

# Cost Accounting

**Level 3**

**Model Answers**

Series 4 2004 (Code 3016)

## **Vision Statement**

Our vision is to contribute to the achievements of learners around the world by providing integrated assessment and learning services, adapted to meet both local market and wider occupational needs and delivered to international standards.



© Education Development International plc 2004 Company Registration No: 3914767  
All rights reserved. This publication in its entirety is the copyright of Education Development International plc.  
Reproduction either in whole or in part is forbidden without written permission from Education Development International plc.

The Old School, Holly Walk, Leamington Spa, Warwickshire CV32 4GL  
Telephone: +44 (0) 8707 202909 Facsimile: + 44 (0) 1926 887676  
Email: [customerservice@ediplc.com](mailto:customerservice@ediplc.com)

## **Cost Accounting Level 3**

### **Series 4 2004**

#### **How to use this booklet**

Model Answers have been developed by Education Development International plc (EDI) to offer additional information and guidance to Centres, teachers and candidates as they prepare for LCCIEB examinations. The contents of this booklet are divided into 3 elements:

- (1) Questions – reproduced from the printed examination paper
- (2) Model Answers – summary of the main points that the Chief Examiner expected to see in the answers to each question in the examination paper, plus a fully worked example or sample answer (where applicable)
- (3) Helpful Hints – where appropriate, additional guidance relating to individual questions or to examination technique

Teachers and candidates should find this booklet an invaluable teaching tool and an aid to success.

EDI provides Model Answers to help candidates gain a general understanding of the standard required. The Board accepts that candidates may offer other answers that could be equally valid.

© Education Development International plc 2004

All rights reserved; no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without prior written permission of the Publisher. The book may not be lent, resold, hired out or otherwise disposed of by way of trade in any form of binding or cover, other than that in which it is published, without the prior consent of the Publisher.



# Cost Accounting

## Series 4 2004

### QUESTION 1

A company has three production departments (A, B and C) and two service departments (Stores and Maintenance) within its factory. The budgeted production overhead costs for a period allocated to the five departments were as follows:

	<b>A</b>	<b>B</b>	<b>C</b>	<b>Stores</b>	<b>Maintenance</b>
Allocated Overheads (£)	75,000	60,000	48,000	29,000	17,500

The following budgeted costs have yet to be apportioned to the five departments:

Rent	£60,000
Supervision	£120,000
Depreciation of machinery	£75,000

In addition the following information relating to the five departments is available:

	<b>A</b>	<b>B</b>	<b>C</b>	<b>Stores</b>	<b>Maintenance</b>
Floor space (sqm)	1,500	1,200	800	1,000	500
Machine value (£)	140,000	90,000	50,000	8,000	12,000
Numbers of employees	22	17	15	2	4
Use of Stores Department	40%	30%	20%	–	10%
Use of Maintenance Department	35%	30%	15%	20%	–

Budgeted machine hours for the period were 200,000 for Department A, 125,000 for Department B and 100,000 for Department C.

Actual results for the period were:

	<b>Production Department</b>		
	<b>A</b>	<b>B</b>	<b>C</b>
Actual overhead incurred (£) (allocated and apportioned)	195,000	160,000	110,000
Actual machine hours	180,000	130,000	90,000

### REQUIRED

- Produce a budgeted overhead distribution table, for the period, showing the allocated and apportioned costs for the five departments. (2 marks)
- Re-apportion the budgeted Service Department costs to the Production Departments using simultaneous equations.  
**(Full marks will not be awarded for other methods)** (9 marks)
- Calculate a pre-determined overhead absorption rate per machine hour for each of the Production Departments. (3 marks)
- Calculate the over/under absorbed overhead for **each** of the production departments for the period. (6 marks)

**(Total 20 marks)**

### Model Answer to Question 1

(a) Budgeted overhead distribution table.

	Production Departments			Service Departments	
	A	B	C	Stores	Maintenance
Allocated	75,000	60,000	48,000	29,000	17,500
Rent [1]	18,000	14,400	9,600	12,000	6,000
Supervision [2]	44,000	34,000	30,000	4,000	8,000
Depreciation [3]	35,000	22,500	12,500	2,000	3,000
	<u>172,000</u>	<u>130,900</u>	<u>100,100</u>	<u>47,000</u>	<u>34,500</u>

#### Workings

[1] Rent and Rates (based on floor area)

$$\text{Dept A} = 60,000 \times (1,500/5,000) = \text{£}18,000$$

[2] Supervision (based on number of employees)

$$\text{Dept A} = 120,000 \times (22/60) = \text{£}44,000$$

[3] Depreciation (based on machine value)

$$\text{Dept A} = 75,000 \times (140,000/300,000) = \text{£}35,000$$

(b) Reapportionment of service department costs.

$$\text{Equation 1} \quad S = 47,000 + 0.2M$$

$$\text{Equation 2} \quad M = 34,500 + 0.1S$$

$$\text{Equation 1} \times 5 \quad 5S = 235,000 + M$$

$$\text{Rearrange equ. 2} \quad -0.1S = 34,500 - M$$

$$\text{ADD} \quad 4.9S = 269,500$$

$$S = 55,000$$

$$\text{Substituting in equ. 2} \quad M = 34,500 + (0.1 \times 55,000)$$

$$M = 40,000$$

$$\text{Apportionment of S} \quad A = 55,000 \times 40\% = 22,000$$

$$B = 55,000 \times 30\% = 16,500$$

$$C = 55,000 \times 20\% = 11,000$$

$$M = 55,000 \times 10\% = 5,500$$

$$\text{Apportionment of M} \quad A = 40,000 \times 35\% = 14,000$$

$$B = 40,000 \times 30\% = 12,000$$

$$C = 40,000 \times 15\% = 6,000$$

$$S = 40,000 \times 20\% = 8,000$$

Secondary apportionment of service departments

	A	B	C	Stores	Maintenance
Bal b/d	172,000	130,900	100,100	47,000	34,500
Stores	22,000	16,500	11,000	(55,000)	5,500
Maintenance	14,000	12,000	6,000	8,000	(40,000)
	<u>208,000</u>	<u>159,400</u>	<u>117,100</u>	<u>0</u>	<u>0</u>

**Model Answer to Question 1 continued**

(c) Overhead absorption rates

	<b>Dept A</b>	<b>Dept B</b>	<b>Dept C</b>
Total overheads (3)	208,000	159,400	117,100
Budgeted machine hours	200,000	125,000	100,000
Absorption rate per machine hour (£)	1.04	1.2752	1.171

(d) Over/under absorption

<b>Department</b>	<b>Actual m/c hrs</b>	<b>O/head abs rate</b>	<b>O/head absorbed</b>	<b>O/head incurred</b>	<b>Over/under</b>
-------------------	---------------------------	----------------------------	----------------------------	----------------------------	-------------------