

Do not do questions 4 + 5.

COSTING QUESTIONS

- ✓ 1. Delila Ltd sells one product. The cost card for that product is given below:

Direct materials	£ 4
Direct labour	£ 5
Variable production overhead	£ 3
Fixed production overhead	£ 2
Variable selling cost	£ 3

Total variable cost
 $= £(4 + 5 + 3 + 3) = £15$
 $= SP £20 - £15 = £5 \text{ contribution}$
 $= £5 \times 800 \text{ (units)} = £4,000$

Marginal Costing does not include Fixed.

The selling price per unit is £20. Budgeted fixed overheads are based on budgeted production of 1,000 units. Opening inventory was 200 units and closing inventory was 150 units. Sales during the period were 800 units and actual fixed overheads incurred were £1,500.

The total contribution earned during the period was:

- A £2000
- B £2,500
- ☒ C £4,000
- D £2,500

- ✓ 2. Jameson sells one product. The cost card for that product is given below:

Direct materials	£ 6
Direct Labour	£ 7
Variable Production Overhead	£ 4
Fixed Production Overhead	£ 3
Variable Selling Cost	£ 4

Total variable cost
 $= £(6 + 7 + 4 + 4) = 21$
 $= SP £40 - 21 = 19 \text{ contribution}$
 $= 19 \times 1000 = £19,000$

The selling price per unit is £40. Budgeted fixed overheads are based on budgeted production of 1,500 units. Opening inventory was 500 and closing inventory was 400 units. Sales during the period were 1000 units and actual fixed overheads incurred were £4,000.

The total contribution earned during the period was:

- A 22,000
- ☒ B 19,000
- C 16,000
- D 17,000

3. Jones Ltd sells one product. The cost card for that product is given below:

	£	Total Variable Cost
Direct materials	* 7	$£(7+8+5+5) = 25$
Direct Labour	* 8	$= SP £30 - 25 = £5 \text{ contribution}$
Variable Production Overhead	* 5	$= £5 \times 2000 = £10,000$
Fixed Production Overhead	4	
Variable Selling Cost	* 5	

The selling price per unit is £30. Budgeted fixed overheads are based on budgeted production of 1,000 units. Opening inventory was 800 and closing inventory was 650 units. Sales during the period were 2000 units and actual fixed overheads incurred were £3,500.

The total contribution earned during the period was:

- A 22,000
- B 20,000
- C 15,000
- ☒ D 10,000

4. An organisation manufactures and sells a single product that has a variable cost of £24 per unit and a contribution to sales ratio of 40%. Total monthly fixed costs are £720,000.

What is the monthly breakeven point (in units)?

- A 18,000
- B 20,000
- C 30,000
- ☒ D 45,000

Contribution per unit = $(£24 / 0.60 \times 0.40) = £16$
 Breakeven point = $(£720,000 / 16) = 45,000 \text{ units}$

5. A company that uses marginal costing has a profit of £37,500 for a period. Opening inventory was 100 units and closing inventory was 350 units.

The fixed production overhead absorption rate is £4 per unit.

What is the profit under absorption costing?

- A £35,700
- B £36,500
- ☒ C £38,500
- D £39,300

Marginal Costing profit 37,500
 Add: Fixed Costs in closing inventory
 $(350 \times £4) \text{ overhead unit absorption rate}$ 1,400
 Less: Fixed Costs in opening inventory
 $(100 \times £4)$ (400)
 Absorption Costing Profit 38,500

- ✓ 6. A company produces and sells a single product whose variable cost is £6 per unit.

Fixed costs have been absorbed over the normal level of activity of 200,000 units and have been calculated as £2 per unit.

The current selling price is £10 per unit.

How much profit is made under marginal costing if the company sells 250,000 units?

- A £500,000
B £600,000
C £900,000
D £1,000,000

Contribution per unit = $\frac{(10 - 6)}{SP - VC} = £4$

Total Contribution	$(250,000 \times £4)$	1,000,000
Fixed Overheads	$(200,000 \times £2)$	400,000
		600,000

- ✓ 7. A company has established a marginal costing profit of £72,300. Opening inventory was 300 units and closing inventory is 750 units. The fixed production overhead absorption rate has been calculated as £5/unit.

What was the profit under absorption costing?

- A £67,050
B £70,050
C £74,550
D £77,550

Marginal Costing Profit

Marginal Costing Profit	72,300
Less: Fixed Costs in opening inventory	(1,500)
Add: Fixed Costs in closing inventory	3,750
	74,550

- ✓ 8. Which of the following are true of marginal costing?

- i) The marginal cost of a product includes an allowance for fixed production costs.
ii) The marginal cost of a product represents the additional cost of producing an extra unit.
iii) If the inventory increases over a year, the profits under absorption costing will be lower than with marginal costing.

- A i) only
B ii) only
C ii) and iii) only
D i), ii) and iii)

9. An organisation manufactures and sells a single product. At the budgeted level of output of 2,400 units per week, the unit cost and selling price structure is as follows:

	£ per unit	£ per unit
Selling price		60
Less - variable production cost	15	
- other variable cost	5	
- fixed cost	30	
		(50)
Profit		10

What is the breakeven point (in units per week)?

- A 1,200
B 1,600
C 1,800
D 2,400

$$\text{Contribution per unit} = \text{SP} - \text{VC} - \text{OVC} = 60 - 15 - 5 = 40$$

$$\text{Total Fixed Costs (TFC)} = 30 \times 2400 = 72,000$$

$$\text{Breakeven point} = \frac{72,000}{40} = 1,800$$

10. Which of these statements are true of marginal costing?

- i) The contribution per unit will be constant if the sales volume increases.
ii) There is no under- or over-absorption of overheads.
iii) Marginal costing does not provide useful information for decision making.

- A i) and ii) only
B ii) and iii) only
C ii) only
D i), ii) and iii)

11. A company that makes and sells a single product has budgeted the following unit costs and profit.

		Budgeted Profit	125,000
		Budget Profit/unit	1
Sales price	£ +8	Therefore budget Sales =	125,000 units
Variable cost	-3	Budgeted Fixed Costs =	125,000 × £4 (FC)
Fixed cost	4		= 500,000
Profit	1	Contribution/unit	= £5
		(8 - 3)	

The budgeted profit is £125,000.

$$\text{Breakeven point} = \frac{500,000}{5} = 100,000 \text{ units}$$

What is the margin of safety expressed as a percentage of budgeted sales?

- A 15%
B 17.5%
C 20%
D 25%

$$\text{Margin of Safety} = 125,000 - 100,000 = 25,000$$

Margin of Safety is normally measured as a percentage of the budgeted Sales, which in this case is

$$\frac{25,000}{125,000} = 0.20 \text{ or } 20\%$$

12. A company sells a single product that has a contribution of £27 per unit and a contribution to sales ratio of 45%.

This period it is forecast to sell 1,000 units giving it a margin of safety of £13,500 in sales revenue terms

What are the company's total fixed costs per period?

- A £6,075
 B £7,425
 C £13,500
 D £20,925
- Handwritten calculations:*
 Contribution £27
 Contribution to sales ratio 45%
 Selling price $\frac{£27}{0.45} = £60$
 Margin of safety in units $\frac{£13,500}{60} = 225$
 Break-even point $= 1000 - 225 = 775$ units (forecast)
 Total fixed costs $= 775 \text{ units} \times 27 = £20,925$

13. A company manufactures and sells a single product. The following data relate to a weekly output of 2,880 units:

	£ per unit	£ per unit
Selling price		80
Less costs:		
Variable production	30	
Other variable	10	
Fixed	25	
		(65)
Profit		15

What is the weekly breakeven point (in units)?

- A 1,900
 B 1,440
 C 1,800
 D 4,800
- Handwritten calculations:*
 Contribution per unit $(80 - 30 - 10) = £40$
 Total Fixed Costs $(25 \times 2880) = 72,000$
 Break-even point $(72,000 / 40) = 1,800$ units

14. An organisation manufactures a single product that is sold for £60 per unit. The organisation's total monthly fixed costs are £54,000 and it has a contribution to sales ratio of 40%. This month it plans to manufacture and sell 4,000 units.

What is the organisation's margin of safety this month (in units)?

- A 1,500
 B 1,750
 C 2,250
 D 2,500
- Handwritten calculations:*
 CSR $0.40 \times £60 = £24$
 $= \frac{54,000}{24} = 2,250$ units
 $= 4,000 - 2,250 = 1,750$ units

- ✓ 15. Dane makes and sells a single product which has a selling price of £26, prime costs are £10 and overheads (all fixed) are absorbed at 50% of prime cost. Fixed overheads are £50,000.

What is the breakeven point (to the nearest whole unit)?

- A 1,923
B 3,125
C 4,545
D 5,000

$$\begin{aligned} &26 - 10 = £16 \\ &50,000 / 16 \text{ per unit} = 3,125 \text{ units} \end{aligned}$$

The following data are to be used for questions 16 and 17

Budgeted labour hours	6,000
Budgeted overheads	£140,380
Actual Labour hours	7,200
Actual overheads	£179,000

- ✓ 16. Based on the data given above, what is the labour hour overhead absorption rate?

- A £26.79 per hour
B £23.40 per hour
C £22.22 per hour
D £22.72 per hour

$$\begin{aligned} \text{OAR} &= \frac{£140,380 \text{ (BO)}}{6000 \text{ (BLH)}} \\ &= £23.40 \end{aligned}$$

- ✓ 17. Based on the data given above, what is the amount of overhead under/over-absorbed?

- A £11,080 under absorbed
B £10,880 over absorbed
C £10,520 under absorbed
D £12,008 under absorbed

$$\begin{aligned} \text{ALH } 7,200 \times 23.40 \text{ (OAR)} &= 168,480 \text{ (overhead absorbed)} \\ 179,000 \text{ (actual overheads)} & \\ \hline -10,520 &\text{ under absorbed.} \end{aligned}$$

Under absorbed overheads occur when:
actual overheads exceed absorbed overheads