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	112,000	462,000
Net profit		98,000

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	**50%**	**75%**	**90%**
Units	10,000	15,000	18,000
Costs	**€**	**€**	**€**
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	25,000	25,000	25,000
	368,000	534,250	634,000

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)**