

**SECTION 3 (80 marks)**  
Answer **ONE** question

**8. Marginal Costing and Separation of Costs**

- (a) Doyle Ltd produces a single product. The company's profit and loss account for the year ended 31/12/2007, during which 14,000 units were produced and sold, was as follows. The company operated at 70% of capacity in 2007.

	€	€
Sales (14,000 units)		560,000
Materials	120,000	
Direct labour	140,000	
Factory overheads	90,000	
Administration expenses	<u>112,000</u>	<u>462,000</u>
Net profit		<u>98,000</u>

The materials, direct labour and a third of the factory overheads are variable costs. €62,500 of the administration expenses are fixed.

**You are required to calculate:**

- (i) The company's break-even point and margin of safety.
  - (ii) The profit the company would make in 2008 if it reduced the selling price by 5%, increased advertising by €10,000 and thereby increased sales to 20,000 units with all other cost levels unchanged.
  - (iii) The number of units that must be sold at €36 per unit to provide a profit of 20% of the sales revenue received from these same units.
  - (iv) The profit the company would make if a commission of 5% of sales is given to sales personnel and €1 extra per unit spent on enhanced packaging, thereby increasing the sales to 19,000 units at €42 per unit
  - (v) For what purpose is the Contribution Sales Ratio regularly used? When is the use of this ratio essential?
- (b) Mixed costs can be separated into their fixed and variable elements by using records of costs from previous periods. Max PLC manufactures a single component. The following production costs and output levels have been recorded during March, April and May 2007:

Output Levels	<b>50%</b>	<b>75%</b>	<b>90%</b>
Units	10,000	15,000	18,000
<b>Costs</b>	<b>€</b>	<b>€</b>	<b>€</b>
Direct materials	140,000	210,000	252,000
Direct Labour	80,000	120,000	144,000
Production Overheads	66,000	96,000	114,000
Other overhead costs	57,000	83,250	99,000
Administration expenses	<u>25,000</u>	<u>25,000</u>	<u>25,000</u>
	<u>368,000</u>	<u>534,250</u>	<u>634,000</u>

Profit is budgeted to be 15% of sales.

**You are required to:**

- (i) Separate production overheads into fixed and variable elements.
- (ii) Separate other overhead costs into fixed and variable elements.
- (iii) Prepare a Flexible Budget for 95% Activity Level using Marginal costing principles, and show the contribution.

**(80 marks)**