

## MODULE 1 EXAM, SPRING 2021

### **SOLUTION** (Note: Order of questions may vary)

1. The "4% rule" suggests that retired persons withdraw 4% per year of their retirement funds. Based on this rule, a person who wishes to retire on \$50,000 per year would need what level of total retirement savings at retirement?
  - A. 4% per year
  - B. \$1.25m
  - C. \$2.5m
  - D. \$2,000

Answer: B

Explanation: The 4% rule states that Annual payment = 0.04 x Retirement savings total. As discussed in lecture 7. The idea of the 4% rule is that, if you keep to it, you most likely won't "run out of money."

2. The focus company, Amazon.com, has a current equity market capitalization of more than \$1.5 trillion dollars. Looking at Amazon's current and historical data, what is the most convincing reason for investor confidence in Amazon?
  - A. High and sustained record of revenue growth
  - B. Extremely high margins, compared to other tech companies such as Apple
  - C. Extremely high asset turnover, compared to other retailers such as Walmart
  - D. Large dollar value of tangible assets providing comprehensive asset backing to the equity

Answer: A

Explanation: Amazon has produced compound annual growth rates of 20%+ in revenues over a 20 year period, and this record of growth is most attractive to investors. Their margins are good for a retailer, but not impressive for tech, as Apple/Microsoft/Google have margins in excess of 20%. Conversely, their asset turnover is high relative to some of their tech competitors, but not as high as a "best in breed" brick and mortar retailer like Walmart. As discussed in lecture 4A.

3. The 10 year US treasury bond interest rate or yield is closest to:
  - A. 1%
  - B. 3%
  - C. 5%
  - D. 7%

Answer: A, as discussed in lectures 1 and 2.

4. Which of the following would be classified as a current asset?
  - A. Accounts payable
  - B. Equipment
  - C. Cash
  - D. Goodwill

Answer: C, see page 49 and lecture 3.

Use the following information on Annie Oakley Incorporated (AOI) to answer the 2 questions: (Note: due to limitations of the system, these questions may have been served apart)

Average stockholders' equity	\$5,000	Net income	\$4,000
Average total assets	\$20,000	Sales	\$40,000
Current assets	\$8,000	Total liabilities	\$16,000
Current liabilities	\$2,000		

5. What is the **Asset Turnover** of AOI?

- A. 0.5
- B. 2
- C. 4
- D. 5

Answer: B

Explanation: Asset Turnover = Sales / Assets = \$40,000/\$20,000 = 2, see lecture 4

6. What is the Current Ratio of AOI?

- A. 0.5
- B. 2
- C. 4
- D. 8

Answer: C

Explanation: Current Ratio = Current Assets/Current Liabilities = \$40,000/\$20,000 = 2, see page 55 and lecture 3

7. GameStop Corporation has 68.75 million shares of common stock outstanding. It has no other equity shares, and pays no cash dividends. GameStop has total debt outstanding of \$162m. If the stock price today for GameStop is \$243.67, what is the equity market capitalization of GameStop in millions of dollars? (values may vary)

Answer: The equity market capitalization is the stock price multiplied by the number of shares (lecture 2, slide 22 and page 134).

Answer example using the values shown above:  $68.75 \times 243.67 = \$16,752\text{m}$

8. Which stock price index is most indicative of small company stocks?

- A. Russell 2000
- B. S&P 500
- C. NASDAQ
- D. Dow Jones Industrial Average

Answer: A

9. SpecialiChee Inc (SCI) locates some fine cheese from Switzerland called Gruyère. Specialichee purchases \$3000 worth of the cheese in January, arranging to pay suppliers in February. In February, SCI sells two thirds of the cheese at a 100% markup. The remaining cheese is sold in March at a 50% markup. Customers pay cash.

What is the revenue for each month of the first quarter?

January	February	March
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- A. January: zero; February: \$4,000; March: \$2,000
- B. January: -\$3000; February: \$4,000; March: \$1,500
- C. January: zero; February: \$1,000; March: \$1,500
- D. January: zero; February: \$4,000; March: \$1,500

ANSWER: D

- Explanation: January – no cheese sold, so revenue = 0
- February: 2/3 of the \$3000 cheese is sold => cost of cheese is \$2000. The cheese is marked up by 100% => Revenue of \$4000
- March: Remaining cheese is 1/3 of \$3000 => cost of cheese is \$1000. However, this cheese is only marked up 50% => Revenue of \$1500

10. Zumbrun (Wall Street Journal) suggests that cutting government debt won't be easy. What does the example of Japan show us, according to the article?

- A. High government debt can cause deflation
- B. It is essential that central banks do not own government debt
- C. Government debts can rise for a long time, without sparking a fiscal crisis.
- D. 200% of GDP is the absolute upper limit for government debt, if a fiscal crisis is to be avoided

Answer: C

Source: The article states that Japan's sovereign debt has exceeded 200% without causing a crisis. Incidentally, the increase in spending and government debt was in response to deflation, not the cause of it. Also, the article does not mention deflation at all.

11. Michael Richman has \$4,448,000 total savings. As a minimum, how many individual bank companies should he spread the savings between, to make sure that it is all insured by the FDIC? (savings may vary)

Answer: The number of banks is the savings divided by \$250K, but rounded **up**. It is necessary to round up, because any sum above \$250,000 needs another bank to ensure it. For example, \$501,000 would require 3 banks.

Answer example using the value shown above:  $\$4448/250 = 17.8$ . Round up to 18 banks.

12. The Neil Irwin article "Is Inflation About to Take Off? That's the Wrong Question" states that US household savings in 2020 have increased by \$1.56 trillion more than in 2019. What does Irwin suggest as a possible result, if people become more confident in the economy and spend their savings?

- A. A broad based surge of demand across a wide range of industries
- B. A recovery in prices in a limited number of industries such as garments and airlines
- C. A recovery in demand in a limited number of industries such as restaurants and hotels
- D. Increasing use of stock brokers (such as Robinhood etc.) to invest in the stock market

Answer: A

Reference: See the “sloshing bathtub” discussion in the article.

13. Venezuela (under the leadership of President Maduro) has suffered several bouts of hyperinflation (very high inflation of prices) in recent years. When Professor Briginshaw says “Maduro didn’t go into the office one day and say – ‘Let’s have some hyperinflation’ “, what point is he making?

- A. Although Maduro wanted hyperinflation, he was not able to cause it from the office, but needed to take to the streets
- B. The Venezuelan government’s actions had no influence on the hyperinflation
- C. Hyperinflation benefits retired persons on fixed incomes
- D. Hyperinflation was an unintended consequence of the Venezuelan government’s policies under Maduro

Answer: D

Explanation: As discussed in, for example, lecture 8

14. What is profit?

- A. Difference between revenues and expenses
- B. Revenue generated by goods and services
- C. Total money taken in by a corporation
- D. Increases in a corporation's stock price
- E. Increases in income from year to year

Answer: A

Reference: Lecture 3, slide 25

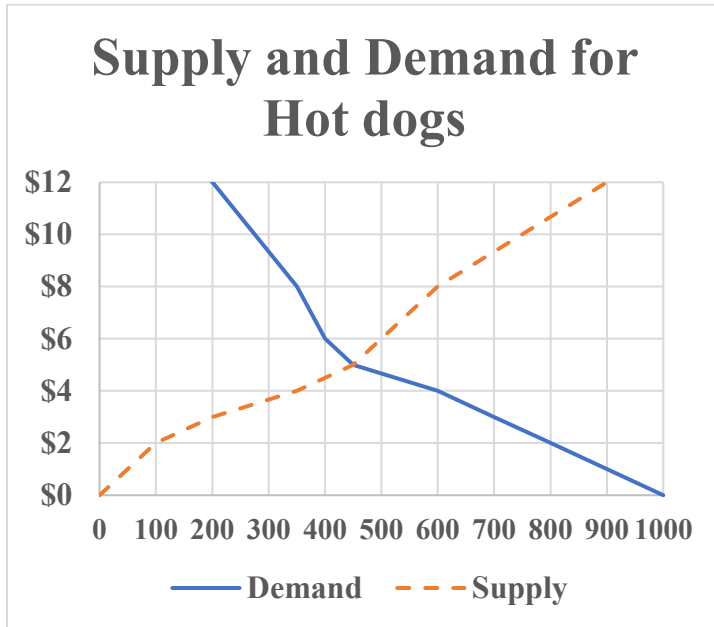
15. A company is established with \$1,000 of stockholder's equity and \$500 of debt (liabilities). Unfortunately, the company fails and the total assets are sold for \$300. If the rules of financial seniority are strictly applied, what will stockholders and debtholders receive?

- A. Debtholders will receive \$300 and stockholders will receive zero
- B. Stockholders will receive \$200 and debtholders will receive \$100
- C. Debtholders will receive \$300 and stockholders will receive the par value of their shares
- D. Stockholders will receive \$300 and debtholders will receive zero

Answer: A

Reference: See discussion of Financial seniority in lecture 2

16. Please examine the below supply and demand graph for standard hot dogs during January 2020 in an isolated town. The total revenue for the month across all hot dog suppliers is closest to...



- A. \$2,450
- B. \$2,250
- C. \$0
- D. \$1,600

Answer: B

Explanation: All trading occurs at the market price (\$5), where supply and demand (450 units) are matched. Therefore, the revenue earned by suppliers of hot dogs (equal to consumers' total spending on hot dogs) = \$5 x 450 = \$2,250

17. Amazon's 6/30/2020 10-Q has the following information:

- Cash flow from Operating Activities: \$20,606m
- Revenues: \$88,912m
- Net income: \$4,446m
- Total Assets: \$258,314m

What is the PROFIT MARGIN of Amazon for the quarter?

- A. 5.8%
- B. 5.0%
- C. 6.6%
- D. 4.2%

Answer: B

Explanation: Profit margin = Net income/Revenue = \$4,446/\$88,912 = 5%

18. The use of special knowledge about a firm, which results in an unfair advantage or generates profit or other types of gain, is known as what?

- A. Equity financing
- B. Prospectus information
- C. Market capitalization
- D. Insider trading

Answer: D, see page 136

19. In 2008 the rate of exchange for one euro was \$1.57, currently the exchange rate is \$1.20 per Euro. Who would have most benefited from this change in exchange rates?

- A. French exporters selling into the USA
- B. US exporters selling into France
- C. US hotel companies
- D. French vacationers visiting the US

Answer: A

Explanation: In 2008 it took \$1.57 to buy a Euro, now it only takes \$1.20. This means you have a **strong dollar** which makes it attractive for US persons or firms to buy things from overseas, such as imports from France. US exporters, and French vacationers (and therefore US hotels), suffer the reverse effect.

20. A product manager taking key pricing and production decisions with a company would rely most for information on which accounting system...?

- A. The company's 10-K reports
- B. The company's financial accounting system
- C. The company's forensic accounting system
- D. The company's managerial accounting system

Answer: D

Explanation: As an internal user, the product manager would have access, and would need, the detailed information from the managerial accounting system. See lecture 2 slide 8 and page 41.

21. A basket of goods cost \$100 on January 1st, 2018. Suppose Inflation during 2018 is -2.4% (i.e. in 2018 there is deflation (prices fall)). Then, inflation is 7.6% in 2019. What is the price of the basket of goods at the end of 2019? (values may vary)

Answer: To use the inflation numbers, firstly, convert them to decimals by dividing by 100. Then add them to 1. Then multiply the resulting inflation factor by the initial price, to get the end of year price. This has to be repeated for each of the two years.

Answer example using above values:

Year 1 (2018):

- Inflation factor for year 1 =  $1 + (-2.4/100) = 0.976$
- End of year price = Jan 1, 2018 price x 0.976

- End of year price =  $100 \times 0.976 = \$97.60$

Year 2 (2019)

- Inflation factor for year 1 =  $1 + (+7.6/100) = 1.076$
- End of year price = Jan 1, 2019 price  $\times 1.076$
- End of year price =  $97.6 \times 1.076 = \$105.02$

22. Which of the following assets is an INTANGIBLE asset?

- A. Equipment
- B. Goodwill
- C. Cash
- D. Inventory

Answer: B, see page 50

23. Which of the following describes the additional earning capacity on an initial investment as interest payments accumulate and earn even more interest?

- A. Interest
- B. Market value
- C. Compound growth or compounding
- D. Discounted cash flow
- E. Rule of 72

Answer: C

24. Stocks have which advantage over bonds?

- A. They have a lower seniority than bonds in liquidation
- B. They are a more safe investment than bonds
- C. Legally, stockholders are guaranteed to receive at least their par value
- D. They have a residual claim if the company performs well, and own part of the profits of the company

Answer: D

Explanation: Stocks' lower seniority is a disadvantage, which makes stocks less safe than bonds. In liquidation, stocks are likely to receive zero, not the par value. However, if things go well for the firm, the bonds only receive a fixed sum of dollars, and the common stock receive all the remaining value (D).

25. What did Professor Briginshaw describe as Amazon.com's "secret weapon"?

- A. Amazon Prime
- B. AWS (Amazon Web Services)
- C. Domestic retail
- D. International retail

Answer: B, see lecture 4A slide 31

26. A company has current sales revenues of \$1,634.1 million and current profit margin of 1.7%, and expected revenue growth of 15.4% per year for the next 10 years. If its profit margin in 10 years will be double its current margin, what is its projected profit in 10 years? Ignore taxes. (values may vary).

Answer: The 10 years away revenue is calculated by multiplying the current revenue by  $(1+g)$  to the 10<sup>th</sup> power, where  $g$  is the revenue growth written as a decimal. Then calculate the future profit, by multiplying the new revenue by the future profit margin, calculated as double the current profit margin.

Answer example using the values shown above:

- Projected revenue:  $\$1,634.1\text{m} \times 1.154^{10} = \$6,844.4\text{m}$
- Future profit margin =  $1.7\% \times 2 = 0.034$
- Projected income:  $\$6,844.4 \times 0.034 = \$232.71\text{m}$

27. Which of the following is included in both the M-1 and M-2 money supply measures?

- A. Stocks
- B. Money market accounts
- C. Checking account balances
- D. Time deposits

Answer: C

Explanation: See pages 78 to 79. Note that, since checking accounts are included in M-1, they are automatically included in M-2 (as M-2 is a superset of M-1).

28. A payment of \$2310 is to be received in 3 years. The interest rate is 5.7%. What is the present value of the future payment? (values may vary)

Answer: As per lecture 8, slide 24: Present value = Future value/  $(1+r)^t$

Answer example using the values shown above:  $PV = 2310/1.057^3 = \$1,956.08$

29. Tracy is running a lemonade stand. Her fixed costs are \$11 per day. The unit contribution margin for each glass of lemonade is 25 cents. In order to make enough for her college fund, Tracy needs to earn \$6 per day of profit. How many glasses of lemonade does Tracy have to sell per day to meet her target profit? Ignore taxes. (values may vary)

Answer: The units to be sold = the total contribution needed (fixed costs + target profit) divided by the contribution margin per glass

Answer example:

- Total Contribution =  $\$11 + \$6 = \$17$
- Contribution margin per glass =  $\$0.25$
- Units required =  $17/0.25 = 68$  units

30. Which of the following bodies requires firms to file disclosures so potential investors have valid information?

- A. Financial Accounting Standards Board



- B. Association of Certified Fraud Examiners
- C. Securities and Exchange Commission
- D. Accounting Disclosure Board

Answer: C, see page 136 and lecture 4A, slide 24.

31. How do independent CPAs (certified public accountants) or CPA firms ensure a company's financial reports really represent its operations?

- A. By acting as advisory to senior management
- B. By reviewing GAAP standards
- C. Through the filing of tax information
- D. By acting as consultants to noncertified accountants
- E. By conducting an audit

Answer: E, see page 42

32. Which of the following terms refers to the recording of financial transactions?

- A. Bookkeeping
- B. Budgeting
- C. Auditing
- D. Controlling
- E. Finance

Answer: A, see page 40

33. Which of the following is a consequence of the divisibility characteristic of money?

- A. Units of money do not expire after a certain time limit.
- B. Units of money can be accurately matched with the value of goods.
- C. Units of money are easily carried.
- D. Units of money have relatively stable value.
- E. Units of money of different nations are easily converted to other units of money.

Answer: B, see page 77

34. The Neil Irwin article "Is Inflation About to Take Off? That's the Wrong Question" proposes four distinct types of inflation risk. Which one of the following is not included in Irwin's list?

- A. The end of hibernation
- B. The great deflation
- C. The yo yo effect
- D. The sloshing bathtub

Answer: B. The fourth inflation risk is "The great **reflation**".

35. Who is the person who accepts the risks and opportunities inherent in a new business opportunity?

- A. Home country economic systems managers

- B. Information technology managers
- C. Entrepreneurs
- D. Capital managers
- E. Human resources

Answer: C, see page 12

36. Dougle Inc has a PE ratio of 40 and retains all of its earnings for future projects. What is the earnings yield and dividend yield for Dougle?

- A. Earnings Yield: 2.5%, Dividend Yield:  $\infty$  (infinity)
- B. Earnings Yield: 2.5%, Dividend Yield: 0%
- C. Earnings Yield: 40, Dividend Yield: zero
- D. Earnings Yield: zero, Dividend Yield: 2.5%

Answer: B.

Explanation: As noted on lecture 4A, slide 27, Earnings yield =  $1/\text{PE ratio} = 1/40 = 0.025$  or 2.5%. Dougle retains all of its earnings, which means its dividends (and therefore its dividend yield) are zero.

37. Which of the following reasons is the primary motivator for a commercial bank to acquire new depositors?

- A. A new deposit account will make more funds available to pay the interest on other deposit accounts.
- B. A new deposit account will make more funds available to give out in dividends to its investors.
- C. A new deposit account will make more funds available to give out in loans.
- D. A new deposit account will make more funds available to pay the bank's employees.

Answer: C

Explanation: Sums deposited by customers cannot be paid out to employees, stockholders or other depositors. However, under the restrictions set by the Fed (reserve requirement) additional deposits do allow the bank to make more loans.

38. Wikitania is a market economy. Ribbles are a useful good in the country. In early 2022, additional supplies of Ribbles become available. Ceteris paribus (all other things being equal), what is the most likely result of the increase in supply:-

- A. Demand for Ribbles will fall
- B. Prices of Ribbles will decrease
- C. Prices of Ribbles will increase
- D. If all Ribbles are sold, the price will not change

Answer: B

Explanation: As more ribbles become available, additional demand must be generated. The only way to do this is by lowering the price. To see this more clearly, think about a real good like gasoline. If supply increases (such as new oil being discovered), prices fall at the gas pump.