

UNIVERSITY OF GRONINGEN
Faculty of Economics and Business
Department of Accounting

ANSWERS
RESIT FINANCIAL ACCOUNTING
FOR IB / E&BE

Semester 1.2 2016/2017
Monday March 27, 2017
Time: 14:00 to 17:0
Location: Aletta Jacobs Hall

Exercise 1 (40 credits)

Wholesale dealer The Drone Company was founded on July 1, 2014. The Drone Company imports and sales one product only - cheap drones for funny games. On January 1, 2017, the balance sheet of The Drone Company is as follows:

The Drone Company			
Balance sheet as of January 1, 2017 (in €s)			
Building	1,250,000	Mortgage	1,000,000
Less: Accumulated depreciation-Building	100,000	Accounts payable	156,988
	1,150,000	Interest payable	6,667
		Total liabilities	1,163,655
Vans	175,000		
Less: Accumulated depreciation-Vans	80,500	Common stock	750,000
	94,500	Retained earnings	200,802
		Total stockholder's equity	950,802
Merchandise inventory	522,500		
Accounts receivable (net)	234,834		
Cash	112,623		
	2,114,457		2,114,457

The building is depreciated in 25 years on a straight-line basis. The residual value of the building after 25 years is €250,000. The building was partially financed with a mortgage. The mortgage will be repaid at once after 25 years. Interest on the mortgage is 4% on an annual basis. Interest payments take place semi-annually, on April 30 and October 30.

The Drone Company's car park comprises five vans. Each of the five vans was purchased for €35,000. The residual value per van is €7,000. The vans are depreciated in four years on a straight-line basis. The first and the second car were bought on January 1, 2014; the third on July 1, 2014; the fourth on January 1, 2015; and the fifth on January 1, 2016.

The Drones Company's merchandise inventory consists of 5,500 drones. The schedule below provides more detailed information regarding the dates, quantity and prices of the drones:

Purchase date	Quantity	Price per drone	Total value
11 November 2016	1,500	95.00	142,500
29 November 2016	2,000	92.50	185,000
21 December 2016	2,000	97.50	195,000
Total	5,500		522,500

Accounts receivable in the balance sheet is shown as a net amount. The allowance for uncollectible accounts at January 1, 2017 was €27,204. The Drone Company uses the percentage of net sales method. The company believes that its uncollectible accounts will continue to be about 1.25% of net sales.

The Drone Company applies the **periodic inventory system** in combination with **LIFO**. Unless stated otherwise, you can assume that all transactions are on credit. In January 2017 the following transactions took place:

- 1/1 The Drone Company rents an additional storage facility for its ice skates. It pays four months of rent in advance by cash. Total amount involved is €25,000.

- 3/1 Sold and delivered 1,250 drones to a company in Belgium for €343,750, terms: 3/10, n/30, FOB shipping point.
- 4/1 Purchased and received: 1,500 drones from a supplier from Taiwan for €147,750, terms: 2/10, n/30, FOB shipping point, invoice dated January 2, 2017.
- 5/1 Returned 50 drones to the Taiwanese supplier from the purchase on January 4 for full credit, €4,925.
- 9/1 The drone Company receives the invoice relating to the delivery of January 4 of the transportation company, €1,500, terms: n/30.
- 10/1 Paid the supplier for the purchase of January 4 less returns.
- 10/1 Paid the transportation courier.
- 14/1 Sold and delivered: 500 drones for €137,500 to a company in France, terms: 2/10, n/30, FOB shipping point.
- 15/1 Received payment from the Belgian company for the sale of January 3.
- 15/1 The French company returns 25 drones from the sale on January 14 for full credit, €6,875. The 25 drones are put in stock again.
- 19/1 Received payment from the French company for the sale of January 14 less returns.
- 20/1 The Drone Company is informed by a lawyer that one of its clients went bankrupt and that 80% of an outstanding amount of €5,000 cannot be collected.
- 21/1 Sold and delivered: 1,000 drones to a company in Spain for €290,000, terms: 3/10, n/30, FOB shipping point.
- 30/1 The Drone Company receives €1,000 in cash from the lawyer relating to the amount of the bankrupt client still had to pay The Drone Company.
- 31/1 The Drone Company sells one of its vans and receives €16,000 in cash. Specifically, one of the vans bought on January 1, 2014 was sold. First, you have to recognize and record the depreciation of this van for January 2017.
- 31/1 The Drone Company pays a dividend of €2,500.

Question A (19 credits)

Prepare the journal entries for the January transactions. Use only the account names provided in the chart of accounts on a separate sheet. Please skip a line after each entry.

Date	Account name	Debit	Credit
1/1	Prepaid rent	25,000	
	@ Cash		25,000
3/1	Accounts receivable	343,750	
	@ Sales		343,750
4/1	Purchases	147,750	
	@ Accounts payable		147,750
5/1	Accounts payable	4,925	
	@ Purchase returns and allowances		4,925
9/1	Freight-in	1,500	

Date	Account name	Debit	Credit
	@ Accounts payable		1,500
10/1	Accounts payable	142,825	
	@ Purchase discount		2,856
	@ Cash		139,969
10/1	Accounts payable	1,500	
	@ Cash		1,500
14/1	Accounts receivable	137,500	
	@ Sales		137,500
15/1	Cash	343,750	
	@ Accounts receivable		343,750
15/1	Sales returns and allowances	6,875	
	@ Accounts receivable		6,875
19/1	Cash	128,013	
	Sales discount	2,612	
	@ Accounts receivable		130,625
20/1	Allowance for uncollectible accounts	4,000	
	@ Accounts receivable		4,000
21/1	Accounts receivable	290,000	
	@ Sales		290,000
30/1	Cash	1,000	
	@ Accounts receivable		1,000
31/1	Depreciation expense-Vans	583	
	@ Accumulated depreciation-Vans		583

Date	Account name	Debit	Credit
31/1	Accumulated depreciation-Vans	21,583	
	Cash	16,000	
	@ Gain on sale fixed asset		2,583
	@ Vans		35,000
31/1	Dividends	2,500	
	@ Cash		2,500

Question B (10 credits)

Prepare the adjusting entries with respect to:

- Interest on the mortgage;
- Depreciation of the building and the vans;
- The allowance for uncollectible accounts;
- Rent expense.

Date	Account name	Debit	Credit
31/1	Interest expense	3,333	
	@ Interest payable		3,333
31/1	Depreciation expense-Vans	2,332	
	@ Accumulated depreciation-Vans		2,332
31/1	Depreciation expense-Building	3,333	
	@ Accumulated depreciation-Building		3,333
31/1	Uncollectible accounts expense	9,522	
	@ Allowance for uncollectible accounts		9,522
	$(343,750 + 137,500 - 6,875 - 2,612 + 290,000) \times 0.0125$		
31/1	Rent expense	6,250	
	@ Prepaid rent		6,250

Question C (8 credits)

Prepare the first part of multistep income statement for The Drone Company for the period ending on January 31, 2017 up until the gross margin. Please be as detailed as possible. At January 31, 2017 the value of the merchandise inventory was €398,187.

The Drone Company Income Statement, January 2017			
Sales			771,250
Less: Sales returns and allowances			-6,875
Less: Sales discounts			-2,612
Net sales			761,763
Cost of goods sold			
Inventory, January 1, 2017		522,500	
Purchases	147,750		
Less: Purchase returns and allowances	-4,925		
Less: Purchase discounts	-2,856		
Net purchases	139,969		
Freight-in	1,500		
Net cost of purchases		141,469	
Cost of goods available for sale		663,969	
Less: Inventory, January 31, 2017		-398,187	
Cost of goods sold*			265,782
Gross margin			495,981
* Cost of goods sold can also be calculated as:			
Number of drones sold: $1,250 + 500 - 25 + 1,000 = 2,725$			
Cost of goods sold: $1,450 * 98.5$ (from purchase of 4/1) + $1,275 * 97.5$ (from purchase of 21/12) = 267,138			
Net cost of goods sold is $267,138 - 2,856$ (purchase discount) + $1,500$ (freight- in) = 265,782			

Question D (3 credits)

Please determine the amount for which the net accounts receivables are presented in The Drone Company's balance sheet as on January 31, 2017. Please show how you have arrived at your amount.

Accounts receivable net: $234,834 (1/1) + 343,750 + 137,500 - 343,750 - 6,875 - 130,625 + 290,000 - 1,000 - 9,522$ (addition allowance) = €514,312

Exercise 2 (30 credits)

Trading company Jensen is located in Heerenveen. Its business activities contain the purchase and sale of solar systems. Jensen presents the balance sheet as of January 1, 2014, the statement of cash receipts and expenditures over 2014 and some additional information as follows (in €):

Balance sheet as of January 1, 2014 (in €)

Buildings at cost	250,000	Convertible bonds	200,000
Accumulated depreciation buildings	-50,000	Lease obligations	150,847
Buildings, carrying value	200,000	Accounts payable trade	126,000
Trucks in lease	201,929	Salaries payable	32,000
Accumulated depreciation trucks in lease	-116,740	Interest payable	2,000
Trucks, carrying value	85,189	Income taxes payable	5,000
Merchandise inventory	185,000	Common stock	200,000
Accounts receivable trade	160,000	Paid in capital, common stock	25,000
Cash	252,000	Paid in capital, treasury stock	0
		Retained earnings	145,842
		Treasury stock	-4,500
	882,189		882,189

Additional information:

- *Buildings:*

The purchase price of the buildings was €250,000. These buildings were purchased on January 1, 2012. The depreciation method is straight-line, the useful life is 10 years and the residual value is zero. On September 1, 2014 an additional building was purchased for €120,000. The depreciation method is straight-line, the useful life is 10 years and the residual value is 12,000.

- *Trucks in lease*

Trucks are depreciated according to the double declining balance method. Their useful life is 8 years and their residual value is €0. There are no investments in trucks during 2014. The start of the lease contract was January 1, 2011.

The annual lease term of the trucks in lease is € 45,000. The contract period equals the useful life and therefore qualifies as a capital (finance) lease. The implied interest rate for this contract is 15%.

For your calculations you can use the following interest table:

Present value of € 1 received each period for a given number of time periods, interest rate of 15%

Period	Present value factor
1	0.86957
2	1.62571
3	2.28323
4	2.85498
5	3.35216
6	3.78448
7	4.16042
8	4.48732

- *Share capital:*
The number of shares issued on January 1, 2014 is 2,000 and the nominal value per share is € 100. On February 1, cash dividends of €5 per share were paid.
- *Treasury stock:*
In 2013 Jensen acquired for the first time 50 shares of its own common shares for €90 per share. Jensen sold these shares on August 1, 2014. The selling price was € 130 per share.
- The gross margin is 40% of sales.
- The income tax expense is 25% of the income before taxes.
- *Convertible bonds:*
The interest on the convertible bonds is 4% per year. The bonds were issued at face value. The nominal value of a bond is € 1,000. The interest will be paid in arrear, once a year, on September 30. On September 30, 2014, all convertible bonds were converted into shares. Every bond with a nominal value of € 1,000 was converted into 4 shares. Per converted bond, the bondholder paid an additional amount of € 150.

Statement of cash receipts and expenditures during 2014 (in €)

<i>Receipts</i>		<i>Expenditures</i>	
Receipts from accounts receivable	1,600,000	Purchase of buildings	120,000
Receipts from conversion of bonds	30,000	Interest paid	8,000
Receipts from sale of treasury stock	6,500	Salaries paid	496,000
		Payments on accounts payable	870,000
		Dividends paid	9,750
		Income taxes paid	10,000
		Lease term paid	45,000
	1,636,500		1,518,750

On December 31, 2014, the amounts of the following balance sheet items are given:

- Merchandise inventory € 205,000
- Accounts receivable trade € 135,000
- Salaries payable € 31,476
- Accounts payable trade € 221,000
- Income taxes payable € 9,000

Round all amounts to whole euros!

Question A (2 credits)

The purchase price of the trucks in lease as of January 1, 2011 was € 201,929. Explain this amount using the present value table.

$$\text{PV factor 8 years 15\% interest} = 4.48732 * 45,000 = 201,929$$

Question B (4 credits)

Complete the balance sheet as of January 1, 2014.

Carrying value, trucks in lease:

$$201,929 * 0.75 * 0.75 * 0.75 = 85,189$$

Accumulated depreciation trucks in lease:

$$201,929 - 85,189 = 116,740$$

Lease obligations:

$$3.35216 * 45,000 = 150,847$$

Interest payable:

$$200,000 * 0.04 * 3/12 = 2,000$$

Treasury stock:

$$50 * 90 = 4,500$$

Question C (5 credits)

Complete the statement of cash receipts and expenditures during 2014 and calculate the amount of cash as of December 31, 2014.

Receipt from conversion of bonds:

$$200 * 150 = 30,000$$

Receipts from sale treasury stock:

$$50 * 130 = 6,500$$

Interest paid:

$$200,000 * 0.04 * = 8,000$$

Dividends paid:

$$(2,000 - 50) * 5 = 9,750$$

Cash:

$$252,000 + 1,636,500 - 1,558,750 = 329,750$$

Question D (4 credits)

Prepare the journal entry of the conversion of bonds into shares as of September 30, 2014. There is no chart of accounts added for this exercise; you have to use the accounts in the financial statements above.

Account name	debit	credit
Convertible bonds	200,000	
Cash (see question C)	30,000	
@ Common stock (200 * 4 * 100)		80,000
@ Paid in capital, Common Stock		150,000

Question E (4 credits)

Calculate the depreciation expense of the buildings in 2014.

Calculate the depreciation expense of the trucks in lease 2014.

Depreciation expense building:
$250,000 * 1/10 + (120,000 - 12,000) * 1/10 * 4/12 = 25,000 + 3,600 = 28,600$
Depreciation expense trucks in lease:
$85,189 * 0.25 = 21,297$

Question F (6 credits)

Complete the balance sheet as of December 31, 2014.

Balance sheet as of December 31, 2014 (in €)

Buildings at cost	370,000	Convertible bonds	0
Accumulated depreciation buildings	-78,600	Lease obligations	128,474
Buildings, carrying value	291,400	Accounts payable trade	221,000
Trucks in lease	201,929	Salaries payable	31,476
Accumulated depreciation trucks in lease	-138,037	Interest payable	0
Trucks, carrying value	63,892	Income taxes payable	9,000
Merchandise inventory	205,000	Common stock	280,000
Accounts receivable trade	135,000	Paid in capital, common stock	175,000
Cash	329,750	Paid in capital, treasury stock	2,000
		Retained earnings	178,092
		Treasury stock	0
	1,025,042		1,025,042

Calculations of the balance sheet items:

Accumulated depreciation, buildings: $50,000 + 28,600 = 78,600$

Buildings, carrying value: $370,000 - 78,600 = 291,400$

Accumulated depreciation trucks in lease: $116,740 + 21,297 = 138,037$

Trucks, carrying value: $201,929 - 138,037 = 63,892$

Cash: see question C

Lease obligations: $2.85498 * 45,000 = 128,474$

Common stock: $200,000 + 80,000 = 280,000$

Paid in capital, common stock: $25,000 + 150,000 = 175,000$

Paid in capital, treasury stock: $50 * (130 - 90) = 2,000$

Question G (3 credits)

Calculate net income in 2014 using the statement of retained earnings

Retained earnings 1/1:	145,842
Net income	?
Dividends:	-9,750
Retained earnings 31/12	178,092

Net income = $178,092 - 145,842 + 9,750 = 42,000$

Question H (2 credits)

Calculate the income tax expense in 2014 in two different ways.

Income tax expense = income taxes payable 31/12 – income taxes payable 1/1 + income taxes paid
 $= 9,000 - 5,000 + 10,000 = 14,000$

Net income = 42,000, income before tax is $42,000 / 0.75 = 56,000$, tax expense is $0.25 * 56,000 = 14,000$

Exercise 3 (30 credits)

Avatar Corporation's income statement for the year ended June 30, 2016, and its comparative balance sheets for June 30, 2016 and 2015 are presented in the following.

Avatar Corporation, Income statement
for the year ended June 30, 2016

	€
Sales	257,400.00
Cost of goods sold	171,600.00
Gross margin	85,800.00
Operating expenses	49,500.00
Operating income	36,300.00
Interest expense	3,080.00
Income before income taxes	33,220.00
Income taxes expense	13,530.00
Net income	19,690.00

Avatar Corporation, Comparative Balance Sheets

June 30, 2016 and 2015

	June 30, 2016	June 30, 2015
Assets		
Cash	76,890.00	13,750.00
Accounts receivables	23,100.00	28,600.00
Merchandise inventory	47,740.00	53,240.00
Prepaid rent	3,520.00	2,860.00
Furniture	60,500.00	66,000.00
Accumulated depreciation	- 9,900.00	- 5,500.00
Total assets	201,850.00	158,950.00
Liabilities and Shareholder's equity		
Account payable	14,300.00	15,400.00
Income taxes payable	1,320.00	1,980.00
Long-term notes payable	40,700.00	38,500.00
Common stock , € 10 par value	126,500.00	99,000.00
Retained earnings	19,030.00	4,070.00
Total liabilities and shareholders' equity	201,850.00	158,950.00

Avatar issued a €24,200 note payable for purchase of furniture, sold furniture that cost € 29,700 with accumulated depreciation of €16,830 at carrying value; recorded depreciation on the furniture for the year, € 21,230; repaid a note in the amount of €22,000; issued €27,500 of common stock at par value; and paid dividends of €4,730.

Question A (24 credits)

Prepare Avatar's statement of cash flows for the year ended June 30, 2016, using the indirect method.

Avatar Corporation, Statement of Cash Flow
for the year ended June 30, 2016

Cash from operating activities		
Net income	2 credits	19,690.00
+ depreciation expense	2 credits	21,230.00
+ decrease in accounts receivable	2 credits	5,500.00
+ decrease in inventory	2 credits	5,500.00

- increase in prepaid rent	2 credits	- 660.00
- decrease in accounts payable	2 credits	- 1,100.00
- decrease in income taxes payable	2 credits	- 660.00
Net cash provided by operating activities		49,500.00
Cash from investing activities		
Cash proceeds from sale of furniture*	2 credits	12,870.00
Cash from financing activities		
Repayment of notes payable	2 credits	- 22,000.00
Issue of common stock	2 credits	27,500.00
Cash paid for dividends	2 credits	- 4,730.00
Net cash used for financing activities		770.00
Net increase in cash during the year		63,140.00
Cash balance, beginning of the year		13,750.00
Ending cash balance		76,890.00
*29,700-16,830=12,870		
Schedule of non-cash investing and financing transactions		
Issue of notes payable for furniture	2 credits	24,200.00

Question B (3 credits, 1 for calculation, 2 for interpretation)

Compute the Cash Flow Yield. Shortly provide your interpretation of this ratio for Avatar Corporation (3 credits).

$$49,500/19,690 = 2.51$$

The ratio of NI to CFO represents an excellent tool to estimate the quality of earnings for Avatar Corporation. Specifically, if CFO is smaller than NI, then an investor could become suspicious regarding the accounting choices made by Avatar. In this scenario, the company recognizes multiple non-cash revenues that increase NI. Since CFO are a very important input in investor's valuation of the company, a high difference from NI surely represents a red flag. Nonetheless, Avatar Corporation's ratio is higher than 1, suggesting that the company has no problem in terms of earnings quality.

Question C (3 credits, 1 for calculation, 2 for interpretation)

Compute the Cash Flows to Sales ratio. Shortly provide your interpretation of this ratio for Avatar Corporation .

$$49,500/257,400 = 0.19$$

The ratio of CFO to Sales represents a good indicator of the company's ability to turn sales into CFO. Descending trends in this ratio are negative signals for investors, since it would mean that the sales of the company do not result from its main, core activity. In the case of Avatar Corporation, the ratio of 19% is rather low, which means that every EUR of sales results in only 19 cents of CFO.