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Marks	167.91/210.00
Grade	**79.96** out of 100.00

Question 1

Correct

Mark 34.00 out of 34.00

Q1.

(a) Take the following list of accounts and for steps 1-5 and 7, show equal entries in two separate accounts:

Accounts:

1.Cash

2.Accounts payable (money a company owes to its suppliers)

3.Inventory of raw materials

4.Work in progress (the value of the goods that are on the shop floor being manufactured into a product)

5.Inventory of finished products

6.Cost of goods sold

7.Sales revenue

8.Accounts receivable (money due to be collected from a customer)

Assume that the terms on which you buy materials and sell products are standard commercial terms, i.e. you issue or receive a purchase order, which triggers an invoice, and the invoice is paid 30 days later.

Consider these steps:

1.Order and receive $1,000 of steel from a supplier.

Credit: 2 ✔ (Account number as listed, fill in an integer from 1 to 8) go up by $1000

Debit: 3 ✔ (Account number as listed, fill in an integer from 1 to 8) go up by $1000

2.Pay the supplier (typically 30 days later).

Debit: 2 ✔ (Account number as listed, fill in an integer from 1 to 8) go down by $1000

Credit: 1 ✔ (Account number as listed, fill in an integer from 1 to 8) go down by $1000

3.Move the steel onto the shop floor, and start fabrication.

Credit: 3 ✔ (Account number as listed, fill in an integer from 1 to 8) go down by $1000

Debit: 4 ✔ (Account number as listed, fill in an integer from 1 to 8) go up by $1000

4.Incur $1,000 of shop labor costs in making the product.

Credit: 1 ✔ (Account number as listed, fill in an integer from 1 to 8) go down by $1000 (people cash their payroll checks right away)

Debit: 4 ✔ (Account number as listed, fill in an integer from 1 to 8) go up by an additional $1000

5.Finish fabrication of an item with a cost of $2,000 of which the raw steel's cost is $1,000 and shop floor labor is $1,000, and move it to finished product inventory.

Credit: 4 ✔ (Account number as listed, fill in an integer from 1 to 8) go down by $2000

Debit: 5 ✔ (Account number as listed, fill in an integer from 1 to 8) go up by $2000

6.Sell the material to a customer for $2,500.

There are four entries here (two offsetting sets).

(1)

Credit: 5 ✔ (Account number as listed, fill in an integer from 1 to 8) go down by $2000

Debit: 6 ✔ (Account number as listed, fill in an integer from 1 to 8) go up by $2000

(2)

Credit: 7 (Account number as listed, fill in an integer from 1 to 8) go up by $2500

Debit: 8 (Account number as listed, fill in an integer from 1 to 8) go up by $2500

7.The customer pays (typically 30 days later).

Credit: 8 (Account number as listed, fill in an integer from 1 to 8) go down by $2500

Debit: 1 (Account number as listed, fill in an integer from 1 to 8) go up by $2500

(b) What book value do you think the item would have sitting in finished product inventory, the cost incurred in making it ($2,000) or its likely sale price ($2,500)?

The book value should be $ 2000

Question 2

Partially correct

Mark 38.00 out of 40.00

Q2. Which of the following items would you classify in COGS? (Fill in an integer number, 1 means "Yes", 2 means "No", 3 means "Maybe")

1.Circuit boards that go into the manufactured item 1 ✔

2.Stationery 2 ✔

3.The pay of the receptionist in the sales office 2 ✔

4.The pay of the receptionist in the manufacturing plant 2 ✔

5.Miscellaneous screws and fittings 2 ✔

6.Telephone charges 2 ✔

7.Raw steel for structural members 1 ✔

8.The pay of a welder brought in on contract 1 ✔

9.The pay of a welder on salary 2 ✔

10.The pay of the floor sweeper in the manufacturing plant 2 ✔

11.The cost of the contract cleaning in the manufacturing plant 2 ✔

12.The cost of the crew of a service vehicle 1 ✔

13.The maintenance charges of a service vehicle 1 ✔

14.The annual registration cost of a service vehicle 2 ✔

15.The cost of the annual business permits 2 ✔

16.Welding consumables (i.e. welding rod) 3 ✔

17.The pay of the shipping department 1 ✖

18.Part or all of the company president's salary 2 ✔

19.Freight on inbound materials 1 ✔

20.Freight on outbound products (assuming FOB point is remote from the factory, i.e. the manufacturer pays the freight rather than the customer.) 1 ✔

Question 3

Correct

Mark 14.00 out of 14.00

Q3.

You are the new marketing VP for Watermetco, a company that sells two items: meters manufactured by a major supplier (an OEM, or Original Equipment Manufacturer) and meter servicing and calibration. These business lines are fairly independent in that you service all kinds of meters, not just the ones you sell, and you sell meters to customers who do their own service. Hence the two lines of business are not linked, i.e. you don't need to sell a meter to get the service work for the meter.

Watermetco Financial Forecast US Regional Office

	Meter Sales	Meter Service	Total
Revenue			
Product sales	2,100,000		2,100,000
Service sales		672,000	672,000
Parts sales for service		39,000	39,000
Subtotal	2,100,000	711,000	2,811,000
Percent of total (%)	74.7	25.3	100
Direct Costs			
Cost of materials	1,942,000	36,500	1,978,500
Direct salaries and fringe per product (includes sales costs)	71,800	213,600	285,400
WCB and other direct employee costs	700	1,100	1,800
Government sealing fees		2,800	2,800
Freight		18,600	18,600
Direct sales costs (travel, etc.)	10,000	3,400	13,400
Small tools and supplies		9,500	9,500
Subtotal	2,024,500	285,500	2,310,000
Contribution margin	75,500	425,500	501,000
CM (%)	3.6	59.8	17.8
General and Admin Costs			
Travel and accommodation			62,000
Advertising and promotions			65,000
Vehicle lease			6,000
Business and property tax			20,700
Legal and professional fees			12,000
Office wages and salaries			96,000
Office fringe benefits			11,900
Lawn, snow, cleaning, and security			6,700
Utilities			13,000
Printing and stationery			7,000
Subscriptions			1,200
Telephone			12,800
Subtotal			314,300
Net income			186,700

Your customers are water utilities. These utilities could buy the meters directly from the manufacturer, but they place orders through you for convenience. You have the summary shown in the following table for the current performance of the US region from your financial contact with the company.

The president of the company tells you that as part of the overall strategy of the company, you are to ensure an expansion of activity in the existing US region with the goal of generating more net income. As a result, you are going to hire a sales leader.

Based on the financial statement, calculate the following items required for your consideration: (Fill in the right option number, an integer from 1 to 4)

1.With the current income statement, which business line is dominant in sales volume? (1. "Meter Sales" 2. "Meter Service")

1 ✔

2.For Meter Sales line, if the sales volume is doubled, how much would the amount of contribution margin increase be?(1. $0; 2. $50,500; 3. $100,500; 4. $75,500) 4 ✔

3.For Meter Sales line, how much the sales volume should be increased in absolute amount in order to justify a sales leader at the

salary of $100,000?(1. $2,777,800; 2. $200,000; 3. $170,000; 4. $75,500) 1

4.For Meter Services line, if the service and part sales volume is doubled, how much would the amount of contribution margin increase be? (1. $75,500; 2. $425,500; 3. $100,00; 4. $277,800) 2

5.For Meter Services line, how much the sales volume should be increased in percentage in order to justify a sales leader at the salary of $100,000?(1. 20%; 2. 100%; 3. 50%; 4. 23.5%) 4

6.For Meter Services line, to earn enough contribution margin as much as the doubling sales in the Meter Sales line, how much the sales volume should be increased in percentage?(1. 18%;2. 25%;3. 50%;4. 65%) 1

7.Which business line should the new sales leader should be looked into as the first priority? (1. "Meter Sales" 2. "Meter Service") 2

Question 4

Partially correct

Mark 6.00 out of 12.00

Q4.

The test to differentiate current from long-term assets and liabilities is whether the payment is due within one year. Some loans have what is called balloon payment, that means from the term of the loan, only interest is paid, and at the end of the loan term, the entire principle is repaid. This kind of financing is rare because it does not reflect the depreciation of assets, but it sometimes occurs if there is an excess of assets to secure the loan. Imagine that a company has a loan for $25 million.

What is the interest and the 'current liability of the loan' in year one for three different loan types? Assume the interest rates for these loans are 8% annually.

(1)a five-year term with straight-line repayment of principal

(2)a loan with principal recovered by a full balloon payment at the end of year five, and

(3)a loan with a leveled (mortgage) type annual repayment with a 20-year term and 8% interest

An 8% 20-year term mortgage is given in the table below based on the initial $1000 loan.

(a) From the project balance diagram, construct the project's original cash flows.

	Level			
Year	Interest Paid ($)	Principal Paid ($)	Total Payment ($)	Remaining Balance ($)
1	80.00	21.85	101.85	978.15
2	78.25	23.60	101.85	954.55
3	76.36	25.49	101.85	929.06
4	74.32	27.53	101.85	901.53
5	72.12	29.73	101.85	871.80
6	69.74	32.11	101.85	839.69
7	67.18	34.68	101.85	805.02
8	64.40	37.45	101.85	767.57
9	61.41	40.45	101.85	727.12
10	58.17	43.68	101.85	683.44
11	54.67	47.18	101.85	636.26
12	50.90	50.95	101.85	585.31
13	46.82	55.03	101.85	530.28
14	42.42	59.43	101.85	470.85
15	37.67	64.18	101.85	406.67
16	32.53	69.32	101.85	337.35
17	26.99	74.86	101.85	262.48
18	21.00	80.85	101.85	181.63
19	14.53	87.32	101.85	94.31
20	7.54	94.31	101.85	0.00

Fill in the table below. (Results should be integer number)

Loan	Interest of year 1($)	Current liability of the loan($)
(1)	$ 2000000 ✔	$ 20738589 ✘
(2)	$ 2000000 ✔	$ 225000000 ✘
(3)	$ 2000000 ✔	$ 24453695 ✘

Question **5**

Partially correct

Mark 18.00 out of 36.00

Q5.

Take the following information on a company, and say what assets the company has and where the money came from to own those assets (its liabilities and equity) at the end of two years of operation (assume the principal repayment on debt has been made for year 2):

·The company has gross sales of $48 million per year, and the pattern of sales is even, i.e. there is no cyclical pattern to sales.

·Customers are large firms with a typical large-firm payment pattern, i.e. 45 days in terms of payments

·COGS for the business is 60% and is material only; all labor costs are in SG&A.

·Monthly payroll is $200,000

·There is enough raw material on hand to support one month of manufacturing, and two months of actual production of finished goods is in the warehouse (remember that finished goods in inventory are carried on the books as COGS, not expected sale price).

·The company pays its suppliers 30 days after goods received.

·The owners started the business with an initial capital injection of $5.6 million 25 months ago.

·The company borrowed $3 million of long term debt, with the principal repayable in 10 equal annual payments.

·The company bought $8 million in assets at start-up and picked a depreciation period of 10 years. No additional assets have been purchased.

·In the first two years of the business, the company had a cumulative net income of $1.8 million and paid dividends of $300,000 ($150,000 per year) to the owners.

·The business has a short-term credit line that runs positive or negative based on the fluctuations of the business (just like a personal checking account).

Prepare a balance sheet and use it to answer the following questions:

(1)What assets does the business have? Which is larger: current assets or fixed?

(2)How much the short-term debt does the business have?

(3)How much working capital does the business have?

(4)If the cumulative dividend over two years had been $1.8 Million instead of $300,000 (if all the profits had been taken out of the business as dividends), what would be the short-term debt will be? Would working capital still be positive?

(5)If you cut the inventory in half by a rigorous program of 'just-in-time' manufacturing and shipping, by how much would your bank borrowings drop? Would working capital change?

Fill in the table below. (Results should be integer number except for the working capital ratio which should keep 2 decimal digits)

In Class Balance Sheet **($000)**
Second Example

Assets		Liabilities	
Current Assets		Current Liabilities	
Cash	--	Short-term credit line	13018 ✗
Receivables	5918 ✗	Accounts payable	2400 ✓
Short-term investments	--	Accrued expenses	200 ✗
Inventory	7200 ✓	Taxes payable	--
Prepaid expenses	--	Current portion of long-term debt	300 ✓
	13118 ✗		15918 ✗
Fixed Assets		Long-Term Debt	
Land, building, and equipment at cost	8000 ✓	Repayable grants	--

Less accumulated depreciation	1600 ✔		Long-term debt	2100 ✔
		6400 ✔		
			Shareholders' Equity	
Long-term investments		--	Capital shares	5600 ✔
Goodwill		--	Retained earnings	1500 ✔
Total assets		6718 ✘	Total liability and equity	6718 ✘

Working capital	-2800 ✘
Working capital ratio	0.82 ✘

Question 6

Partially correct

Mark 57.91 out of 74.00

Q6.

Growthco goes through another year of operation (next year). Prepare a statement of cash flow for next year and comment on Growthco, comparing its performance next year to its performance this year (one paragraph or less). Growthco's income statement and balance sheet for next year are shown as follows:

Growthco Income Statement ($000)

	This year	Next year
Revenue	4,223	5,477
Allowance for bad debt	27	31
Net revenue	4,196	5,446
Cost of goods sold	2,695	3,488
Contribution margin	1,501	1,958
Contribution margin (%)	35.5	35.7
Sales, General, and Administrative Expenses		
All items except depreciation	719	815
Depreciation	620	620
Operating income	162	523
Other income	-24	-21
Net income	138	502
Growthco statement of Retained Earnings ($000)		
Retained earnings at start of year	482	582
Plus net income for this year	138	502
Less dividend paid this year	38	200
Retained earnings at end of year	582	884

Fill in the following form, the results should be integer values.

Growthco Balance Sheet ($000)

	This Year	Next Year	Source	Use
Assets				
Current Assets				
Cash	--	--		--
Receivables	877	1,140		263 ✔
Short-term investments	--	--		--
Inventory	589	754		165 ✔
Prepaid expenses	54	66		12 ✔
	1,520	1,960		
Fixed Assets				
Land, building, and equipment at cost	6,200	6,200		--

Less accumulated depreciation	1,520	2,140	620 ✓	
	4,680	4,060		
Long-term investments	--	--		--
Goodwill	--	--		--
Total Assets	6,200	6,020		
Liabilities				
Current Liabilities				
Short-term credit line	609	53		556 ✓
Accounts payable	387	477	90 ✓	
Accrued expenses	67	93	26 ✓	
Taxes payable	15	33	18 ✓	
Current portion of long-term debt	60	60	--	
	1,138	716		
Long-Term Debt				
Repayable grants	--	--		
Long-term debt	$480	$420		$ 60 ✓
Shareholders' Equity				
Capital shares	$4,000	$4,000	$-	
Retained earnings	$582	$884	$ 302 ✓	
Total liability and equity	$6,200	$6,020		
Sources/uses of funds			$ 1056 ✓	$ 1056 ✓

Growthco Statement of Cash Flow ($000)

	This Year	Next Year
Operating Activities		
Net earnings for the year	138	502 ✓
Depreciation	620	620 ✓
Changes in non-cash working capital	-297	306 ✗

Subtotal	461	1428 ✗
Investing Activities		
Additions to fixed assets	-1700	--
Additions to goodwill and intangibles	--	--
Subtotal	-1700	--
Financing Activities		
Dividends	-38	-200 ✓
Net new long-term borrowings	160	-60 ✓
Net new capital shares	700	--
Subtotal	822	-260 ✓
Funds flow	-417	1168 ✗
Cash on hand (start of year)	-192	-609 ✓
Cash on hand (end of year)	-609	559 ✗
Change in cash position	-417	1168 ✗

◄ Assignment #3 Answers

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Midterm #1 Review Questions and Answers ►