
Financial Accounting (15.516x)**Sample Final Examination**



Question/Topic	Maximum Points
Question 1 – Inventory	10
Question 2 – Taxes	15
Question 3 – Investments	12
Question 4 – Long-term debt	15
Question 5 – Leases	10
Question 6 – Equity	15
Question 7 – PP&E	10
Question 8 – Miscellaneous	13
Total	100

1. Inventory (10 points)

The following questions are based on the financial statements contained in the “modified” annual report for Thermo Fisher that was provided along with this exam, and that was posted to Canvas.

- A. What would **Thermo Fisher’s** ending inventory balance have been if they had used FIFO in 2017? (3 Points)
- B. What would be **Thermo Fisher’s** reported COGS under FIFO for the fiscal year ending on **December 31, 2017**? (4 Points)
- C. **Thermo Fisher’s** inventory turnover ratio would be higher / lower if it used FIFO. (*circle one*) Explain why in 30 words or less (3 Points)

2. Taxes (15 Points)

The following questions are based on the financial statements contained in the “modified” annual report for Thermo Fisher that was provided along with this exam, and that was posted to Canvas.

- A. Using the BSE, record the entry for the provision for income taxes for the fiscal year ended **December 31, 2017**, indicating clearly deferred taxes and taxes payable. (5 Points)

Note that Parts B and C ask for information about a fiscal year other than 2017.

- B. Calculate **Thermo Fisher’s** effective tax rate for the fiscal year ended **December 31, 2016**. Show your work and round your answer to two decimal places (e.g., 34.509% = 34.51%). (4 points)
- C. In one or two sentences, explain the main reason(s) that **Thermo Fisher’s** effective tax rate for the fiscal year ended **December 31, 2016** was different than the US statutory rate of 35.00%. (3 Points)
- D. Use the BSE to record the change in **Thermo Fisher’s** valuation allowance for the fiscal year ended **December 31, 2017**. (3 Points)

3. Investments (12 Points)

The following questions are based on the financial statements contained in the “modified” annual report for Thermo Fisher that was provided along with this exam, and that was posted to Canvas.

- A. In August 2017, **Thermo Fisher** acquired Patheon, a leading global provider of high-quality drug development. Use the BSE to record the acquisition of Patheon, assuming that **Thermo Fisher** purchased 100% of the outstanding equity for \$7,358 million in cash. (5 Points)
- B. Suppose instead that **Thermo Fisher** acquired a 40% stake in Patheon for \$2,950 million in cash in August 2017. Use the BSE to record the appropriate entry at the acquisition date. (3 Points)
- C. Suppose instead that **Thermo Fisher** acquired a 10% stake in Patheon for \$740 million in cash in August 2017. Use the BSE to record the appropriate entry at the acquisition date. (2 Points)
- D. Building on your answer to part C, suppose that at **December 31, 2017**, this 10% stake is valued at \$700 million. Use the BSE to identify any transactions that **Thermo Fisher** might record on **December 31, 2017**. (2 Points)

4. Long-Term Debt (15 points)

The following questions are based on the financial statements contained in the “modified” annual report for Thermo Fisher that was provided along with this exam, and that was posted to Canvas.

FOR THIS QUESTION, ASSUME A 0% TAX RATE.

- A. Use the Balance Sheet Equation (BSE) to identify **Thermo Fisher**’s debt repayments during the year ended **December 31, 2017**. Assume that the repayments were made because the debt matured (i.e., the debt reached its maturity date). (3 points)
- B. **Thermo Fisher** did not mark their long-term debt to fair value. Use the BSE to identify the transaction **Thermo Fisher** would record on **December 31, 2017** if they chose to mark their long-term debt to fair value. (4 points)
- C. In August 2017, **Thermo Fisher** issued 4.10%, 30-year Senior Notes for cash. Assume that the notes were issued on **August 15, 2017** and that the notes pay interest **annually** on August 15. Assume that the market rate of interest on the issuance date was 4.00%. Ignore issuance expenses. Use the BSE to identify the transaction(s) **Thermo Fisher** would have recorded on **August 15, 2017** when it issued the notes. Ignore taxes. (4 points)

- D. Regardless of your answer to Part C, suppose that on **August 15, 2018**, the net 4.10% 30-year Senior Notes outstanding are \$765 million and that interest is paid annually on August 15. Ignore issuance expenses. Record the payment of interest on **August 15, 2019**. (4 points)

5. Leases (10 points).

FOR THIS QUESTION, ASSUME A 0% TAX RATE.

Recall that there is a new standard for leases. Suppose that **Thermo Fisher** executes a new lease on **January 1, 2020**, and accounts for it using the new standard. The six payments on the lease are \$20 million per year, and are due each December 31. The terms of the lease are summarized below:

Annual lease payment:	\$20,000,000
Term of lease:	6 years
Interest rate:	5.00%
Lease commences on:	January 1, 2020
Payments due:	December 31 of each year in the lease term
Present value of lease payments	\$102 million

- A. Use the BSE to identify the transaction(s) **Thermo Fisher** would record on **December 31, 2020**, assuming the lease is classified as a **finance** lease. (4 points)
- B. Use the BSE to identify the transactions **Thermo Fisher** would record on **December 31, 2020**, assuming the lease is classified as an **operating** lease. (3 points)
- C. Net income would be higher / lower / the same (*circle one*) under the finance lease classification. Explain why in one sentence. (3 Points)

6. Equity (15 points)

The following questions are based on the financial statements contained in the “modified” annual report for Thermo Fisher that was provided along with this exam, and that was posted to Canvas.

FOR THIS QUESTION, ASSUME A 0% TAX RATE.

- A. Use the BSE to show how **Thermo Fisher** accounted for its repurchase of stock during the fiscal year ended **December 31, 2017**. (3 points).

- B. How many shares were repurchased in the fiscal year ended **December 31, 2017**? (3 Points)
- C. Regardless of your answer to Part B, suppose that **Thermo Fisher** repurchased 10 million shares in the fiscal year ended **December 31, 2017**. Assume that all of these shares were repurchased on **January 1, 2017**, and further assume that **Thermo Fisher** earns no interest on cash. What would Basic EPS have been **if there were no repurchase**? (3 Points)
- D. Use the BSE to identify the transaction(s) associated with **Thermo Fisher's** share issuance in fiscal year 2017. (4 Points)
- E. How did **Thermo Fisher's** account for the underwriting expenses on the offering (*circle one best answer*). (2 points)
- i. It capitalized them.
 - ii. It deferred them.
 - iii. It reduced paid-in capital by them.
 - iv. None of the above
 - v. All of the above

7. Property, Plant & Equipment (10 points)

The following questions are based on the financial statements contained in the “modified” annual report for Thermo Fisher that was provided along with this exam, and that was posted to Canvas.

- A. Use the BSE to record **Thermo Fisher's** purchase of fixed assets for cash in the fiscal year ended **December 31, 2017**. (3 Points)
- B. Suppose that due to political issues, **Thermo Fisher** must move much of its production to Europe. As a consequence, the value of their PP&E falls to \$2,500 million on January 1, 2018. Use the BSE to identify the transaction (if any) that they would record to reflect this decline in value. (3 Points)
- C. Suppose that on December 31, 2016, **Thermo Fisher** lengthens the depreciable lives of its PP&E by 5 years (but does not change salvage values). Would the following amounts for the year ended **December 31, 2017** have been higher, lower or the same as the respective number shown in their financial statements? Assume **Thermo Fisher's** tax rate is 0.0% (*circle the correct answer*) (4 Points)

Net Income:	higher	lower	the same
Operating Cash Flows:	higher	lower	the same

8. Miscellaneous (15 Points)

The following question is based on the financial statements contained in the “modified” annual report for Thermo Fisher that was provided along with this exam, and that was posted to Canvas.

- A. Use the BSE to show the entry **Thermo Fisher** used to record bad debt expense for the fiscal year ended **December 31, 2017**. (3 Points)
- B. Suppose that due to an audit that takes place on January 1, 2018, **Thermo Fisher** has to write off \$200 million in receivables immediately. **Thermo Fisher** estimates its allowance for doubtful accounts should be \$100 million after the write-off. Use the BSE to record the transaction **Thermo Fisher** used to recognize write-offs on **January 1, 2018**. Record any other transactions that **Thermo Fisher** makes. (5 Points)
- C. Use the following ratio definitions and 2016 ratio values to answer the question.

<u>Ratio</u>	<u>Definition</u>	<u>2016 Ratio Value</u>
Return on Equity:	$\frac{\text{Net Income}}{\text{Ending Shareholders Equity}}$	0.094
Net margin:	$\frac{\text{Net Income}}{\text{Sales}}$	0.111
Asset turnover:	$\frac{\text{Sales}}{\text{Ending Assets}}$	0.399
Leverage:	$\frac{\text{Ending Total Assets}}{\text{Ending Shareholders Equity}}$	2.131

Return on equity was lower in 2017 than in 2016. Which of the following helps explain this decrease in ROE? (*circle only one best answer*) (5 Points)

- i. 2017 net margin was lower than 2016 net margin.
- ii. 2017 asset turnover was higher than 2016 asset turnover.
- iii. 2017 leverage was lower than 2016 leverage.
- iv. None of the above
- v. All of the above