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# Answers

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Section A

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

Workings to computational MCQs:

- 5  $(\$52,000 \div 5,000 \text{ units}) + \{[(\$760,000 - (50,000 \text{ units} \times \$10.40/\text{unit})) \div 54,000 \text{ units}]\}$
- 7  $[(8 \text{ units} \times \$260/\text{unit}) + (12 \text{ units} \times \$270/\text{unit})]$
- 8  $[(3,400 \text{ kg} + 600 \text{ kg}) \div 2]$
- 11  $[(\$44,210 \times 1.4) + \$3,190]$
- 12  $\{[\$4,250 \div (420 \text{ units good output} + 20 \text{ units abnormal loss})] \times 20 \text{ units}\}$
- 14  $\{ \$71,628 \div [9,000 + (1,000 \times 0.4) \text{ units}]\}$
- 16  $[(\$39,420 + \$11,880) \div 5,400 \text{ units}]$
- 20  $\{11\% + [4\% \times (\$35,170/\$29,130)]\}$

**Section B**

**1 (a)** Absorption costing profit statement

	\$	\$	
Sales		162,400	(11,200 units at \$14.50)
Production cost of sales:			
Cost of production	98,040		(11,400 units at \$8.60)
/less Closing inventory	<u>1,720</u>		(200 units at \$8.60)
		<u>96,320</u>	(11,200 units at \$8.60)
Gross profit		66,080	(11,200 units at \$5.90)
Selling & administration costs		<u>43,680</u>	(11,200 units at \$3.90)
Net profit		<u>\$22,400</u>	(11,200 units at \$2.00)

**(b)** Marginal costing

**(i)** Total contribution

Contribution per unit = selling price – variable costs = \$14.50 – \$5.80 = \$8.70

Total contribution = contribution/unit x sales units = \$8.70/unit x 11,200 units = \$97,440

or Contribution/sales (C/S) ratio = [(\$8.70 ÷ \$14.50) x 100] = 60%

Total contribution = sales revenue x C/S ratio = \$162,400 x 0.6 = \$97,440

**(ii)** Total net profit

Total fixed costs = (\$3.80/unit x 11,400 units) + (\$2.90/unit x 11,200 units)

= \$43,320 + \$32,480 = \$75,800

Total net profit = contribution – fixed costs = \$97,440 – \$75,800 = \$21,640

**(iii)** Break-even sales revenue

Break-even sales revenue = total fixed costs x (selling price ÷ contribution/unit)

= \$75,800 x (\$14.50 ÷ \$8.70) = \$126,333

or Break-even sales revenue = total fixed costs ÷ C/S ratio = \$75,800 ÷ 0.6 = \$126,333

**(c)** Difference in net profit

Profit differs because of the inclusion of fixed production overheads in inventory valuation using absorption costing.

200 units inventory increase x \$3.80 per unit fixed production overhead

= \$760 profit difference (\$22,400 – \$21,640)

**2** Transport company

**(a)** Total cost per coach on each route

	Route A	Route B
	\$	\$
Drivers' wages	34,320 (W1)	34,320
Fuel and maintenance	46,818 (W2)	52,949 (W3)
Fixed costs:		
Vehicle tax & insurance	3,870	3,870
Apportioned costs	<u>10,880 (W4)</u>	<u>10,880</u>
	<u>\$95,888</u>	<u>\$102,019</u>

**(b)** Cost per kilometre on each route

	Route A	Route B
Total cost	\$95,888	\$102,019
÷ total kilometres	52,416 (W5)	59,280 (W6)
Cost per kilometre	<u>\$1.8294</u>	<u>\$1.7210</u>

(c) Profit per kilometre on each route

	Route A \$ per km	Route B \$ per km
Revenue	2·0986 (W7)	1·6211 (W8)
Costs	<u>1·8294</u>	<u>1·7210</u>
Profit/(loss)	<u>\$0·2692</u> per km	<u>\$(0·0999)</u> per km

Workings:

W1 \$110/coach x 6 days/week x 52 weeks/year

W2 \$0·8932/km x 12 journeys/day x 14 km/journey x 6 days/week x 52 weeks/year

W3 \$0·8932/km x 10 journeys/day x 19 km/journey x 6 days/week x 52 weeks/year

W4 \$21,760/route ÷ 2 coaches/route

W5 12 journeys/day x 14 km/journey x 6 days/week x 52 weeks/year

W6 10 journeys/day x 19 km/journey x 6 days/week x 52 weeks/year

W7 13 passengers/journey x \$2·26/passenger ÷ 14 km/journey

W8 11 passengers/journey x \$2·80/passenger ÷ 19 km/journey

3 (a) Overhead over/under absorption

Cost centre X	
Overhead absorbed	\$29,146 (1,235 machine hours at \$23·60)
Overhead incurred	<u>\$29,609</u>
Overhead under absorbed	<u>\$463</u>

Cost centre Y	
Overhead absorbed	\$53,718 (6,395 labour hours at \$8·40)
Overhead incurred	<u>\$52,567</u>
Overhead over absorbed	<u>\$1,151</u>

(b) Predetermined, as opposed to actual, overhead absorption rates

Advantages:

- enable overheads to be absorbed immediately after production
- easier to estimate product/job costs
- even out fluctuations that would otherwise occur in unit costs if production is uneven

4 (a) Joint costs

220 kg x \$12·00 per kg = \$2,640

Weight of output is the method used to apportion the joint costs

(b) Comments

(i) The loss on an individual joint product is irrelevant to any decision concerning the joint process because the apportionment of the joint costs is arbitrary. The key is whether the process as a whole is profitable. On the basis of the information available, the process is profitable overall and thus should be continued i.e.

	\$
Product JP1 (100 kg x \$8·00 per kg)	800
Product JP2 (120 kg x (\$2·00) per kg)	<u>(240)</u>
Net	<u>560</u>

(ii) Product JP1 should be further processed to form Product FP1 because the further processing operation results in an incremental profit i.e.

	\$ per kg
Incremental revenue (\$25·00 – \$20·00)	5·00
Incremental costs	<u>3·50</u>
Incremental profit	<u>1·50</u>

Section A 2 marks each question

40

**Section B**

<b>1 (a)</b>	sales	1		
	cost of production	1		
	closing inventory	1		
	gross profit	2		
	non-production costs	1		
	net profit	<u>2</u>	8	
<b>(b) (i)</b>	contribution per unit	$1\frac{1}{2}$		
	total contribution	<u><math>1\frac{1}{2}</math></u>	3	
<b>(ii)</b>	fixed costs	2		
	total net profit	<u>1</u>	3	
<b>(iii)</b>	b/even sales revenue		3	
<b>(c)</b>	explanation (words or figures)		<u>2</u>	19
<b>2 (a)</b>	drivers' wages	2		
	fuel	5		
	fixed costs	<u>3</u>	10	
<b>(b)</b>	total km	3		
	cost per km	<u>2</u>	5	
<b>(c)</b>	revenue per km	3		
	cost & profit per kilometre	<u>2</u>	<u>5</u>	20
<b>3 (a)</b>	cost centre X – figure	2		
	cost centre Y – figure	2		
	cost centre X – 'under'	1		
	cost centre y – 'over'	<u>1</u>	6	
<b>(b)</b>	advantages – 2 for each		<u>4</u>	10
<b>4 (a)</b>	joint costs	$1\frac{1}{2}$		
	method	<u><math>1\frac{1}{2}</math></u>	3	
<b>(b) (i)</b>	narrative	2		
	calculation	<u>2</u>	4	
<b>(ii)</b>	narrative	2		
	calculation	<u>2</u>	<u>4</u>	<u>11</u>
				<u>100</u>