

**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	<u>82,500</u>	<u>900,750</u>
Net profit		<u>419,250</u>

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:**

- Calculate the variable and fixed elements of factory overheads using the high/low method.
- Calculate the company's break-even point and margin of safety.
- 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.
- 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.

- 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.

- What is meant by the term 'Sensitivity Analysis'?

**(80 marks)**