

FINANCIAL MATH & ANALYSIS CONCEPTS (190)

—OPEN EVENT—

REGIONAL – 2020

DO NOT WRITE ON TEST BOOKLET

TOTAL POINTS _____ (*100 points*)

Failure to adhere to any of the following rules will result in disqualification:

- 1. Contestant must hand in this test booklet and all printouts. Failure to do so will result in disqualification.**
- 2. No equipment, supplies, or materials other than those specified for this event are allowed in the testing area. No previous BPA tests and/or sample tests or facsimile (handwritten, photocopied, or keyed) are allowed in the testing area.**
- 3. Electronic devices will be monitored according to ACT standards.**

No more than sixty (60) minutes testing time

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Directions: Answer the following multiple-choice questions by identifying the letter that best completes each sentence or answers the question.

1. Sally worked a total of 25 hours this week. Her hourly wage is \$9.75. What was her total gross pay for the week?
 - a. \$247.35
 - b. \$ 9.75
 - c. \$243.75
 - d. \$390.00

2. Chad works as a copy editor for a local newspaper. His annual salary is \$24,000. What would Chad earn as a weekly gross salary?
 - a. \$ 480.00
 - b. \$ 461.54
 - c. \$ 500.00
 - d. \$1,000.00

3. Allison used an employment agency to help her find her recent employment at a call center. Allison pays 3% for the first 6 months of her employment of her salary to the agency as a finder fee. Allison's weekly salary is \$676.00. How much will Allison pay to the employment agency?
 - a. \$ 20.28
 - b. \$ 81.12
 - c. \$572.82
 - d. \$527.28

4. Cathy works at a local park in the concession stand. She is making the nightly deposit. Her deposit consists of 22-Twenty Dollar Bills, 8-Ten Dollar Bill, 13-Five Dollar Bills, 10-One Dollar Bills, 18-Quarters, 12-Dimes, 8-Nickles, 37-Pennies, and one check in the amount of \$7.75. What is her total deposit?
 - a. \$607.47
 - b. \$601.47
 - c. \$609.22
 - d. \$616.97

5. Jason earned \$86,000 this year working as a Sales Marketing Agent. He pays 6.2% in Social Security and 1.45% in Medicare taxes. What is the total tax Jason will pay this year based on his annual earnings?
 - a. \$5,332.00
 - b. \$6,579.00
 - c. \$5,320.00
 - d. \$6,880.00

6. A local entrepreneur is counting his sales for the day. He is trying to calculate the average sale per customer. His customer sales per transaction is as follows: \$145.00, \$86.95, \$54.26, \$112.75, and \$65.45. What is the average sale per customer for today?
 - a. \$ 92.88
 - b. \$ 54.26
 - c. \$464.41
 - d. \$112.75

7. Amy has a certificate of deposit (CD) that is getting ready to mature this month. Her \$4,500.00 CD earns 2.8% fixed simple interest annually. Her CD was with the bank for a total of 2 years. If Amy was to cash in her CD, how much will her investment check be worth?
 - a. \$ 252.00
 - b. \$4,752.00
 - c. \$4,858.00
 - d. \$4,962.00

8. Alex paid rent on his first-year lease to his landlord for a total of \$17,750.00. If Alex had to pay a first-month rent deposit which was included in his total payment, how much rent does Alex pay per month?
 - a. \$1,479.67
 - b. \$1,365.38
 - c. \$1,589.38
 - d. \$1,497.67

9. Kameron earns \$9.50 an hour as a cashier. Her employer pays overtime at a rate of time-and-a-half. This week Kameron works a total of 47 hours. What is Kameron's gross pay this week?
 - a. \$446.50
 - b. \$380.00
 - c. \$479.75
 - d. \$479.50

10. Hope is a per diem employee who earns \$65.00 a day that she works on special projects. In the last month she averages 17 days of work. What would Hope's gross pay be for a full year?
 - a. \$13,260.00
 - b. \$12,360.00
 - c. \$43,260.00
 - d. \$42,360.00

11. Mary works in a factory where she makes widgets. Mary is paid as a piece worker. Mary earns \$1.25 per passed inspection widget she makes. This week Mary had 173 widgets, of which 6 did not pass inspection. What is Mary's gross pay for a month (4 weeks) if she remains on this production schedule?
- \$216.25
 - \$865.00
 - \$835.00
 - \$825.00
12. George is paid bi-weekly at his job. He earns an average of \$1,125.00 a pay period. What is George's annual salary?
- \$27,000.00
 - \$13,500.00
 - \$29,000.00
 - \$29,250.00
13. Mickey has 100,000 shares of stock in his company. As Mickey decides to retire, he wants to cash in his shares. If each share is sold at \$127.00, and he must pay his broker a fee of 7.5% of the overall sale, how much will Mickey's check be worth?
- \$12,700,000.00
 - \$ 952,500.00
 - \$11,747,500.00
 - \$ 3,175,000.00
14. Oscar is calculating his monthly gross wage from his new job. Oscar earns \$17.75 an hour. This week Oscar works a total of 38.5 hours. If Oscar continues to work the same number of hours each week this month (4 weeks), what is Oscar's gross pay?
- \$ 683.38
 - \$2,733.50
 - \$3,833.80
 - \$2,698.00
15. Rudy Wilkinson works at a company that uses a every two week pay structure. If Rudy earns \$42,475.00 a year, how much is Rudy's hourly wage?
- \$22.12
 - \$20.42
 - \$24.20
 - \$21.22

16. Jerry Griffin is paid \$11.75 an hour for regular time he works as a help desk clerk. If Jerry is permitted to work overtime, he is paid at time-and-a-half per hour of time worked. What is Jerry's overtime pay rate?
- \$11.75
 - \$23.50
 - \$17.63
 - \$17.36
17. This past weekend Christopher worked 17 hours at double-time pay. His regular pay is \$8.75. How much is Christopher's pay from this past weekend total?
- \$148.75
 - \$297.50
 - \$223.13
 - \$147.85
18. You are responsible for calculating payroll for the week. You have three employees who have the following total hours: Employee 1, 18.5; Employee B, 27; and Employee C, 32.75. Employee 1 earns \$7.75 per hour; Employee 2 earns \$9.90 per hour, and Employee 3 earns \$12.75 per hour. What is the total for the payroll this week?
- \$828.24
 - \$792.93
 - \$606.48
 - \$798.24
19. Eric Holmes earns a salary of \$56,560. How much will his bi-weekly payroll check be worth?
- \$2,356.66
 - \$2,356.67
 - \$2,175.39
 - \$2,175.38
20. Paul is paid a salary of \$425.00 a week plus $2\frac{3}{4}\%$ commission on weekly sales over \$7,500.00. His sales this last week totaled \$18,400. What was his total earnings for this week?
- \$506.00
 - \$931.00
 - \$631.25
 - \$724.75

21. A salesperson who works on a straight commission basis sold 12 furnace systems at \$3,975 each. The commission rate was 16%. What was the amount of commission earned?
- a. \$47,700.00
 - b. \$ 7,632.00
 - c. \$ 2,981.25
 - d. \$ 4,611.00
22. Yvonne earns extra money by cleaning carpets. Her charge is based on the size and condition of the carpet. Recently, she cleaned 5 floors for \$225 each, 6 floors for \$175 each, and 3 floors for \$298 each. What was the average amount of income received by Yvonne given her recent week of appointments?
- a. \$3,069.00
 - b. \$1,023.00
 - c. \$ 219.21
 - d. \$ 219.12
23. Jason insures his apartment for \$32,000 at an annual rate of \$0.78 per \$100 insured. What is Jason's annual insurance premium?
- a. \$249.60
 - b. \$246.90
 - c. \$246.60
 - d. \$249.90
24. Anthony recently made an online purchase from a well-known e-retailer. His total shopping cart balance was \$172.68. His state sales tax which will be collected by the company is 9.5%. What will be his total purchase price?
- a. \$ 16.40
 - b. \$190.87
 - c. \$189.08
 - d. \$174.32
25. The local school is running a yearbook special. If you purchase 2 copies, you receive a discount of 22% on the second copy only. You decide to purchase 6 copies for your friends. Each yearbook costs \$62.78. How much is your bill?
- a. \$293.82
 - b. \$376.68
 - c. \$267.56
 - d. \$335.25

26. During the President's Sale at the local mattress store, each customer earns a discount of 20.19% for any purchase total of \$699.00 or higher. You decide to purchase a new mattress that retails for \$799.00, plus sales tax of 7.75%. How much will it cost you to purchase the new mattress?
- \$960.32
 - \$782.87
 - \$687.10
 - \$728.87
27. Charlie loves to eat at his favorite restaurant. His total bill with tip recently was \$75.85. If his bill prior to the tip was \$62.20, how much of a tip did Charlie leave for his server?
- 18%
 - 15%
 - 22%
 - 10%
28. Suzanne's BBQ has assets of \$482,400 and liabilities of \$158,800. What is the net worth of Suzanne's BBQ to date?
- \$323,600.00
 - \$641,200.00
 - \$332,600.00
 - \$416,200.00
29. Eddie has an annual gross income of \$42,500 for the year. He has a total of \$3,670 in adjustments, and \$8,980 in deductions. Eddie only claims himself as an exemption. Each exemption is worth \$3,000. What is Eddie's taxable income for the year?
- \$26,760.00
 - \$29,850.00
 - \$35,830.00
 - \$26,850.00
30. Angel's adjusted gross income on her federal tax return was \$68,980. She claimed the standard deduction of \$4,850.00, and one exemption at \$3,400.00. What was Angel's taxable income?
- \$68,890.00
 - \$60,730.00
 - \$60,370.00
 - \$68,980.00

31. You deposit a total of \$500 on July 1 and keep your money from this deposit in the bank for an entire year. You make no further deposits or withdrawals. If the bank pays 2.25% interest compounded semiannually, what compound interest will you earn on this deposit after one year?
- a. \$ 11.32
 - b. \$ 13.12
 - c. \$119.50
 - d. \$191.50
32. The bank pays 3% annual interest compounded quarterly. You deposit \$950.00 on April 1 and make no other deposits or withdrawals. What is the interest earned on your account on January 1 of the next year?
- a. \$21.38
 - b. \$14.25
 - c. \$21.54
 - d. \$14.38
33. The bank pays 3% annual interest compounded quarterly. You deposit \$950.00 on April 1 and make no other deposits or withdrawals. What would your balance be in your account after interest was applied on January 1 of the next year?
- a. \$971.54
 - b. \$964.38
 - c. \$971.49
 - d. \$964.25
34. Ellie deposited these items into her checking account at the local credit union: 14-twenties, 24-quarters, 8 dimes, a check in the amount of \$174.25, and a check in the amount of \$165.25. She wants to keep \$35.00 in cash from her deposit. What is the net deposit she is putting in the bank today?
- a. \$626.30
 - b. \$591.30
 - c. \$661.30
 - d. \$583.30
35. Michael reviews his bank statement and begins to reconcile with his checkbook register. His bank statement has a balance of \$789.52, and his checkbook register has a balance of \$861.52. He notices a missing deposit from the bank statement of \$65.25, and the bank statement shows a fee for the month in the amount of \$6.75. Once he reconciles his statement with his checkbook; what is his new balance?
- a. \$724.27
 - b. \$789.52
 - c. \$854.77
 - d. \$920.02

36. June deposits the following checks into her bank account: \$45.62, \$82.56, and \$96.52. What is her total deposit for the day?
- \$224.34
 - \$224.70
 - \$224.43
 - \$224.07
37. How much interest will you earn on a simple interest CD if interest is paid semiannually, with a maturity date of 1 year? Your deposit is \$2,000.00 and the interest rate is 4.5%.
- \$45.00
 - \$54.00
 - \$90.00
 - \$94.00
38. Justin earns 6% commission on sales up to \$10,000 and 7% on sales over \$10,000. If Justin's sales this past month are \$37,000, how much commission salary will Justin earn?
- \$5,180.00
 - \$2,490.00
 - \$3,300.00
 - \$3,490.00
39. Tammy's Tacos is performing their weekly inventory count on supplies. They had 16 sleeves of taco shells on the shelf. Their sales this week were: 50, 52, 24, 34, and 40. If each sleeve has 20 tacos, how many new sleeves does Tammy's Tacos need to order to keep their standard 16 sleeves on hand?
- 9
 - 12
 - 8
 - 10
40. Tom, a corporate attorney, is heading to Indianapolis, Indiana for a court hearing. Tom's firm pays up to \$80 a day for meals. He will be in town for a total of 4 days. His meal receipts are as follows: \$65.25, \$52.33, \$39.85, and \$105.25. What percentage of Tom's meal budget is he using?
- 82%
 - 81%
 - 80%
 - 83%

41. Jesse Griffin works for a local car dealership. He is guaranteed a minimum salary of \$1,025 a week, or 12 percent of his total sales, depending on which one is greater. What is Jesse's gross earnings for the week if his total sales were \$75,000.00?
- \$ 1,025.00
 - \$ 1,037.00
 - \$ 9,000.00
 - \$10,025.00
42. Tremendous Tasty Treats just opened a store location on the west side of the city. In the process of opening their new location, they borrowed \$17,000 from their local bank to purchase new equipment. The loan has a simple interest of 4.5%. How much interest will be paid on the loan the first 6 months?
- \$382.50
 - \$328.50
 - \$492.50
 - \$429.50
43. Your local school bookstore sells a variety of products. On opening day the inventory is referred to in units is valued at \$20,250.00, with a total of 600 units. After the first week, inventory reflects only 215 units are left in the system. Therefore, what is the value of the total units left in the system at the end of the week?
- \$7,562.52
 - \$7,652.25
 - \$7,256.25
 - \$7,526.52
44. Shawn's credit card statement comes in the mail. Upon reading her statement her previous balance was \$326.89. Her new purchases totaled \$146.29, she had a credit of \$29.86, and interest of \$5.79. What was her new balance on her account?
- \$437.53
 - \$497.25
 - \$508.83
 - \$449.11
45. Brandon and Linda own a local bakery. They are preparing to go to the bank to apply for a small business loan. They are reviewing their balance sheet and have a total of \$145,896 in assets, and \$52,614 in liabilities. What is their percentage of liabilities given this information?
- 30%
 - 29%
 - 36%
 - 37%

46. Sam is assessing his budget and is trying to determine if he should apply for a low interest credit card. The credit card company looks at each applicant's debt-to-income ratio. Currently, Sam has a payment for his housing in the amount of \$575.00, utilities in the amount of \$52.50, car loan in the amount of \$175.00, and \$75.00 for his internet and cable. Sam's gross income for the month is \$975.00. What is Sam's debt-to-income ratio?
- 75%
 - 80%
 - 72%
 - 90%
47. The previous balance on Jackie's credit card is \$679.52. Her card has an APR of 12%, with finance charges applied with a monthly periodic rate to the previous balance. She made \$192 in new purchases this month. Her minimum payment is 4% of her current balance, rounded to the nearest dollar. What are her periodic finance charges?
- \$6.79
 - \$6.80
 - \$6.97
 - \$6.87
48. The previous balance on Jackie's credit card is \$679.52. Recently, her monthly statement stated her finance charges totaled \$6.80. What is her current balance, including the finance charge and the new purchases in the amount of \$192.00?
- \$878.39
 - \$878.32
 - \$878.49
 - \$878.31
49. The current balance on Jackie's credit card is \$679.52. Her card has an APR of 12%, with finance charges applied with a monthly periodic rate to the previous balance. She made \$192 in new purchases this month. Her minimum payment is 4% of her current balance, rounded to the nearest dollar. What is her minimum payment?
- \$40.00
 - \$38.00
 - \$31.00
 - \$35.00
50. Julio has \$165.36 in his bank account. He makes a deposit of \$130.00, two debit card purchases of \$32.15 and \$15.42, and an ATM withdrawal of \$100.00. What is his new balance?
- \$147.79
 - \$242.93
 - \$347.79
 - \$442.93