

Answer Key

Unit 1: Financial Accounting

Module 1: Accounting Theory, Recording and Control Systems

1.1.1 Accounting Fundamentals

No.	Answers	Further explanations
1	D	
2	C	
3	A	
4	B	
5	C	
6	B	
7	D	
8	B	
9	D	
10	B	
11	B	
12	B	
13	D	
14	A	

No.	Answers	Further explanations
15	A	
16	B	
17	C	
18	A	
19	C	
20	C	
21	B	
22	B	
23	B	
24	A	
25	D	
26	C	
27	B	
28	D	
29	D	

1.1.2 Recording Financial Information

No.	Answers	Further explanations
1	B	
2	B	<p>Explanation</p> <p>The body of the question says, “an equivalent value of ordinary shares” and makes no mention of the value of the shares. The possible answer is that ordinary shares (common stock) issued is equal to the fair value physical assets. The acquisition of assets is always at fair value not at book value.</p>

No.	Answers	Further explanations
3	A	Working Fair Value of the individual asset ÷ Fair Value of the total assets × The acquisition cost = Recorded value of the individual assets = $\$50\,000 \div \$250\,000 \times \$200\,000 = \$40\,000$
4	C	Working Fair Value of the asset ÷ Fair Value of the total asset × The acquisition cost = Recorded value of the individual assets = $\$80\,000 \div \$250\,000 \times \$200\,000 = \$64\,000$
5	B	
6	C	
7	D	
8	C	
9	C	
10	B	Working Goodwill = The purchase price of the business – the fair value of the business = $\$13\,000\,000 - \$12\,000\,000 = \$1\,000\,000$
11	D	
12	B	
13	D	
14	C	
15	C	
16	D	
17	A	

No.	Answers	Further explanations
18	C	<p>Working</p> <p>Reducing balance method for calculating depreciation</p> <p>Formula: Depreciation for the year = *Net Book Value (NBV) × given percentage = *120 000 × 15% = \$18 000</p> <p>*Net Book Value = Property, Plant and Equipment at cost – Accumulated Depreciation</p> <p>The journal is Dr: Income Summary; Cr: Allowance for Depreciation</p>
19	D	
20	D	
21	D	
22	C	
23	D	
24	D	
25	B	<p>Explanation</p> <p>Any issue of common stock (ordinary shares) to current shareholders at a discounted price from market price is called a rights issue.</p>
26	B	<p>Working</p> <p>The issue of shares was a rights issue. The current ordinary shareholders were issued the shares at 12.00 which is \$2.00 above par (\$12.00 – \$10.00 = \$2.00). The market price does not matter in a rights issue as the shares are usually issued lower than market price, that is, a discounted price for current shareholders. As a result:</p> <p>Dr: Cash: Cash Collected = \$12.00 × 20 000 ordinary shares = \$240 000</p> <p>Cr: Ordinary Shares: Ordinary Shares value = \$10.00 × 20 000 ordinary shares = \$200 000</p> <p>Cr: Paid-in Capital in Excess of Par: Capital in Excess of Par = \$2.00 × 20 000 ordinary shares = \$40 000</p>
27	D	

No.	Answers	Further explanations
28	C	
29	B	

1.1.3 Internal Controls

No.	Answers	Further explanations
1	A	
2	A	
3	C	
4	C	
5	A	
6	B	
7	A	
8	C	
9	D	
10	D	
11	B	
12	C	<p>Explanation</p> <p>Although most students see the answer as ‘establishment of responsibility’ or ‘segregation of duties’, the issue here is the lack of supervision or checking of the money by someone other than the cashier to verify that the sum collected is equal to the day’s recorded receipts up to the point that the deposit slip is prepared and deposited into the night deposit facility.</p>
13	B	

No.	Answers	Further explanations
14	D	
15	A	
16	D	
17	C	
18	D	
19	B	
20	A	

Module 2: Preparation of Financial Statements

1.2.1 Forms of Business Organisations

No.	Answers	Further explanations
1	B	
2	A	
3	B	
4	A	
5	D	
6	B	
7	A	
8	A	
9	D	
10	A	

1.2.2 Preparation and Presentation of Statement of Comprehensive Income

No.	Answers	Further explanations
1	D	
2	B	
3	B	<p>Working</p> <p>Total number of units in stock = 900</p> <p>Number of units of stock remaining in stock = Total number of units – Stock issued = 900 – 600 = 300</p> <p>Value of stock using FIFO = $(200 \times 14) + (100 \times 15) = \\4300</p>
4	A	<p>Working</p> <p>Value of stock using weighted average = Total value of units in hand / Total number of units in hand = $\\$12\,200/900 = \\13.55</p> <p>$300 \times 13.55 = \\$4065$</p>
5	A	
6	C	
7	B	
8	D	
9	A	<p>Working</p> <p>$(\text{Opening capital} + \text{Additional capital}) - (\text{Closing capital} + \text{drawings}) = (\\$30\,000 + \\$30\,000) - (\\$60\,000 + \\$10\,000) = \\$10\,000$</p>
10	B	
11	D	
12	D	
13	D	
14	A	
15	D	

1.2.3 Preparation and Presentation of Statements of Retained Earning and Financial Position

No.	Answers	Further explanations
1	B	Working Retained Earnings 1 January 2014 \$90 000 Prior year adjustment understatement depreciation <u>(\$20 000)</u> Adjusted Retained Earnings January 2014 \$70 000 Profit for the year <u>\$80 000</u> \$150 000 Dividends declared <u>\$(20 000)</u> Balance of retained earnings for 2014 <u><u>\$130 000</u></u>
2	C	
3	D	
4	C	
5	B	Working Cost of Equipment – Allowance for depreciation $\times 10\% = (\$100\,000 - \$25\,000) \times 10\% = \$7\,500$
6	B	Working Allowance for depreciation + annual depreciation = $(\$25\,000 + \$7\,500) = \$32\,500$
7	C	Working Cost of depreciation – accumulated depreciation = $(\$100\,000 - \$32\,500) = \$67\,500$
8	D	
9	A	
10	C	

No.	Answers	Further explanations
11	B	
12	D	
13	C	
14	B	Working Monthly salary \times 12 = \$20 000 \times 12 = \$240 000
15	D	Working Total salaries paid for the year – salaries for the period = \$320 000 – \$240 000 = \$80 000
16	A	
17	B	
18	B	
19	C	
20	A	
21	A	
22	A	Working Closing capital = $-400 + 300 + 70 + 40 + 15 - 3 = 22$
23	D	Working Net loss = Opening capital – minus closing capital = $200 - 22 = 178$ loss

1.2.4 Preparation of Financial Statement for other businesses

No.	Answers	Further explanations
1	D	
2	C	Working 15-year mortgage value \times 10% = $200\,000 \times 10\% = \$20\,000$

No.	Answers	Further explanations
3	C	Working <div style="text-align: right;">\$</div> Sales 2 000 000 Purchases <u>(800 000)</u> 1 200 000 Honoraria (30 000) Insurance (5 000) General (10 000) Salaries and wages (30 000) Loan interest <u>(20 000)</u> Net profit 1 105 000
4	C	Working $300 \text{ members} \times 150 \text{ monthly subscriptions} = \$45\,000$
5	A	
6	D	
7	A	
8	D	
9	D	
10	A	
11	A	
12	C	
13	D	
14	D	
15	B	Working $\text{Common stock } 10\,000 \times 2 \text{ bonus shares} = \$20\,000$
16	A	Working $\text{Common stock} + \text{bonus shares} \div \text{rights issues} = \$20\,000 + \$10\,000 \div 5 = \$6\,000$

No.	Answers	Further explanations																						
17	A	Working Common Stock = \$10 000 + \$20 000 + \$6 000 = \$36 000 The bonus shares total of \$20 000 will deducted from the additional capital first and the remainder from retained earnings Therefore Additional Capital = \$19 000 – \$19 000 = 0 and Retained Earnings = \$71 000 – \$1 000 = \$70 000																						
18	B	<table style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: right;">\$</td> </tr> <tr> <td>Sales revenues</td> <td style="text-align: right;">\$150 000</td> </tr> <tr> <td>Cost of goods sold</td> <td style="text-align: right;"><u>(80 000)</u></td> </tr> <tr> <td>Gross profit</td> <td style="text-align: right;">70 000</td> </tr> <tr> <td>Other revenues</td> <td style="text-align: right;"><u>20 000</u></td> </tr> <tr> <td></td> <td style="text-align: right;">90 000</td> </tr> <tr> <td>Selling expenses</td> <td style="text-align: right;">(10 000)</td> </tr> <tr> <td>Administrative expenses</td> <td style="text-align: right;">(20 000)</td> </tr> <tr> <td>Other expenses</td> <td style="text-align: right;">(15 000)</td> </tr> <tr> <td>Finance costs</td> <td style="text-align: right;"><u>(8 000)</u></td> </tr> <tr> <td>Profit before tax</td> <td style="text-align: right;">37 000</td> </tr> </table>		\$	Sales revenues	\$150 000	Cost of goods sold	<u>(80 000)</u>	Gross profit	70 000	Other revenues	<u>20 000</u>		90 000	Selling expenses	(10 000)	Administrative expenses	(20 000)	Other expenses	(15 000)	Finance costs	<u>(8 000)</u>	Profit before tax	37 000
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Profit before tax	37 000																							
19	A	Working Profit before tax \$37 000 × 20% = \$7 400																						
20	A	Working Profit before tax \$37 000 – Corporation tax \$7 400 = \$29 600																						

1.2.5 Accounting for Partnerships

No.	Answers	Further explanations
1	A	
2	A	Working Total Fair market value of assets – Total capital = (\$400 000 + \$100 000 + \$150 000 + \$40 000) – \$900 000 = \$210 000
3	D	
4	A	

No.	Answers	Further explanations
5	A	Working Value of shares ($\$100\,000 \times 5$) – old capital added to new investment ($\$150\,000 \times 2 + 100\,000$) = $\$100\,000$
6	D	
7	B	
8	D	Working Old partners' capital + new partner capital = ($\$80\,000 + \$75\,000 + \$300\,000$) = $\$455\,000$
9	C	Working Total investment \div 1/5 interest = $\$455\,000 \div 5 = \$91\,000$
10	C	Working Wood's investment – Wood's interest = $\$300\,000 - \$91\,000 = \$209\,000$
11	A	
12	D	
13	B	Working Net profit $\$26\,000$ – Salary $\$6\,000$ = remaining profits to be shared $\$20\,000$ $3/5$ share of profit $\$20\,000 = \$12\,000$ $2/5$ share of profit $\$20\,000 = \$8\,000$
14	B	
15	B	Working Total income to be shared = Income $\pounds 50\,000$ less share of interest of capital ($\$100\,000 \times 10\% = \$10\,000$) + ($\$50\,000 \times 10\% = \$5\,000$) = $\$35\,000$. Amount of income to be shared between partners = $\$35\,000 \div 2 = \$17\,500$ each
16	B	Working Old partners' capitals + New partner capital = $\$48\,000 + \$42\,000 + \$50\,000 = \$140\,000$ New partner $1/5$ share of capital is $\$140\,000 \div 5 = \$28\,000$

No.	Answers	Further explanations
17	A	
18	A	
19	C	
20	A	
21	B	
22	D	Working Total loss to be shared equally = $\$39\,000 \div 3 = \$13\,000$

Module 3: Financial Reporting and Interpretation

1.3.1 Preparation of Cashflow Statement (Indirect Method Only)

No.	Answers	Further explanations
1	C	
2	D	Explanation It is important to remember that not only are cash items and items that can be easily converted to cash considered to be cash and cash equivalents, but a bank overdraft, because of its nature of being a demand payment, significantly affects the cash balance and should be included in this total.
3	C	
4	B	
5	D	
6	A	
7	C	
8	A	
9	C	

No.	Answers	Further explanations																														
10	D	<p>Explanation and working</p> <p>Under IAS 7, operating activities start with the profit before interest and tax. Adjustment must also be made for any Investment income, such as dividend income or interest income for the period.</p> <p>Profit before interest and tax = Net Income + Tax for the year + Interest expense for the year – Interest income or Investment income for the year = \$29 000 + \$4000 + \$1500 – (\$1200 + \$6000) = \$27 300</p>																														
11	A	<p>Explanation and working</p> <p>Net cash flow from operating activities is calculated as follows:</p> <p>Profit before interest and tax + *Net non-cashflow adjustments + *Net changes to working capital – Tax paid – Interest paid</p> <p>*(this figure can be positive or negative)</p>																														
		<p>In this question it is calculated as follows:</p> <table border="1"> <tbody> <tr> <td>Profit before interest and taxes as calculated in the previous question</td> <td>\$27 300</td> <td></td> </tr> <tr> <td>Adjustments (noncash flow items)</td> <td></td> <td></td> </tr> <tr> <td>Depreciation</td> <td>\$1750</td> <td></td> </tr> <tr> <td>Gain on sale of equipment</td> <td>(\$900)</td> <td>\$28 150</td> </tr> <tr> <td>Changes in working capital</td> <td></td> <td></td> </tr> <tr> <td>Net increase in current assets except cash</td> <td>(\$6000)</td> <td></td> </tr> <tr> <td>Net increase in current liabilities</td> <td>\$4500</td> <td>(\$1500)</td> </tr> <tr> <td>Interest paid</td> <td></td> <td>(\$1200)</td> </tr> <tr> <td>Tax paid</td> <td></td> <td>(\$3200)</td> </tr> <tr> <td>Net cashflow from operating activities</td> <td></td> <td>\$22 250</td> </tr> </tbody> </table>	Profit before interest and taxes as calculated in the previous question	\$27 300		Adjustments (noncash flow items)			Depreciation	\$1750		Gain on sale of equipment	(\$900)	\$28 150	Changes in working capital			Net increase in current assets except cash	(\$6000)		Net increase in current liabilities	\$4500	(\$1500)	Interest paid		(\$1200)	Tax paid		(\$3200)	Net cashflow from operating activities		\$22 250
Profit before interest and taxes as calculated in the previous question	\$27 300																															
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12	D	<p>Explanation</p> <p>Since the land was exchanged for ordinary shares there is no exchange of cash in the transaction. However, because of its significance to the financial statements and as a result the users of these statements, IAS 7 requires that there must be separate disclosure of this transaction in the notes.</p>																														

No.	Answers	Further explanations										
13	D	<p>Explanation and working</p> <p>Net cashflow from investing activities = Proceeds from sale or disposal of non-current assets – Purchase of non-current assets + Investment income</p> <p>In this question the following items are investing activity items:</p> <table border="1"> <tbody> <tr> <td>Purchase of motor van</td> <td>(\$15 000)</td> </tr> <tr> <td>Proceeds from sale of equipment</td> <td>\$6000</td> </tr> <tr> <td>Dividend Income</td> <td>\$6000</td> </tr> <tr> <td>Interest income received</td> <td>\$1200</td> </tr> <tr> <td>Net cash flow from investing activities</td> <td>(\$1800)</td> </tr> </tbody> </table>	Purchase of motor van	(\$15 000)	Proceeds from sale of equipment	\$6000	Dividend Income	\$6000	Interest income received	\$1200	Net cash flow from investing activities	(\$1800)
Purchase of motor van	(\$15 000)											
Proceeds from sale of equipment	\$6000											
Dividend Income	\$6000											
Interest income received	\$1200											
Net cash flow from investing activities	(\$1800)											
14	A											
15	D											

1.3.2 Financial Statements Analysis: Ratios

No.	Answers	Further explanations
1	B	
2	D	
3	D	<p>Working</p> <p>Closing inventory = Opening inventory \times 110% = \$35 000 \times 110% = \$38 500</p>
4	B	<p>Working</p> <p>Average inventory = (Opening Inventory + Closing Inventory) \div 2 = (\$35 000 + (\$35 000 \times 110%)) \div 2 = \$36 750</p>
5	B	<p>Working</p> <p>Stock Turnover = Cost of Sales \div Average Inventory = *\$112 000 \div \$36 750 = 3.05 times</p> <p>*Cost of sales = 80% of sales = 80% \times \$140 000 = \$112 000</p>

No.	Answers	Further explanations
6	C	Working Accounts receivable days ratio = Average Accounts Receivables ÷ Credit Sales × Number of business days = *\$20 000 ÷ \$120 000 × 340 = 57 days *Average receivable = (Opening Receivables + Closing Receivables) ÷ 2 = (\$25 000 + \$15 000) ÷ 2 = \$20 000
7	D	Working Accounts payable days ratio = Average Accounts Payables ÷ Cost of Sales × Number of business days = *\$15 000 ÷ \$80 000 × 340 = 64 days *Average Payables = (Opening Payables + Closing Payables) ÷ 2 = (\$25 000 + \$15 000) ÷ 2 = \$20 000
8	D	
9	B	
10	C	Working Current Ratio = Current Assets ÷ Current Liabilities = (\$14 000 + \$8000 + \$30 000 + \$15 000) ÷ (\$6000 + \$16 000 + \$15 000) = \$67 000 ÷ \$37 000 = 1.81:1
11	B	Working Acid Test/Quick Ratio = (Current Assets – Inventory) ÷ Current Liabilities = (\$14 000 + \$8000 + \$30 000) ÷ (\$6000 + \$16 000 + \$15 000) = \$52 000 ÷ \$37 000 = 1.41:1
12	D	
13	A	
14	D	Working Gross Profit Percentage = *Gross Profit ÷ Net Sales × 100 = \$80 000 ÷ \$152 000 × 100 = 52.63% Gross Profit = *Net Sales – Cost of Sales = \$152 000 – \$72 000 = \$80 000 Net Sales = Sales – Sales returns and Allowances = \$156 000 – \$4000 = \$152 000
15	A	

No.	Answers	Further explanations
16	B	<p>Working</p> <p>Net profit margin = $\frac{\text{*Net Profit}}{\text{Net Sales}} \times 100 = \frac{\\$38\,250}{\\$152\,000} \times 100 = 25.16\%$</p> <p>*Net Profit = Profit before tax – corporation tax = $\\$45\,000 - (\\$45\,000 \times 15\%) = \\$38\,250$</p> <p>Profit before tax = Net Sales + other revenues – Cost of Sales – operating and other expenses = $\\$152\,000 + \\$7\,000 - \\$72\,000 - \\$30\,000 - \\$12\,000 = \\$45\,000$</p> <p>Net Sales = Sales – Sales returns and Allowances = $\\$156\,000 - \\$4\,000 = \\$152\,000$</p>
17	B	<p>Working</p> <p>Income attributable to ordinary shareholders = Net Income – Preference Dividend = $\\$62\,000 - \\$6\,000 = \\$56\,000$</p>
18	C	<p>Working</p> <p>Earnings per share = Income attributable to ordinary shareholders divided by average number of ordinary shares in issue = $\frac{(\\$75\,000 - \\$6\,000)}{((26\,000 \text{ shares} + 20\,000 \text{ shares}) \div 2)} = \\3.00 per ordinary share</p>
19	D	<p>Working</p> <p>MV per share / EPS = $\frac{\\$25}{3} = 8.33$</p>
20	B	<p>Working</p> <p>$(\text{TCL} + \text{TNCL}) / \text{TA} = (115 + 185) / 750 = 40\%$</p>
21	B	<p>Working</p> <p>$(\text{TCL} + \text{TNCL}) / \text{TSE} = (75 + 175) / 250 = 1$</p>
22	A	
23	A	

1.3.3 Disclosures and Receivership

No.	Answers	Further explanations
1	C	
2	D	

No.	Answers	Further explanations
3	B	
4	A	
5	C	
6	A	
7	D	
8	B	Working Total sales @ 90% = $(10 + 4 + 7 + 9) \times 90\% = 27$
9	C	
10	C	
11	C	
12	B	
13	A	
14	B	
15	D	
16	C	
17	D	
18	C	
19	B	
20	C	
21	B	
22	A	
23	D	

No.	Answers	Further explanations
24	C	
25	B	
26	C	
27	A	
28	B	
29	A	
30	C	

Unit 2: Cost and Management Accounting

Module 1: Costing Principles

2.1.1 Introduction to Cost and Management Accounting

No.	Answers	Further explanations
1	D	
2	D	
3	C	
4	C	
5	D	

2.1.2 Manufacturing Accounts Preparation

No.	Answers	Further explanations
1	B	
2	D	
3	C	
4	D	

No.	Answers	Further explanations
8	A	<p>Working</p> <p>Cost of goods sold is calculated as follows.</p> $\begin{array}{r} \$3000 \times 8 = \quad \$24\,000 \\ \$5000 \times 8.40 = \quad \$42\,000 \\ \$6000 \times 8 = \quad \underline{\$48\,000} \\ \quad \quad \quad \$114\,000 \\ \$4000 \times 8.40 = \quad (\$33\,600) \\ \$6000 \times 8 = \quad (\$48\,000) \\ \$1000 \times 8.40 = \quad \underline{(\$8\,400)} \\ \quad \quad \quad \underline{\underline{\$24\,000}} \end{array}$
9	A	
10	D	
11	D	
12	C	<p>Working</p> $\sqrt{\frac{2 \times 30\,000 \times 20}{3}}$
13	A	
14	D	
15	D	<p>Working</p> <p>Safety stock = (maximum expected usage for the week – average usage per week) × lead time = (150 – 100) × 3 = 150</p> <p>Reorder point = (lead time × average weekly usage) + safety stock = (3 × 100) + 150 = 450</p>

2.1.5 Elements of Cost: Labour

No.	Answers	Further explanations
1	C	
2	C	

No.	Answers	Further explanations
3	A	Working Normal hours – idle hours × rate per hour = 40 – 3 = 37 $37 \times \text{£}18 = \$666$
4	B	Working Idle time × rate per hour + total direct labour = $3 \times \text{£}18 + \text{£}666 = \720
5	D	
6	A	
7	C	Explanation These are alternative treatments; they cannot be applied simultaneously. Period costs is not an option in this case because it refers to production workers.
8	B	
9	A	
10	C	
11	B	Working Number of hours × rate per hour = $40 \times \$50 = \2000
12	C	Working Time and half × overtime hours = $\$50 \times 1.5 \times 40 = \3000
13	D	
14	B	Working $600 \times \$0.50 = \300 $100 \times \$0.55 = \55 $45 \times \$0.60 = \underline{\$27}$ <u><u>\$382</u></u>
15	B	

2.1.6 Elements of Cost: Overheads

No.	Answers	Further explanations
1	D	Working Household department ÷ total space occupied = $(500 \div 1000) \times \$28\,000$ = \$14 000
2	D	Working Allocation basis: Janitorial + Mixing + Baking = $10 + 50 + 80 = 140$ Allocation: $(10 \div 140) \times \$800\,000 = \$57\,142$
3	D	
4	A	
5	A	
6	B	Working Budgeted overhead costs ÷ budgeted direct labour hours = $\$550\,000 \div 20\,000 = \27.50
7	C	
8	D	
9	D	
10	B	
11	A	
12	D	
13	C	Working Total overhead = Assembly $(8 \times \$8 = \$64)$ + Finishing $(15 \times \$15 = \$225)$ = \$289

No.	Answers	Further explanations
14	D	Working Direct material (\$130 + \$35) \$165 Direct labour (\$40 + \$90) \$130 Overhead (from previous question) <u>\$289</u> <u>\$584</u>
15	A	

2.1.7 Decision Making – Relevant Costing

No.	Answers	Further explanations
1	B	Working Cost per unit for direct material = $\$37\,500 \div 7\,500 = \5.00 Cost per unit for direct labour = $\$60\,000 \div 7\,500 = \8.00 Variable manufacturing overhead = $(\$20\,000 \times 30\%) \div 7\,500 = \0.80 Variable selling overhead = $(\$25\,000 \times 0.5 \times 60\%) \div 7\,500 = \1.00 Total unit cost = $\$5 + \$8 + \$0.80 + \$1 = \$14.80$ Cost to produce special order = $(200 \times \$14.80) + \400 [additional fixed cost] = \$3360
2	D	Working Price per unit to earn \$1000 = $(\$3360 + \$1000) \div 200 = \text{£}21.80$
3	B	

No.	Answers	Further explanations			
4	B	Working			
			Make \$	Buy \$	Net income increase (decrease) \$
		Direct materials	80 000	0	80 000
		Direct labour	40 000	0	40 000
		Variable manufacturing overhead	10 000	0	10 000
		Fixed manufacturing overhead	5 000	2 500	2 500
		Purchase price (75 000 × \$1.50)	0	112 500	(112 500)
			135 000	115 000	20 000
5	C				
6	D				
7	C				
8	B				
9	C				
10	D				
11	C				
12	A	Working			
		Expected decrease in revenue	(\$100 000)		
		Expected decrease in total variable cost	\$40 000		
		Expected decrease in fixed cost (50%)	<u>\$20 000</u>		
		Expected decrease in total cost	<u>\$60 000</u>		
		Expected decrease in operating income	<u><u>(\$20 000)</u></u>		
13	A				

No.	Answers	Further explanations																												
14	B	Working Direct material \$2 500 Direct labour \$1000 Variable manufacturing overhead <u>\$200</u> Total variable costs <u>\$3 700</u>																												
15	A	Working <table border="1"> <thead> <tr> <th></th> <th>Make \$</th> <th>Outsource \$</th> <th>Difference \$</th> </tr> </thead> <tbody> <tr> <td>Variable cost:</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Direct material</td> <td>2500</td> <td></td> <td>2500</td> </tr> <tr> <td> Direct labour</td> <td>1000</td> <td></td> <td>1000</td> </tr> <tr> <td> Variable manufacturing overhead</td> <td>200</td> <td></td> <td>200</td> </tr> <tr> <td>Purchase price (7 × \$500)</td> <td>0</td> <td>3500</td> <td>(3500)</td> </tr> <tr> <td></td> <td>3700</td> <td>3500</td> <td>200</td> </tr> </tbody> </table>		Make \$	Outsource \$	Difference \$	Variable cost:				Direct material	2500		2500	Direct labour	1000		1000	Variable manufacturing overhead	200		200	Purchase price (7 × \$500)	0	3500	(3500)		3700	3500	200
	Make \$	Outsource \$	Difference \$																											
Variable cost:																														
Direct material	2500		2500																											
Direct labour	1000		1000																											
Variable manufacturing overhead	200		200																											
Purchase price (7 × \$500)	0	3500	(3500)																											
	3700	3500	200																											

Module 2: Costing Systems

2.2.1 Traditional Costing and Activity Based Costing

No.	Answers	Further explanations
1	C	
2	D	
3	A	
4	C	
5	B	
6	A	Working 4000 units × 2.5 hrs = 10 000 hours

No.	Answers	Further explanations																				
7	B	Working $\text{OHAR} = \text{Total estimated overhead cost} \div \text{Total estimated activity} =$ $\$250\,000 \div ((4000 \text{ units} \times \$22.50) + (6000 \text{ units} \times \$31.50)) = \$250\,000 \div$ $\$279\,000 = \$0.90 \text{ per direct labour dollar}$																				
8	C	Working $4000 \text{ units} \times 2.5 \text{ hrs} \times \$9 = \$90\,000$																				
9	D	Working $\$281\,000 / 10\,000 \text{ hrs} = \28.10																				
10	D	Working $\$46\,000 / 1150 \text{ phone calls} = \40.00																				
11	C																					
12	C	Working $\text{POHAR} = \text{Total estimated overhead cost} \div \text{Total estimated activity} =$ $\text{Total estimated overhead cost} \div \text{Total labour hours} = \$252\,000 \div (4200 +$ $10\,800) = \$16.80$																				
13	B	Working $\text{Overhead absorbed} = \text{POHAR} \times \text{Activity for product} = \16.80×4200 $\text{direct labour hours} = \$70\,560$																				
14	A	Working <table border="1" data-bbox="331 1205 1336 1709"> <thead> <tr> <th></th> <th>Cost \$</th> <th>Total activity</th> <th>Overhead activity rate \$</th> <th>Custom tablets overhead cost using ABC</th> </tr> </thead> <tbody> <tr> <td>Set ups</td> <td>171 000</td> <td>300 set ups</td> <td>570/set up</td> <td>$\\$570 \times 120 =$ \$68 400</td> </tr> <tr> <td>Machine maintenance</td> <td>81 000</td> <td>9000 machine hours</td> <td>9/mhr</td> <td>$\\$9 \times 3600 =$ \$32 400</td> </tr> <tr> <td>Total manufacturing Overhead costs</td> <td>252 000</td> <td></td> <td></td> <td>$\\$68\,400 + \\$32\,400$ $= \\$100\,800$</td> </tr> </tbody> </table>		Cost \$	Total activity	Overhead activity rate \$	Custom tablets overhead cost using ABC	Set ups	171 000	300 set ups	570/set up	$\$570 \times 120 =$ \$68 400	Machine maintenance	81 000	9000 machine hours	9/mhr	$\$9 \times 3600 =$ \$32 400	Total manufacturing Overhead costs	252 000			$\$68\,400 + \$32\,400$ $= \$100\,800$
	Cost \$	Total activity	Overhead activity rate \$	Custom tablets overhead cost using ABC																		
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Total manufacturing Overhead costs	252 000			$\$68\,400 + \$32\,400$ $= \$100\,800$																		

No.	Answers	Further explanations																				
15	D	<p>Working</p> <table border="1"> <thead> <tr> <th></th> <th>Cost \$</th> <th>Total activity</th> <th>Overhead activity rate \$</th> <th>Slimline tablets overhead cost using ABC</th> </tr> </thead> <tbody> <tr> <td>Set ups</td> <td>171 000</td> <td>300 set ups</td> <td>570/set up</td> <td>$570 \times 180 = \\$102\,600$</td> </tr> <tr> <td>Machine maintenance</td> <td>81 000</td> <td>9000 machine hours</td> <td>9/mhr</td> <td>$9 \times 5400 = \\$48\,600$</td> </tr> <tr> <td>Total manufacturing Overhead costs</td> <td>252 000</td> <td></td> <td></td> <td>$\\$102\,600 + \\$48\,600 =$ $\\$151\,200$</td> </tr> </tbody> </table> <p>Difference in overhead = ABC cost – traditional costing cost = $\\$151\,200 - \\$70\,560 = \\$80\,640$</p>		Cost \$	Total activity	Overhead activity rate \$	Slimline tablets overhead cost using ABC	Set ups	171 000	300 set ups	570/set up	$570 \times 180 = \$102\,600$	Machine maintenance	81 000	9000 machine hours	9/mhr	$9 \times 5400 = \$48\,600$	Total manufacturing Overhead costs	252 000			$\$102\,600 + \$48\,600 =$ $\$151\,200$
	Cost \$	Total activity	Overhead activity rate \$	Slimline tablets overhead cost using ABC																		
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Total manufacturing Overhead costs	252 000			$\$102\,600 + \$48\,600 =$ $\$151\,200$																		

2.2.2 Job Costing

No.	Answers	Further explanations
1	B	
2	D	
3	A	
4	C	
5	A	<p>Working</p> <p>Overhead applied = Activity for the job \times *POHAR = Labour cost \times 60% = $(\\$120 \times 28 \text{ hours}) \times 60\% = \\2016</p> <p>*Labour rate per hour = $\\$3\,600\,000 \div 30\,000 \text{ hours} = \text{£}120$</p>
6	D	<p>Working</p> <p>Selling price of Job 121 = *Cost of Job 121 \times 110% = $\\$12\,144 \times 110\% = \\$13\,358.40$</p> <p>*Cost of Job 121 = Direct materials + Direct labour + Manufacturing overhead = $\\$6000 + (\\$120 \times 32 \text{ hours}) + (\\$120 \times 32 \text{ hours} \times 60\%) = \\$12\,144$</p>

No.	Answers	Further explanations																														
7	B																															
8	D																															
9	C	<p>Working</p> <p>Overhead application rate = (Total cost of Job P123 – Direct costs) ÷ Total Direct labour costs × 100 = (\$34 000 – (\$25 000 + \$5000)) ÷ \$25 000 × 100 = 16%</p>																														
10	B	<p>Working</p> <p>Overhead application rate = (Total cost of Job 2 × 34 – Direct costs) ÷ Total Direct costs × 100 = (\$16 800 – {[32 hours × \$250] + \$6000}) ÷ {[32 hours × \$250] + \$6000} × 100 = (\$16 800 – 14 000) ÷ 14 000 × 100 = 20%</p>																														
11	C	<p>Working</p> <p>Total overhead applied = Total labour cost × Predetermined overhead rate = (\$120 + \$130 + \$300 + \$240 + \$250 + \$230 + \$260) × 120% = \$1836</p>																														
12	B	<p>Working</p> <p>Ending WIP inventory = Job 620 + Job 623 = (\$100 + \$240 + \$240 × 120%) + (\$390 + \$260 + \$260 × 120%) = \$1590</p>																														
13	D	<p>Working</p> <p>Remember to include all the elements of cost, not only direct costs.</p> <p>Jobs 617, 618 and 621 were sold during the period. The calculation is as follows.</p> <table border="1" data-bbox="331 1260 1336 1723"> <thead> <tr> <th>Job No.</th> <th>Opening work in process \$</th> <th>Direct materials \$</th> <th>Direct labour \$</th> <th>Overhead applied \$</th> <th>Total \$</th> </tr> </thead> <tbody> <tr> <td>617</td> <td>120</td> <td>100</td> <td>120</td> <td>120 × 120% = 144</td> <td>484</td> </tr> <tr> <td>618</td> <td>200</td> <td>–</td> <td>130</td> <td>130 × 120% = 156</td> <td>486</td> </tr> <tr> <td>621</td> <td>–</td> <td>420</td> <td>250</td> <td>250 × 120% = 300</td> <td>970</td> </tr> <tr> <td>Total cost of goods sold</td> <td>320</td> <td>520</td> <td>500</td> <td>600</td> <td>\$1940</td> </tr> </tbody> </table>	Job No.	Opening work in process \$	Direct materials \$	Direct labour \$	Overhead applied \$	Total \$	617	120	100	120	120 × 120% = 144	484	618	200	–	130	130 × 120% = 156	486	621	–	420	250	250 × 120% = 300	970	Total cost of goods sold	320	520	500	600	\$1940
Job No.	Opening work in process \$	Direct materials \$	Direct labour \$	Overhead applied \$	Total \$																											
617	120	100	120	120 × 120% = 144	484																											
618	200	–	130	130 × 120% = 156	486																											
621	–	420	250	250 × 120% = 300	970																											
Total cost of goods sold	320	520	500	600	\$1940																											

No.	Answers	Further explanations
14	D	
15	B	
16	B	Working $\$200\,000 \times 75\% = \$150\,000$
17	B	Working $\$175\,000 - \$150\,000 = \$25\,000$ under-applied
18	A	Working Overhead % for Job N75 = Overhead applied \div Total cost of job $\times 100 =$ $(4000 \text{ labour hours} \times \$25.00) \div (66000 + 84000 + (4000 \times 25.00)) \times 100 = 40\%$
19	B	Working Total over/under applied overhead = Actual overhead – overhead applied $= \$160\,000 - (4000 \text{ hrs} + 1800 \text{ hrs}) \times 25 = \$160\,000 - \$145\,000 = \$15\,000$ under applied
20	C	Working Gross profit percentage = (Selling price – Cost of Job) \div Selling Price $\times 100 =$ $\{ \$280\,000 - [\$66\,000 + \$84\,000 + (4000 \times \$25.00)] \} \div \$280\,000 \times 100 = 11\%$

2.2.3 Process Costing

No.	Answers	Further explanations
1	A	
2	B	
3	D	

No.	Answers	Further explanations
4	A	<p>Working</p> <p>Beginning work-in-process inventory (80% to complete): $4000 \times 80\%$ 3200</p> <p>Units started and completed during the period: (Total units accounted for – *ending WIP inventory – *beginning WIP inventory) $(12\,000 \text{ units} - 3\,000 \text{ units} - 4\,000 \text{ units})$ <u>5000</u></p> <p>Units completed and transferred out 8200</p> <p>Ending work-in-process inventory (40% complete): $3000 \times 40\%$ <u>1200</u></p> <p>Total equivalent units <u><u>9400</u></u></p> <p>*This does not consider the percentage of completion</p>
5	C	<p>Working</p> <p>Beginning work-in-process inventory (80% to complete): $4000 \times 80\%$ 3200</p> <p>Units started and completed during the period: (Total units accounted for – *ending WIP inventory – *beginning WIP inventory) $(40\,000 \text{ units} - 6\,000 \text{ units} - 4\,000 \text{ units})$ <u>30\,000</u></p> <p>Units completed and transferred out 33\,200</p> <p>Ending work-in-process inventory (40% complete): $6000 \times 40\%$ <u>2400</u></p> <p>Total equivalent units <u><u>35\,600</u></u></p> <p>*This does not consider the percentage of completion</p>
6	A	<p>Working</p> <p>When using weighted average, the percentage on completion for beginning inventory is ignored.</p> <p>Units completed and transferred out (Total units accounted for – *ending WIP inventory) $(40\,000 - 6000)$ 34\,000</p> <p>Ending work-in-process inventory (40% complete): $6000 \times 40\%$ <u>2400</u></p> <p>Total equivalent units <u><u>36\,400</u></u></p> <p>*This does not consider the percentage of completion</p>

No.	Answers	Further explanations
7	D	<p>Working</p> <p>Using both FIFO and weighted average methods the answer is the same. This part of the production report does not consider the percentage of completion.</p> <p>Total units to account for = Beginning WIP inventory + Units started during the period</p> <p>= 4000 units + 36 000 units = 40 000 units</p>
8	D	<p>Working</p> <p>Using both FIFO and weighted average methods the answer is the same. This part of the production report does not consider the percentage of completion.</p> <p>Total units to account for = Beginning WIP inventory + Units started during the period</p> <p>= 4 000 units + 36 000 units = 40 000 units</p>
9	C	<p>Working</p> <p>$(4000 \times 80\%) + 6000 - 2000 + (2000 \times 30\%) = 7800$</p>
10	D	<p>Working</p> <p>$4000 + 6000 - 2000 + (2000 \times 30\%) = 8600$</p>
11	D	<p>Working</p> <p>$4000 + 6000 = 10\ 000$</p>
12	B	
13	B	
14	D	
15	D	

No.	Answers	Further explanations
16	C	<p>Working</p> <p>Beginning work-in-process inventory (30% to complete): $15\,000 \times 30\% =$ 4500</p> <p>Units started and completed during the period: (Total units accounted for – *ending WIP inventory – *beginning WIP inventory) $(165\,000 \text{ units} - 45\,000 \text{ units} - 15\,000 \text{ units})$ <u>105\,000</u></p> <p>Units completed and transferred out 109\,500</p> <p>Ending work-in-process inventory (60% complete): $45\,000 \times 60\%$ <u>27\,000</u></p> <p>Total equivalent units <u><u>136\,500</u></u></p>
17	B	<p>Working</p> <p>Beginning work-in-process inventory (60% to complete): $15\,000 \times 60\% =$ 9000</p> <p>Units started and completed during the period (Total units accounted for – *ending WIP inventory – *beginning WIP inventory) $(165\,000 \text{ units} - 45\,000 \text{ units} - 15\,000 \text{ units})$ <u>105\,000</u></p> <p>Units completed and transferred out 114\,000</p> <p>Ending work-in-process inventory (20% complete): $45\,000 \times 20\%$ <u>9000</u></p> <p>Total equivalent units <u><u>123\,000</u></u></p>
18	B	<p>Working</p> <p>Equivalent unit cost: Direct Materials = Cost added during the period ÷ Equivalent units = $\\$297\,000 \div 136\,500 = \\2.176</p>
19	C	<p>Working</p> <p>Equivalent unit cost: Conversion Cost = Cost added during the period ÷ Equivalent units = $\\$273\,600 \div 123\,000 = \\2.224</p> <p>Total Equivalent Unit Cost = Equivalent unit cost: Direct Materials + Equivalent unit cost: Conversion Cost = $\\$2.176 + \\$2.224 = \\$4.40$</p>
20	A	<p>Working</p> <p>$15\,000 \times 30\% = 4500$</p>

2.2.4 Marginal Costing and Absorption Costing Techniques

No.	Answers	Further explanations										
1	C											
2	B											
3	C											
4	D											
5	D											
6	A											
7	D											
8	C	<p>Explanation and working</p> <p>To calculate the fixed manufacturing overhead unit cost, remember to divide the total fixed manufacturing overhead by the number of units produced. Remember this unit cost can change based on the level of output. The calculation for this question is as follows.</p> <p>Total fixed manufacturing overhead ÷ Number of units produced = $\\$150\,000 \div 7\,500 \text{ units} = \\20.00</p>										
9	D	<p>Working</p> <p><u>Absorption costing: total unit cost</u></p> <table> <tr> <td>Direct materials</td> <td style="text-align: right;">\$20</td> </tr> <tr> <td>Direct labour</td> <td style="text-align: right;">\$40</td> </tr> <tr> <td>Variable manufacturing overhead</td> <td style="text-align: right;">\$8</td> </tr> <tr> <td>Unit fixed manufacturing overhead</td> <td style="text-align: right;"><u>\$20</u></td> </tr> <tr> <td>Total unit cost</td> <td style="text-align: right;"><u>\$88</u></td> </tr> </table>	Direct materials	\$20	Direct labour	\$40	Variable manufacturing overhead	\$8	Unit fixed manufacturing overhead	<u>\$20</u>	Total unit cost	<u>\$88</u>
Direct materials	\$20											
Direct labour	\$40											
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10	A	<p>Working</p> <p><u>Variable costing: total unit cost</u></p> <table> <tr> <td>Direct materials</td> <td style="text-align: right;">\$20</td> </tr> <tr> <td>Direct labour</td> <td style="text-align: right;">\$40</td> </tr> <tr> <td>Variable manufacturing overhead</td> <td style="text-align: right;"><u>\$8</u></td> </tr> <tr> <td>Total unit cost</td> <td style="text-align: right;"><u>\$68</u></td> </tr> </table>	Direct materials	\$20	Direct labour	\$40	Variable manufacturing overhead	<u>\$8</u>	Total unit cost	<u>\$68</u>		
Direct materials	\$20											
Direct labour	\$40											
Variable manufacturing overhead	<u>\$8</u>											
Total unit cost	<u>\$68</u>											

No.	Answers	Further explanations
11	B	Working Absorption costing closing inventory cost = Closing inventory units × total unit product cost = *700 units × \$88 total unit product cost = \$61 600 *Closing inventory units = Opening Inventory units + units produced – Units sold = 0 + 7500 – 6800 = 700 units
12	B	Working Absorption costing closing inventory cost = Closing inventory units × total unit product cost = *700 units × \$68 total unit product cost = \$47 600 *Closing inventory units = Opening Inventory units + units produced – Units sold = 0 + 7500 – 6800 = 700 units
13	D	
14	B	
15	B	

2.2.5 Service Sector Costing

No.	Answers	Further explanations
1	C	
2	B	
3	C	
4	D	
5	C	
6	A	
7	B	Working POHAR = Total Estimated Overhead ÷ Total Estimated Activity = (\$1 923 750 + \$645 000 + \$555 000) ÷ 3 675 000 = \$0.85

No.	Answers	Further explanations
8	C	Working Alexander Caterers = POHAR × Actual auditor direct labour costs Total overhead applied = $\$0.85 \times (360 \times [\$3\,675\,000 \div 29\,400 \text{ hours}])$ = $\$38\,250$
9	C	Working Cost of Alexander Job = Direct Labour cost + Overhead Applied = (360 hours × \$125 per hour) + \$38 250 = \$83 250 $\$3\,675\,000 / 29\,400 \text{ hrs} = \125 ph
10	C	

Module 3: Planning and Decision Making

2.3.1 Budgeting

No.	Answers	Further explanations
1	C	
2	D	
3	D	
4	D	
5	A	
6	C	Working Sales 120 Ending inventory (60% × 140) August 84 Opening inventory <u>(50)</u> Budgeted purchases for July <u>154</u>
7	D	
8	D	
9	A	

No.	Answers	Further explanations																								
10	A																									
11	A																									
12	C																									
13	D	<p>Working</p> <table border="1"> <thead> <tr> <th></th> <th>January</th> <th>February</th> <th>March</th> </tr> </thead> <tbody> <tr> <td>Budgeted sales in units</td> <td>50 000</td> <td>60 000</td> <td>80 000</td> </tr> <tr> <td>× selling price</td> <td>× \$20</td> <td>× \$20</td> <td>× \$20</td> </tr> <tr> <td></td> <td>\$1 000 000</td> <td>\$1 200 000</td> <td>\$1 600 000</td> </tr> </tbody> </table>		January	February	March	Budgeted sales in units	50 000	60 000	80 000	× selling price	× \$20	× \$20	× \$20		\$1 000 000	\$1 200 000	\$1 600 000								
	January	February	March																							
Budgeted sales in units	50 000	60 000	80 000																							
× selling price	× \$20	× \$20	× \$20																							
	\$1 000 000	\$1 200 000	\$1 600 000																							
14	B	<p>Working</p> <table border="1"> <thead> <tr> <th></th> <th>January</th> <th>February</th> <th>March</th> </tr> </thead> <tbody> <tr> <td>Accounts receivable</td> <td>600 000</td> <td></td> <td></td> </tr> <tr> <td>Sales January (25%, 75%) × 1 000 000</td> <td>250 000</td> <td>750 000</td> <td></td> </tr> <tr> <td>Sales February (25%, 75%) × 1 200 000</td> <td></td> <td>300 000</td> <td>900 000</td> </tr> <tr> <td>Sales March (25%, 75%) × 1 600 000</td> <td></td> <td></td> <td>400 000</td> </tr> <tr> <td></td> <td>850 000</td> <td>1 050 000</td> <td>1 300 000</td> </tr> </tbody> </table>		January	February	March	Accounts receivable	600 000			Sales January (25%, 75%) × 1 000 000	250 000	750 000		Sales February (25%, 75%) × 1 200 000		300 000	900 000	Sales March (25%, 75%) × 1 600 000			400 000		850 000	1 050 000	1 300 000
	January	February	March																							
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16	A																									
17	D	<p>Working</p> <table> <tbody> <tr> <td>Cash balance</td> <td>\$25 000</td> </tr> <tr> <td>Cash collections</td> <td><u>\$90 000</u></td> </tr> <tr> <td>Cash available</td> <td>\$115 000</td> </tr> <tr> <td>Cash disbursement</td> <td><u>\$(150 000)</u></td> </tr> <tr> <td>Cash deficit</td> <td><u><u>\$(35 000)</u></u></td> </tr> </tbody> </table> <p>Ending cash balance required is \$10 000. Therefore, the company must borrow \$45 000 to make up the cash deficit of \$35 000</p>	Cash balance	\$25 000	Cash collections	<u>\$90 000</u>	Cash available	\$115 000	Cash disbursement	<u>\$(150 000)</u>	Cash deficit	<u><u>\$(35 000)</u></u>														
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No.	Answers	Further explanations															
18	A																
19	D																
20	C	Working <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>July \$</th> <th>August \$</th> <th>September \$</th> </tr> </thead> <tbody> <tr> <td>40 000</td> <td>60 000</td> <td></td> </tr> <tr> <td></td> <td>60 000</td> <td>90 000</td> </tr> <tr> <td></td> <td></td> <td>36 000</td> </tr> <tr> <td></td> <td></td> <td>126 000</td> </tr> </tbody> </table>	July \$	August \$	September \$	40 000	60 000			60 000	90 000			36 000			126 000
July \$	August \$	September \$															
40 000	60 000																
	60 000	90 000															
		36 000															
		126 000															

2.3.2 Standard Costing and Variances

No.	Answers	Further explanations
1	A	
2	A	
3	A	
4	D	
5	D	Working $\text{Actual cost}(\text{AH} \times \text{SR}) = \$15\,000 - (1600 \times \$10) = \$1\,000 \text{ F}$
6	A	
7	D	
8	D	
9	D	
10	A	
11	D	
12	C	

No.	Answers	Further explanations
13	A	
14	B	
15	A	
16	D	
17	B	
18	C	
19	A	Working $5000 \times 2.5 = 12\,500$
20	D	Working $SR(AH - SH) = \$5(13\,000 - 12\,500) = \$2\,500\text{ U}$
21	D	Working $(AH \times AR) - (AH \times SR) = (30\,000) - (15\,000 \times \$3) = \$15\,000\text{ F}$
22	D	Working $SR(AH - SH) = \$3(15\,000\text{ hrs} - (2.5 \times 5000\text{ units})) = \$7\,500\text{ U}$

2.3.3 Cost Volume Profit

No.	Answers	Further explanations
1	A	
2	D	
3	B	Working $\$200\,000 - (\$80\,000 / 0.5) = \$40\,000$
4	D	Working Selling price - variable cost = $(\$1\,000 - \$700) = \$300$ Fixed cost \div Contribution margin per unit = $\$300\,000 \div \$300 = 1\,000$
5	D	Working $\$100\,000 + \$500\,000 = 30\%$ Variable cost = $70\% = \$1\,400\,000$ Therefore sales = $\$2\,000\,000$

No.	Answers	Further explanations												
6	A													
7	D													
8	C													
9	B													
10	D													
11	D													
12	D													
13	B													
14	A	Working $(62\,500 \text{ units} \times \$3) - \$100\,000 - \$25\,000 = \$62\,500$ therefore variable cost = \$1												
15	D													
16	C													
17	C													
18	D	Working Break-even in dollars = fixed expenses \div contribution margin ratio = $\$100\,000 \div 50\% = \$200\,000$ Margin of safety = Sales – breakeven sales = $\$500\,000 - \$200\,000 = \$300\,000$ Margin of safety % = Margin of safety \div sales = $\$300\,000 \div \$500\,000 \times 100 = 60\%$												
19	B	Working <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Per unit (\$)</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Selling price ($\\$150\,000 \div 5\,000$)</td> <td style="text-align: center;">30</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Variable expense ($\\$90\,000 \div 5\,000$)</td> <td style="text-align: center;">18</td> <td style="text-align: center;">60</td> </tr> <tr> <td>Contribution</td> <td style="text-align: center;">12</td> <td style="text-align: center;">40</td> </tr> </tbody> </table>		Per unit (\$)	%	Selling price ($\$150\,000 \div 5\,000$)	30	100	Variable expense ($\$90\,000 \div 5\,000$)	18	60	Contribution	12	40
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20	D	Working Fixed expenses / Contribution margin % = $30\,000 / 0.4 = \$75\,000$												

2.3.4 Capital Budget Techniques on Investment Decision Making

No.	Answers	Further explanations
1	C	Working Annual average investment = $(\$200\,000 + \$20\,000) \div 2 = \$110\,000$ Accounting rate of return = $\$40\,000 \div \$110\,000 \times 100 = 36.4\%$
2	B	
3	C	
4	C	
5	A	
6	C	
7	D	
8	D	
9	D	
10	D	
11	A	
12	C	
13	D	
14	B	Working Initial investment \div expected annual net cash flows = $\$800\,000 \div \$200\,000 = 4$ years
15	A	

No.	Answers	Further explanations																											
16	A	<p>Working</p> <table border="1"> <thead> <tr> <th>Number of years</th> <th>Discount</th> <th>\$</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td>(5 000)</td> </tr> <tr> <td>1</td> <td>$0.893 \times \\$2500$</td> <td>2232.50</td> </tr> <tr> <td>2</td> <td>$0.797 \times \\$2000$</td> <td>1594</td> </tr> <tr> <td>3</td> <td>$0.712 \times \\$2000$</td> <td>1424</td> </tr> <tr> <td>4</td> <td>$0.636 \times \\$1500$</td> <td>954</td> </tr> <tr> <td>Total value of discounted cash flows</td> <td></td> <td>6204.50</td> </tr> <tr> <td>Initial investment</td> <td></td> <td>(5 000)</td> </tr> <tr> <td>NPV</td> <td></td> <td>1204.50</td> </tr> </tbody> </table>	Number of years	Discount	\$	0		(5 000)	1	$0.893 \times \$2500$	2232.50	2	$0.797 \times \$2000$	1594	3	$0.712 \times \$2000$	1424	4	$0.636 \times \$1500$	954	Total value of discounted cash flows		6204.50	Initial investment		(5 000)	NPV		1204.50
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