
Fixed Production Overheads (₹ 4,00,000)	20
Administrative Expenses (Fixed)	10
Selling Expenses (20% Fixed)	15
Distribution Expenses (40% Fixed)	20
Total Cost of sales per unit	200

Prepare a flexible budget for Production of (a) 15,000 units, (b) 10,000 units. **(April, 15)**

Q.62. KBC Manufacturing company produces 7500 units by Utilizing Its 75% Capacity, supply you the following cost information:- **15 marks**

Cost information at 75%. Capacity utilization (7500 units)

Particulars	Amount
Direct material	7,50,000
Direct labour	6,00,000
Direct expenses	3,00,000
Factory Overhead	4,50,000
Office Overheads	3,00,000
Selling Overheads	1,50,000

Additional information:-

a) Direct materials, Direct labour, Direct Expenses are variable cost.

b) Factory Overheads per unit, increases by 10%, if capacity utilization goes down below the 75% and decreases by 10%, if capacity utilization goes up above the 75%.

c) Office overheads are fixed overheads.

d) Selling Overheads per unit increases by 20%, if the capacity utilization goes down below 75% and decreases by 20%, if the Capacity utilization goes up above the 75%.

e) It is the policy of the company to charge profit at 25%on cost. **(April, 13)**

You are require to prepare a Flexible budget at 50%, 80% and 100% capacity utilization.

Commented [u48]: budget

Q.63. M/s. Jayshree Enterprises is currently working at 50% capacity & produces 10,000 units. At 60% working raw material cost increases by 2% & selling price falls by 2%. At 80% working raw material cost increases by 5% & selling price by 5%. At 50% capacity working the product costs ₹ 18 per unit & is sold at ₹ 20 per unit. **[15]**

The unit cost of ₹ 10 is made up as following:

Material	₹ 10
Wages	₹ 03
Factory Overheads	₹ 03 (40% Fixed)
Administration Overheads	₹ 02 (50% fixed)

Prepare a statement showing the estimated profit of the business when it is operated at is operated at 60% & 80% capacity.

It may be noted the fixed overhead remain constant upto 100% capacity. Increase in raw material cost & decrease in selling price are to be calculated with reference to the figure given for 50% capacity usage. **[April, 2016]**

Q.64. From the following information given prepare the budget for 80% level of activity **[15]**

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Level of activity	50%	60%
No. of units	25,000	30,000
Direct Material Rs.	2,00,000	2,40,000
Direct wages Rs.	75,000	90,000
Factory overhead Rs.	2,00,000	2,05,000
Office and Administration Rs.	3,00,000	3,00,000
Selling and Distribution Rs.	2,50,000	2,70,000

Profit is 20% on Sales **[April, 2017]**

Q.65. The following data is available of a manufacturing company for a year. **[15]**

Fixed Expenses	Rs."000"
Salaries and Wages	1,520
Rent,Rates and Taxes	1,056
Depreciation	1,184
Sundry Administration Expenses	1,040

Variable Expenses		Semi-Variable Expenses	
At 50% capacity	**Rs."000"**	**At 50% capacity**	**Rs."000"**
Materials	3,472	Repairs and maintenance	560
Labour	3,264	Indirect Labour	1,264
Other Expenses	1,264	Salesman Salaries	608
		Sundry Administration Expenses	448

Semi –Variable expenses remain constant between 45% and 65% of capacity, increasing by 10 between 66% and 80% capacity and by 20% between 81% and 100% capacity.

Sales at various level are	Rs. "000"
At 50% capacity	16,000
At 60% capacity	19,200
At 75% capacity	24,000
At 90% capacity	28,800
At 100% capacity	32,000

Prepare a flexible budget for the year and forecast the profit at 50%, 75% and 100% of capacity. **[April, 2017]**

PRODUCTION BUDGET

Q.66. Fun Toys Ltd. manufactures a toy monkey with moving parts & a Built-in voice box. Projected sales for 5 months are as follows. **[15]**
(Nov, 2006)

Month	Projected Sales (in units)
July, 2004	4,200
August, 2004	4,500
September, 2004	4,800
October, 2004	4,600
November, 2004	4,700

1. Each toy requires direct material from a supplier at ₹ 35 for moving Parts.
2. Voice boxes are purchased from another supplier at ₹10 Per Toy
3. Labour Cost is ₹20 per toy & Variable overhead cost is ₹ 5 PerToy.
4. Fixed manufacturing overhead applicable to Production is ₹ 45,000 per month.
5. It is practice of the company to manufacture an output in a month which is equivalent to 1.2 times of the Following month's sales.

Prepare the Production budget & the Production cost budget for July,2004 to Oct, 2004

Q.67. The following are the estimated sales of a company for eight months ending 30th November, 2011: **[15]**

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Commented [u52]: budget

Month	Estimated Sales in Units
April, 2011	24,000
May, 2011	26,000
June, 2011	18,000
July, 2011	16,000
August, 2011	20,000
September, 2011	24,000
October, 2011	28,000
November, 2011	24,000

As a matter of policy, the company maintains the closing balance of finished goods and raw materials as follows:--

Stock Item	Closing Balance of a Month
Finished Goods (units)	40% of the estimated sales for next month
Raw materials (kg)	50% of the estimated consumption for next month

Every unit of production requires 4 kg raw materials costing ₹ 4 per kg.
Prepare Production Budget (in Units) & Raw Materials purchase Budget (in kg & cost) of the company for half year ended 30th September, 2011. **(April, 2011)**

Q.68. ABC Foods Products Limited has prepared the following sales Budget for the first five months of 2016

Sales Budget (in Units)

January	10,800
February	15,600
March	12,200
April	10,400
May	9,800

The inventory of finished products at the end of every month is to be equal to 25% of the sales estimate for the next month. On 1st January 2016, there were 2,700 units of product in hand. There is no work-in-process at the end of any month.
Every unit of product requires two types of materials in the following quantities:
Material A: 4 Kg. Material B: 5 Kg.
Material equal to one-half of the next month's production are to be in hand at the end of every month. This requirement was met on 1st January 2016
Budgeted prices for the purchase of materials are
Material A: ₹ 3 per kg; Material B: 2 per kg. **[April,2016]**

Prepare Materials consumption Budget & purchase budget (qty& value) for first quarter of 2016 showing the quantities of each type of material to be purchased every month **[15]**