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

8. Marginal Costing

Clarke Ltd produces a single product. The company's profit and loss account for the year ended 31/12/2016, during which 60,000 units were produced and sold, was as follows:

	€	€
Sales (60,000 units)		1,320,000
Materials	270,000	
Direct labour	207,000	
Factory overheads	240,000	
Administration expenses	101,250	
Selling expenses	82,500	900,750
Net profit		419,250

The materials and direct labour are variable costs. Apart from a sales commission of 5% of sales, selling and administration expenses are fixed. Factory overheads are mixed costs, and have behaved in the past as follows:

Year ended	Output (units)	Factory Overheads in €
31/12/2013	90,000	330,000
31/12/2014	50,000	210,000
31/12/2015	30,000	150,000

Required:

(a) Calculate the variable and fixed elements of factory overheads using the high/low method.

(b) Calculate the company's break–even point and margin of safety.

(c) Calculate the number of units that must be sold at €25 per unit to provide a profit of 10% of the sales revenue earned from these same units.

(d) Calculate the selling price the company must charge per unit in 2017, if fixed costs increase by 12% but the volume of sales and profit remain the same.

(e) After conducting market research the following options have been proposed.

Option 1 – Reduce the selling price by 10% and spend an extra €30,000 on advertising to increase sales volume by 20%.

Option 2 – Spend €40,000 on leasing a new packaging machine (fixed cost). This will reduce the variable cost per unit by €2 maintaining sales at current levels.

Prepare a marginal costing statement for each option.

Write a **brief** report for the manager of Clarke Ltd with your recommendation.

(f) What is meant by the term 'Sensitivity Analysis'?

(80 marks)