

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

**8. Overhead Apportionment and Flexible Budgeting**

- (a) Heron Ltd has two Production Departments 1 and 2 and two ancillary Service Departments X and Y. The following are the expected overhead costs for the next 6 months:

Overhead	Total €
Depreciation of equipment	20,000
Depreciation of factory buildings	24,000
Factory heating	8,000
Factory cleaning	4,000
Factory canteen	5,400

The following information relates to the Production and Service Departments of the Factory:

	Production		Service	
	Dept. 1	Dept. 2	Dept. X	Dept. Y
Volume in cubic metres	1,000	2,000	600	400
Floor area in square metres	800	600	400	200
Number of employees	140	100	70	50
Book value of equipment	€10,000	€15,000	€9,000	€6,000
Machine hours	4,000	1,000		

**You are required to:**

- (i) Calculate the overhead to be absorbed by each Department stating clearly the basis of apportionment used.
  - (ii) Transfer the Service Department costs to Production Departments 1 and 2 on the basis of machine hours.
  - (iii) Calculate a machine hour overhead absorption rate for Departments 1 and 2.
  - (iv) Explain why it is necessary to transfer Service Department costs to Production Departments 1 and 2.
- (b) Mixed costs can be separated into their fixed and variable elements by using records of costs from previous periods. Edant plc manufactures a single component for the motor industry. The following production costs and output levels have been recorded during March, April and May 2011:

Output Levels	60%	80%	90%
Units	12,000	16,000	18,000
<b>Costs</b>	<b>€</b>	<b>€</b>	<b>€</b>
Direct materials	156,000	208,000	234,000
Direct Labour	108,000	144,000	162,000
Production Overheads	79,200	102,000	113,400
Other overhead costs	64,800	85,200	95,400
Administration expenses	<u>30,000</u>	<u>30,000</u>	<u>30,000</u>
	<u>438,000</u>	<u>569,200</u>	<u>634,800</u>

Profit is budgeted to be 20% of sales. **Other overhead costs** can be separated into their fixed and variable elements as follows: **Variable cost per unit is €5.10 and Fixed Cost €3,600.**

**You are required to:**

- (i) Separate production overheads into fixed and variable elements.
- (ii) Prepare a Flexible Budget for 95% Activity Level using Marginal Costing principles and show the contribution.
- (iii) Explain, with examples, 'controllable' and 'uncontrollable' costs.

**(80 marks)**