Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Section: G\_\_\_ Score: \_\_\_\_ / 100

This quiz is worth 7.5% of the overall course grade. You have 60 minutes from the start of class to complete the quiz. The quiz will be graded out of a total of 100 points. **Read each question carefully** and do your best to answer it. Make sure to show your work when answering questions, as partial credit will be awarded for work that, while not leading to the correct answer, shows significant progress towards it.

This quiz is a closed-book quiz. You may only use calculators, along with other devices as explicitly allowed by university policy.

This quiz asks you to solve 4 questions, each based on a described situation. Write your final answers in the space provided. You may use the other whitespace provided for showing your work. You may also use the last page of the exam as additional scratch paper, if needed. If rounding is not mentioned in a question, you may round to the nearest integer.

When you are finished, you may turn the quiz in at the front. If you wish to use any electronic devices after finishing, please do so outside the classroom.

Question 1, Inventory **(26 points)**, 3 parts

Score: \_\_\_\_\_/26

You are working for a small startup with the goal of sending a drone to the moon. As they have little financing, they decide to start out by selling t-shirts inspired by your company’s vision. You started buying only a small quantity and selling at a relatively low price. After a good bit of publicity, the t-shirts became a viral sensation, allowing you to purchase larger amounts and sell at higher prices. A complete record of purchases and sales for the month are listed below.

|  |  |
| --- | --- |
| Date | Details |
| Starting balance | 50 shirts at $8 each |
| Feb 2, 2018 | Sold 10 at $15 each |
| Feb 9, 2018 | Sold 20 at $15 each |
| Feb 12, 2018 | Purchased 100 shirts at $5 each |
| Feb 16, 2018 | Sold 80 at $20 each |
| Feb 19, 2018 | Purchase 160 shirts at $4 each |
| Feb 23, 2018 | Sold 80 at $15 each |

**Part 1)** What is the company’s revenue for the month? **(2 points)**

|  |
| --- |
| Revenue |
|  |

**Part 2)** The company is debating whether to use *Perpetual FIFO* or *Perpetual Average Cost*. Calculate COGS and Gross profit under both methods. Extra space for work is provided on the next page.
*[Do not round prices while calculating average cost]* **(20 points)**

|  |  |  |
| --- | --- | --- |
|  | FIFO | Average COST |
| COGS |  |  |
| Gross Profit |  |  |

**Part 3)** The company’s executives are debating which method to use. Some executives want to maximize net income to make the company’s financials look more attractive to venture capital investors, while others want to save money by minimizing tax payments. Which method should each group push for? **(4 points)**

|  |  |  |
| --- | --- | --- |
|  | Maximize net income | Minimize tax payments |
| Method |  |  |

*Extra space for work on Part 2:*

Question 2, P&E **(32 points)**, 5 parts

Score: \_\_\_\_\_/32

On April 1, 2017, Coffee Corp acquired an industrial grade coffee roasting machine from Germany.

**Part 1)** To acquire the machine, they paid $50,000. The machine was shipped FOB destination at a cost of $1,000. To import the machine they paid a $500 stamp duty. They paid a technician $300 to inspect the machine before use. They also tested the machine; the test cost $100 to run and produced $100 of useful inventory. After the successful test, Coffee Corp held a celebratory coffee tasting, costing $200 in inventory and a few broken mugs due to over-caffeination. After 1 month of usage, they had routine maintenance on the machine. Which of these costs should they include in the value of the machine? Select *No* if the net effect of a cost on the machine’s value is 0. **(8 points)**

|  |  |  |  |
| --- | --- | --- | --- |
| Cost | Include? Yes or No | Cost | Include? Yes or No |
| Purchase price |  | Testing costs |  |
| Shipping |  | Celebratory party |  |
| Tax (stamp duty) |  | Broken mugs |  |
| Inspection |  | Routine maintenance |  |

*Use the following information for Parts 2 through 4.* Suppose that after substantial maintenance work on January 1, 2018, the machine is now able to work twice as fast. Due to this substantive difference in function, Coffee Corp decides to revalue the asset. It determines that the machine has $64,000 of value, a useful life of 8 years and a salvage value of 28,000. Coffee Corp’s fiscal year end is December 31st.

**Part 2)** If they use double declining balance depreciation, what are the amounts of depreciation they will record on December 31st, 2018, 2019, and 2020? **(6 points)**

|  |  |  |
| --- | --- | --- |
| 31 Dec 2018 | 31 Dec 2019 | 31 Dec2020 |
|  |  |  |

**Part 3)** If they use straight line depreciation, what are the amounts of depreciation they will record on December 31st, 2018, 2019, and 2020? **(6 points)**

|  |  |  |
| --- | --- | --- |
| 31 Dec 2018 | 31 Dec 2019 | 31 Dec 2020 |
|  |  |  |

**Part 4)** If they use units of production depreciation, and they use 10%, 20%, and 10% of the asset’s lifetime production capacity in the years 2018, 2019, and 2020, respectively, what are the amounts of depreciation they will record for each of these three years? **(6 points)**

|  |  |  |
| --- | --- | --- |
| 2018 | 2019 | 2020 |
|  |  |  |

**Part 5)** Suppose that on Coffee Corp’s financial statements as of December 31, 2022, the roaster is listed on Coffee Corp’s books with a cost of $64,000 and accumulated depreciation of $22,500. On March 31st, 2023, Coffee Corp decides to exchange the coffee roaster for warehouse space worth $41,500. If they kept the roaster for the full year, they would record $4,500 of straight line depreciation on it on December 31, 2023. What is the journal entry they would record for this exchange? **(6 points)**

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Accounts | DR | CR |
| 2023.03.31 |  |  |  |

Question 3, Liabilities **(28 points)**, 5 parts

Score: \_\_\_\_\_/28

In March 2018, there were rumors that Qualcomm, a US semiconductor company, would be acquired by Singaporean company Broadcom Limited. Details emerged that Broadcom would offer $117B USD for the acquisition. However, as of Q4 2017, Broadcom only had $11B of cash on hand. Consider what would happen if Broadcom was to issue a bond to help with this acquisition.

Suppose that Broadcom issued a $20,000M bond with a 3% coupon rate to help raise cash for the acquisition. The bond has 20 years of life with semiannual coupon payments and a 30/360 day basis.

**Part 1)** If Broadcom issues this bond at par on March 31, 2018, how much interest expense will they record each coupon period? *[Record values to the nearest million.]* **(4 points)**

|  |
| --- |
| Interest Expense |
|  |

**Part 2)** Broadcom’s fiscal year end in 2018 is October 28th. How many days of accrued interest will Broadcom need to account for in their adjusting entry on October 28, 2018? **(4 points)**

|  |
| --- |
| Days to Accrue Interest |
|  |

**Part 3)** Given the political uncertainty surrounding the acquisition, suppose that Broadcom instead is forced to offer the bond at a 4% yield. What would be the price of the bond in this case? *[Record values to the nearest million.]* **(8 points)**

|  |
| --- |
| Price at 4% yield |
|  |

**Part 4)** At the same the acquisition was being discussed, there were rumors that Intel, a competitor of Qualcomm and Broadcom, might attempt to acquire both companies. If investors are bullish on this proposition, it is possible that Broadcom could instead issue the bond at a premium. If Broadcom was able to issue the bond at a price of $24,000M, corresponding to a yield of 1.80%, how much interest expense would they record for the first coupon payment? For the second coupon payment? Ignore any adjusting entries. *[Record values to the nearest million.]* **(8 points)**

|  |  |
| --- | --- |
| Interest expense – Coupon 1 | Interest expense – Coupon 2 |
|  |  |

**Part 5)** If Broadcom issued the bond as a premium bond as in Part 4, what is the total amount of interest expense they would save over the 20 years, as compared to if they issued the bond at par? *[Record values to the nearest million.]* **(4 points)**

|  |
| --- |
| Total interest expense saved |
|  |

Question 4, Intangibles **(14 points)**, 3 parts

Score: \_\_\_\_\_/14

In July 2017, Nesta Investment Holdings Limited (NIHL) agreed to purchase Global Logistic Properties (GPL) for $16B SGD. NIHL is a subsidiary of a Chinese investment firm specifically created to purchase GLP, a Singaporean company. This deal was the largest M&A transaction of quarter 4 2017 in Singapore.

For the acquisition, NIHL paid an additional 25% above the fair value of the company, i.e., GLP itself had a fair value (net assets) of $12.8B. Furthermore, at the time of the acquisition, GLP had $41B worth of warehousing assets.

**Part 1)** What is the amount of goodwill, in billions of Singapore dollars, NIHL will acquire in this transaction? **(4 points)** *[Round to 1 decimal place]*

|  |
| --- |
| Goodwill |
|  |

**Part 2)** What amount of liabilities, in billions of Singapore dollars, did GLP have on their books at the time of acquisition? Assume that the only assets GLP has are its warehousing assets, and that the book value and market value of these warehousing assets are the same. **(4 points)** *[Round to 1 decimal place]*

|  |
| --- |
| Liabilities |
|  |

**Part 3)** If, in 1 year, NIHL determines that the value of goodwill has dropped by $1B, what is the journal entry to record this? **(6 points)**

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Accounts | DR | CR |
| 1 |  |  |  |