

**Question 8**

**80**

(a)	€	€	€ per unit
Sales (14,000 units – 70%)		560,000	40.00
Less Variable Costs			
Direct materials	120,000		
Direct lab	140,000		
Factory overhead	30,000		
Administration overhead	<u>49,500</u>	<u>339,500</u>	<u>24.25</u>
<b>Contribution</b>		220,500	15.75
Less Fixed Costs			
Factory overhead	60,000		
Administration overhead	<u>62,500</u>	<u>122,500</u>	
Net Profit		<u>98,000</u>	

(i) **Break even point**       $\frac{\text{Fixed Costs}}{\text{CPU}} = \frac{[5] 122,500}{[5] 15.75} = [3] 7,778 \text{ units}$

**Margin of safety**       $\text{Sales} - \text{break even point} = [3] 14,000 - 7,778 [3] = [2] 6,222 \text{ units}$

(ii) **Profit from reduced selling price**

Sales	(20,000 x €38.00)	760,000	[3]
Less variable costs	(20,000 x €24.25)	485,000	[3]
– fixed costs		<u>132,500</u>	[3]
Profit		<u>142,500</u>	[2]

(iii) **Number of Units that must be sold**

Let N be the no of units

Sales	=	V.C.	+	F.C.	+	Profit
36N	=	24.25N	+	122,500	+	[20% of 36N]
36N – 24.25N – 7.2N	=	122,500				
4.55N [7]	=	122,500				[4]
N	=	26924 units				[2]

(iv) **The profit they would Make from S.P of €42**

Sales	[19,000 x €42]	798,000	[3]
Less Variable costs	[19,000 x (24.25 + 1 + 2.10)]	<u>519,650</u>	[5]
Contribution		278,350	
Less Fixed costs		<u>122,500</u>	[1]
Profit		<u>155,850</u>	[2]

(v) To calculate the break even point [2]  
When necessary figures are not available – variable cost or selling price or units

(b)

<b>Production overheads</b>	<b>Units</b>	<b>Total Cost</b>
		€
High	18,000	114,000
Low	<u>10,000</u>	<u>66,000</u>
Difference	8,000	48,000

The variable cost of 8,000 units is 48,000, therefore the variable cost per unit is €6 [3]

Total production overhead cost	66,000	96,000	114,000
Less variable costs	<u>60,000</u>	<u>90,000</u>	<u>108,000</u>
Therefore, Fixed cost	<u>6,000</u>	<u>6,000</u>	<u>6,000</u>

<b>Other overhead costs</b>	<b>Units</b>	<b>Total Cost</b>
		€
High	18,000	99,000
Low	<u>10,000</u>	<u>57,000</u>
Difference	8,000	42,000

The variable cost of 8,000 units is 40,000, therefore the variable cost per unit is €5.25 [3]

	<b>10,000</b>	<b>15,000</b>	<b>18,000</b>
Total other overhead costs	57,000	83,250	99,000
Less variable costs	<u>52,500</u>	<u>78,750</u>	<u>94,500</u>
Therefore, Fixed cost	4,500	4,500	4,500

#### **Flexible Budget in Marginal Costing format**

Sales			785,000	[1]
Less Variable Costs				
Direct Materials	(19,000 x 14)	266,000		[1]
Direct Labour	(19,000 x 8)	152,000		[1]
Production overheads	(19,000 x 6)	114,000		[1]
Other overhead costs	(19,000 x 5.25)	<u>99,750</u>		[1]
			<u>631,750</u>	
<b>Contribution</b>			<b>[1] 153,250</b>	
Less Fixed Costs				
Production overheads		6,000		[1]
Other overheads		4,500		[1]
Administration		<u>25,000</u>		[1]
			<u>35,500</u>	
Profit			<u>117,750</u>	[1]

Total cost is 85% of sales.

Total cost = 631,750 + 35,500 = 667,250

85% of sales = 667,250

100% = 785,000