
Answers

Section A

- 1 A
- 2 B
- 3 C
- 4 D
- 5 B
- 6 C
- 7 C
- 8 C
- 9 A
- 10 B
- 11 C
- 12 B
- 13 D
- 14 C
- 15 C
- 16 D
- 17 A
- 18 D
- 19 D
- 20 C

Workings to computational MCQs:

5 $[(198,968 - 187,739) \div (129,440 - 117,620)] = 0.95$

7 $(1.0 \div 0.8) = 1.25$

11 $[(32,170 \times 0.65) + (24,850 \times 0.35)] = 29,608$

13 $[3,170 + 4,650 + 3,970 + (11,430 \div 12,700 \times 3,970)] = 15,363$

15 $\{[61,600 - (440 \times 1.80)] \div 21,560\} = 2.82$

17 $[87,500 \times (60 \div 180)] = 29,167$

18 $[104,976 \div (60 \times 0.8 \times 90)] = 24.30$

19 $[(94,000 + 6,000) \times (7.00 \div 2.80)] = 250,000$

20 $[(81,000 + 8,683) \div 3.037] \text{ or } (81,000 \div 2.743) = 29,530$

Section B

1 (a) (i) Cost unit

Defined by CIMA Official Terminology as ‘a unit of product or service in relation to which costs are ascertained’.

Examples include:

Operation (in a hospital) i.e the cost per operation is calculated

Barrel (in the brewing industry) i.e the cost per barrel is calculated

(ii) Cost centre

Defined by CIMA Official Terminology as ‘a production or service location, function, activity or item of equipment for which costs are accumulated’.

Examples include:

Raw material preparation, order processing department

- (b)** Cost centres, profit centres and investment centres all involve the assignment of responsibility for business performance to individual business managers. The distinction between the different types of responsibility centre is what individual managers are held accountable for. This depends upon their respective spheres of influence.

As defined in (a) above, and as the name implies, cost centre managers are accountable only for those costs of an organisation that come within their sphere of influence, for example the manager of an administration department would be responsible for the costs under his/her control. On the other hand profit centre managers are accountable not only for certain costs but some revenues also, and thus for a level of profit for example measured by the profit percentage of sales. An investment centre manager is responsible for profit but with additional responsibility for capital investment: performance may be measured by return on investment.

2 (a) Time rate payment system

- (i)** Labour cost per unit (output 2,500 units per week):

$$(6 \text{ operatives} \times 40 \text{ hours} \times \text{£}8.00 \text{ per hour}) = \text{£}1,920$$

$$\text{£}1,920 \div 2,500 \text{ units} = \text{£}0.768 \text{ per unit}$$

- (ii)** % change in labour cost per unit (output 2,750 units per week)

$$\text{£}1,920 \div 2,750 \text{ units} = \text{£}0.698 \text{ per unit}$$

$$\text{Reduction in unit cost} = [(\text{£}0.768 - \text{£}0.698) \div \text{£}0.768] \times 100\% = 9.1\%$$

(b) Incentive scheme

- (i)** Labour cost per unit (output 3,080 units per week)

Basic:		£
6 operatives x 40 hours at £4.00 per hour		960.00
Differential piecework:		
2,500 units at £0.375 per unit	937.50	
500 units at £0.45 per unit	225.00	
80 units at £0.60 per unit	48.00	
		1,210.50
		£2,170.50

$$\text{£}2,170.50 \div 3,080 \text{ units} = \text{£}0.705 \text{ per unit}$$

- (ii)** Level of output for common total labour cost

		£
Current system cost	1,920.00	
Less:		
Incentive scheme basic	960.00	
Piecework payments	960.00	
Less:		
Incentive scheme initial piecework	937.50	(for 2,500 units)
Additional piecework payments	£22.50	

$$\text{£}22.50 \div \text{£}0.45 \text{ per unit} = 50 \text{ units (in excess of previous level)}$$

$$\text{Level of output} = 2,500 \text{ units (2,500 + 50)}$$

3 (a) Predetermined production overhead absorption rates

Department X – £51,240 ÷ 4,200 machine hours = £12.20 per machine hour

Department Y – £87,120 ÷ 5,280 machine hours = £16.50 per machine hour

Department Z – £66,816 ÷ 11,520 direct labour hours = £5.80 per direct labour hour

(b) Over/under absorption of overhead (Month 1)

	Overhead incurred £	Overhead absorbed £	Over/(under) absorption £
Department X	4,410	4,148 (340hrs at 12.20)	(262)
Department Y	7,190	7,029 (426hrs at 16.50)	(161)
Department Z	5,610	5,713 (985hrs at 5.80)	103
	<u>17,210</u>	<u>16,890</u>	<u>(320)</u>

(c) General reasons for overhead under absorption

- Actual overhead expenditure greater than budget
- Actual machine hours worked less than budget

4 (a) Contract W

Incremental costs (£):

Labour – Department X	nil	
– Department Y	2,400	
Materials	5,588	{5,740 – [80 x (6.50 – 4.60)]}
Production overhead	972	{[(220 x 7.50) + 2,400] x 1.2 x 0.2}
Non-production overhead	nil	
	<u>8,960</u>	

Minimum price to quote for Contract W is £8,960.

(b) Sub-contract work

Net present value:

Time	Cash flow (£)	Discount factor (10%)	Present value (£)
0	(120,000)	1.000	(120,000)
1	40,000	0.909	36,360
2	55,000	0.826	45,430
3	70,000	0.751	52,570
			<u>14,360</u>

Net present value of keeping the machinery for sub-contract work is £14,360.

		marks	marks
Section B			
1	(a) (i) definition example	$1\frac{1}{2}$ <u>$1\frac{1}{2}$</u>	3
	(ii) definition example	$1\frac{1}{2}$ <u>$1\frac{1}{2}$</u>	3
	(b) 1 for each + 1 for linkage		<u>4</u>
			<u>10</u>
2	(a) (i) weekly total cost cost per unit	1 <u>1</u>	2
	(ii) revised unit cost % reduction	1 <u>1</u>	2
	(b) (i) basic pay initial piecework differential piecework cost per unit	1 1 3 <u>1</u>	6
	(ii) differential piecework payments required extra units level of output	2 2 <u>1</u>	5 <u>15</u>
3	(a) dept X depts Y & Z (1 for each)	2 <u>2</u>	4
	(b) overhead absorbed (1 for each) over/(under) absorption ($1\frac{1}{2}$ for each) net under absorption	3 $4\frac{1}{2}$ <u>$1\frac{1}{2}$</u>	9
	(c) $1\frac{1}{2}$ for each reason		<u>3</u>
			<u>16</u>
4	(a) dept X labour dept Y labour materials production overhead non-production overhead	$1\frac{1}{2}$ 1 3 3 <u>$1\frac{1}{2}$</u>	10
	(b) opportunity cost of machinery cash inflows exclusion of depreciation disposal value of machinery discounting & NPV	2 1 2 1 <u>3</u>	9 <u>19</u>