

UNIVERSITY OF GRONINGEN
Faculty of Economics and Business
Department of Accounting

ANSWERS
FINAL EXAM FINANCIAL ACCOUNTING
FOR IB / E&BE

Semester 1.2 2015/2016
Tuesday January 26, 2016
Time: 09:00 to 11:30
Location: Exam Hall

Exercise 1 (30 credits)

Jurassic Bark is a trading company specialized in buying and selling wooden dinosaur figurines. The financial year starts on January 1 and ends on December 31. Jurassic Bark's beginning balance sheet (in euros) on January 1, 2015, is as follows:

Balance sheet on January 1, 2015 (in euros)

Building	8,500,000	Mortgage payable	4,000,000
Accumulated depreciation - building	(700,000)	Accounts payable trade	440,000
Trucks	420,000	Salaries payable	40,000
Accumulated depreciation - trucks	(204,960)	Interest payable	100,000
Trade inventory	820,000	Common stock	200,000
Accounts receivable trade (net)	650,000	Additional paid in capital	3,800,000
Cash	1,134,000	Retained earnings	2,039,040
Total	<u>10,619,040</u>	Total	<u>10,619,040</u>

The following information is provided in the footnotes:

Jurassic Bark uses the straight-line method to depreciate its building, and the double-declining balance method to depreciate its trucks. The building has an expected useful life of twenty years and a residual value of € 5,000,000. The trucks have an expected useful life of ten years and no residual value.

The interest on the mortgage is paid annually on June 30. The principal of the mortgage will be repaid in full on December 31, 2030.

All purchases and sales are on credit.

Accounts receivable trade (net) consists of the following items:

Accounts receivable trade (gross)	730,000
Allowance for uncollectible accounts	<u>(80,000)</u>
Accounts receivable trade (net)	650,000

During the year, write-offs are equal to € 54,000. Jurassic Bark uses the accounts receivable aging method to estimate the Allowance for uncollectible accounts. An analysis of the Accounts receivable shows that € 97,000 may be uncollectible.

Gross sales during 2015 are € 6,400,000. During the year, total sales discounts are € 450,000. € 300,000 worth of sales were returned to Jurassic Bark during the year.

The table below gives an overview of all cash receipts and cash expenditures during 2015 (in euros).

Schedule of cash receipts and expenditures over 2015 (in euros)

Receipts		Expenditures	
Payments on accounts receivable	3,825,000	Payments on accounts payable	4,050,000
		Salaries paid	150,000
		Interest paid	200,000

On December 31, 2015, the amounts of the following balance sheet items are given:

Trade inventory	730,000
Accounts payable trade	380,000
Salaries payable	44,000

Question A (2 credits)

Use the information provided to determine the purchase date of the trucks. Use a calculation to support your answer.

The depreciable cost of the trucks is 420,000. Accumulated depreciation on Jan. 1, 2015, is 204,960. This means that the carrying value at that time is 215,040. Since the expected useful life is equal to ten years and the company uses the double declining balance, the annual depreciation rate is 20%. One year after the purchase, the carrying value is $420,000 * 0.80 = 336,000$. Two years after the purchase the carrying value is $336,000 * 0.80 = 268,800$, and after three years the carrying value is $268,800 * 0.80 = 215,040$. Hence, the purchase date is **January 1, 2012**. (2 credits)

Question B (2 credits)

Complete the schedule of cash receipts and expenditures over 2015 and calculate the Cash balance on December 31, 2015.

Interest paid: $4,000,000 * 5\% = \mathbf{200,000}$ (1 credit)

Cash balance 31/12/2015: $1,134,000 + 3,825,000 - 4,050,000 - 150,000 - 200,000 = \mathbf{559,000}$ (1 credit)

Question C (3 credits)

Calculate the uncollectible accounts expense over the year 2015 and determine the Allowance for uncollectible accounts balance on December 31, 2015.

Uncollectible accounts expense: the target balance for the allowance is 97,000. Beginning balance is 80,000, write-offs are 54,000. This means that the expense will need to be equal to $97,000 - 80,000 + 54,000 = \mathbf{71,000}$ (2 credits)

Ending balance: aging method is used, so given: **97,000** (1 credit)

Question D1 (2 credits)

Calculate the purchase of trade inventory over the year 2015.

Accounts Payable beginning + Purchases – Payments = Accounts Payable ending

$440,000 + \text{Purchases} - 4,050,000 = 380,000$

Purchases = **3,990,000** (2 credits)

Question D2 (2 credits)

Calculate the cost of goods sold over the year 2015.

Trade inventory beginning + Purchases – COGS = Trade inventory ending

$820,000 + 3,990,000 - \text{COGS} = 730,000$

Cost of goods sold = **4,080,000** (2 credits)

Question E (5 credits)

Complete the income statement for 2015.

Income statement, 2015 (in euros)

Cost of goods sold	4,080,000	Gross sales	6,400,000
Salaries expense	154,000	Sales discounts	(450,000)
Depreciation expense building	175,000	Sales returns and allowances	(300,000)
Depreciation expense truck	43,008		
Interest expense	200,000		
Uncollectible accounts expense	71,000		
Net income	<u>926,992</u>		

Calculations Question E:

Sales (and discounts and returns & allowances): given

Cost of goods sold: see question D2

Salaries expense: salaries paid + change in salaries payable: payable has gone up, so this difference needs to be added to salaries paid: $150,000 + (44,000 - 40,000) = 154,000$ (1 credits)

Depreciation building: depreciable cost is $8,500,000 - 5,000,000 = 3,500,000$. The depreciation rate is 5%, so depreciation expense is $0.05 * 3,500,000 = 175,000$ (1 credits)

Depreciation expense truck: The company uses the double-declining balance method, estimated life is ten years. This means that the annual depreciation rate is 20%. The carrying value of Trucks at the beginning of the year is 215,040. This means that depreciation expense is $0.2 * 215,040 = 43,008$ (2 credits)

Interest expense: $4,000,000 * 5\% = 200,000$ (1 credit)

Uncollectible accounts expense: see question C

Question F (3 credits)

Calculate the Accounts receivable trade (net) balance on December 31, 2015.

Beginning balance for acc. rec. trade gross is 730,000 (given). During the year, acc. rec. trade gross was affected by net sales (5,650,000), payments on acc. rec. (3,825,000), and the write-offs (54,000). The ending balance for acc. rec. trade gross is therefore $730,000 + 5,650,000 - 3,825,000 - 54,000 = 2,501,000$. (2 credits)

The ending balance for the Allowance is 97,000 (given), so the ending balance for acc. rec. trade (net) is $2,501,000 - 97,000 = 2,404,000$. (1 credit)

Question G (3 credits)

Complete the balance sheet on December 31, 2015.

Balance sheet on December 31, 2015 (in euros)

Building	8,500,000	Mortgage payable	4,000,000
Accumulated depreciation – building	(875,000)	Accounts payable trade	380,000
Trucks	420,000	Salaries payable	44,000
Accumulated depreciation – trucks	(247,968)	Interest payable	100,000
Trade inventory	730,000	Common stock	200,000
Accounts receivable trade (net)	2,404,000	Additional paid in capital	3,800,000
Cash	559,000	Retained earnings	2,966,032
Total	<u>11,490,032</u>	Total	<u>11,490,032</u>

Calculations Question G:

Acc. depr. building and trucks: beginning balance plus answers to question D

Trade inventory: given

Accounts receivable trade (net): see question F

Cash: see question B

Mortgage payable: remains the same; 4,000,000 (1 credit)

Accounts payable trade: given

Salaries payable: given

Interest payable: $6/12 * 5\% * 4,000,000 = 100,000$ (1 credit)

Common stock / additional paid in capital: given

Retained earnings: beginning + net income = $2,039,040 + 926,992 = 2,966,032$ (1 credit)

Question H (6 credits)

Prepare the cash flow statement from operating activities according to the indirect method for the year 2015.

Cash flows from operating activities over 2015 (in euros)

Net income		926,992 (1 credit)
<i>Adjustments to reconcile net income to net cash</i>		
Depreciation building	175,000	
Depreciation trucks	43,008 (1 credit)	
<i>Changes in current assets and current liabilities</i>		
Decrease in trade inventory	90,000 (1 credit)	
Increase in accounts receivable	-1,754,000 (1 credit)	
Decrease in accounts payable	-60,000 (1 credit)	
Increase in salaries payable	+ 4,000 (1 credit)	
Net cash flows from operating activities	-575,000	

Question I (2 credits)

Calculate the receivable turnover at the end of the year 2015.

Receivable turnover = Net revenue / net average accounts receivable (1 credit)
 $= 5,650,000 / ((650,000 + 2,404,000) / 2) = 3.70$ (1 credit)

Exercise 2 (30 credits)

On the balance sheet as of December 31, 2014, Robo Robotics Corporation reported its stockholders' equity as follows:

Preferred Stock, 9% noncumulative, 100 par value, 10,000 shares authorized, 5,000 shares issued and outstanding	\$500,000
Common Stock, \$5 par value, 1,500,000 shares authorized, 600,000 shares issued and outstanding	3,000,000
Additional Paid-in Capital-Common Stock	1,250,000
Retained Earnings	2,967,000
Total Stockholders' Equity	<u>\$7,717,000</u>

During 2015, the following transactions occurred:

Marks		
2	Feb 12	Issued 30,000 shares of its \$5 par value common stock for \$750,000 cash.
2	Feb 22	Purchased 5,000 shares of its own stock for \$30 per share, the current market price.
2	Feb 28	Issued 10,000 shares of its \$5 par value common stock in exchange for land and a building. The building is estimated to have a market value of \$170,000. Market value of stock is \$30. Management records land at market value of stock minus market value of building
2	March 9	Sold 1,000 shares of treasury stock purchased on Feb 22 for \$31 per share.
2+2	April 30	Declared cash dividend for a full year to preferred stockholders and a stock dividend for common stockholders. Dividend to preferred stock holders is to be paid on June 30 2015 to shareholders of record on May 1, 2015. Declared & issued a 10 percent stock dividend (Market value of the stock was \$35.00 on April 30 and \$28.00 on June 30).
2	May 1	Sold 2,500 shares of treasury stock purchased on Feb 22 for \$30 per share.
0/-1	May 1	Date of record.
2	May 7	Sold 1,500 shares of treasury stock purchased on Feb 22 for \$27 per share.
2	June 30	Distributed the dividend.
0/-1	Sep. 1	Declared a 2-for-1 stock split.

Question A (18 credits)

Prepare the appropriate journal entries to record the above transactions. Please skip a line between the different journal entries. **State explicitly if no journal entry is needed.** A chart of accounts is added at the end of this exercise. You are required to use accounts provided in this chart only.

Robo Robotics Corporation, Journal				
Date	Account		Debit	Credit
Feb 12	Cash		750,000	
		Common Stock		150,000
		Additional Paid-in Capital, Common Stock		600,000
Feb 22	Treasury Stock, Common		150,000	
		Cash		150,000

Feb 28	Land		130,000	
	Building		170,000	
	Common stock			50,000
	Additional Paid-in Capital, Common Stock			250,000
March 9	Cash		31,000	
	Treasury Stock, Common			30,000
	Paid-in Capital, Treasury Stock			1,000
April 30	Cash Dividends		45,000	
	Dividends Payable			45,000
	Stock Dividends		2,226,000	
	Common Stock			318,000
	Additional Paid-in Capital, Common Stock			1,908,000
	(600,000+30,000-5,000+10,000+1,000)= 636,000 shares outstanding			
May 1	Cash		75,000	
	Treasury Stock, Common			75,000
May 1	No entry			
May 7	Cash		40,500	
	Paid-in Capital, Treasury Stock		1,000	
	Retained Earnings		3,500	
	Treasury Stock, Common			45,000
June 30	Dividends Payable		45,000	
	Cash			45,000

Sep 1	No entry or the following memorandum entry		
	The 703,600 shares of \$5 par value of common stock issued and outstanding were split 2 for 1, resulting in 1,407,200 shares of \$ 2.5 par value common stock issued and outstanding $2 \times (600,000 + 30,000 + 10,000 + 63,600) = 1,407,200$ shares		

Question B (5 credits)

Prepare the Statement of Stockholders' Equity as it should appear on December 31, 2015. There was no profit or loss to the company during 2015.

Robo Robotics Statement of Stockholders' Equity For the Year Ended December 31, 2015

Contributed Capital

Marks

	Preferred Stock, 9% noncumulative, \$100 par value, 10,000 shares authorized, 5,000 shares issued and outstanding		\$
1	Common Stock, \$2.5 par value, 1,500,000 shares authorized, 1,407,200 shares issued and outstanding	\$3,518,000	
1	Additional Paid-in Capital, Common Stock	4,008,000	
1	Paid-in Capital, Treasury Stock, Common	0	7,526,000
	Total Contributed Capital		\$
1	Retained earnings		692,500
	Total Contributed Capital & Retained Earnings		\$ 8,718,500
1	Less: Treasury Stock		0
	Total Stockholders' Equity		\$ 8,718,500

Space for calculations. This part will not be assessed...

$$\begin{aligned} \text{No of shares of common stock at year end} &= (600,000 + 30,000 + 10,000 + 63,600) \times 2 \\ &= 1,407,200 \end{aligned}$$

$$\begin{aligned} \text{Additional Paid-in Capital-Common Stock} &= 1,250,000 + 600,000 + 250,000 + 1,908,000 \\ &= 4,008,000 \end{aligned}$$

$$\begin{aligned} \text{Retained Earnings} &= 2,967,000 - 45,000 - 2,226,000 - 3,500 \\ &= 692,500 \end{aligned}$$

Question C (3 credits)

Issuing common and preferred stock generally has been popular among corporations. However, some companies have bought back their common stock. Name 3 reasons why a company would buy back its own shares?

A company may have several reasons for buying back its own shares. One reason is that it may have uses for the shares, such as for employee stock purchase plans or purchasing other companies. A second reason is to increase the price of the company's stock. A third reason is to increase earnings per share: With fewer shares outstanding, earnings per share should be higher. When the economy has been growing slowly, this is a way to accelerate the growth in earnings per share. A fourth reason is to reduce the cash that will have to be paid in the future for cash dividends. With fewer shares outstanding, less cash will have to be paid. A fifth reason is that management feels that investing in the company's own stock is a sound idea because it is a good value.

Question D (2 credits)

Compute the book value per share of preferred stock and the book value per share of common stock. Assume a call value of \$105 for preferred stock (Round to the nearest cent.)

Marks1
1

Total stockholder's equity		\$8,718,500
Less equity to preferred stockholders (5,000 x \$100 x 1.05)	525,000	
Less dividends in arrears (0 as it is noncumulative)	<u>0</u>	
Equity allocated to preferred stockholders		<u>525,000</u>
Equity pertaining to common stockholders		<u>\$8,193,500</u>
Book value per share of preferred stock (\$525,000 ÷ 5,000)		\$105.00
Book value per share of common stock (\$8,193,500 ÷ 1,407,200)		\$ 5.82

Question E (2 credits)

Repeat the above calculations (Question D i.e. total stockholder's equity doesn't change) and now assume that the preferred stock is cumulative and has two years' dividends in arrears. Compute the book value per share of preferred stock and the book value per share of common stock. (Round to the nearest cent.)

Marks1
1

Total stockholder's equity		\$8,718,500
Less equity to preferred stockholders (5,000 x \$100 x 1.05)	525,000	
Less dividends in arrears (5,000 x \$100 x .09 x 2)	<u>90,000</u>	
Equity allocated to preferred stockholders		<u>615,000</u>
Equity pertaining to common stockholders		<u>\$8,103,500</u>
Book value per share of preferred stock (\$615,000 ÷ 5,000)		\$123.00
Book value per share of common stock (\$8,103,500 ÷ 1,407,200)		\$ 5.76

Chart of accounts exercise 2 (accounts in alphabetical order)

(This sheet can be torn out of the exam)

Accounts Payable
Accounts Receivable
Additional Paid-in Capital, Common Stock
Additional Paid-in Capital, Preferred Stock
Building
Cash
Cash Dividends
Common Stock
Common Stock Distributable
Dividends Payable
Land
Paid-in Capital, Treasury Stock
Preferred Stock
Retained Earnings
Stock Dividends
Treasury Stock, Common