12 Pages

Contestant Number_____

Time_____

Rank_____

FINANCIAL MATH & ANALYSIS (12)

—OPEN EVENT—

Regional– 2012

TOTAL POINTS _____ ***(500)***

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.***

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GENERAL INSTRUCTIONS

The number of decimal places used in calculations and in the reporting of your answers is very important. Below are guidelines to use as you take this test. If a problem varies from these guidelines, it will be noted in the problem.

PAYROLL QUESTIONS

- Do not round the overtime rate.
- Overtime is paid for any hours over 40 worked in a week, *unless otherwise stated in the problem.*
- Normal work week is 40 hours, *unless otherwise stated in the problem.*

PERCENTAGE PROBLEMS

- Round to the nearest tenth when working with percentages.

  Example: Use 2.3% NOT 2%
  Example: An answer of .9638 should be written as 96.4%

FRACTIONS

- All problems with fractions are to be reduced to their lowest terms.

INTEREST

- All interest rates are stated in one-year simple interest, *unless otherwise noted.*

DOLLAR AMOUNTS

- All dollar amounts must be rounded to the second place (nearest cent).

  Example: $35.9765 to $35.98

Please use test booklet as scrap paper

1. Stuart Goldman works at King's Golf Spot. He works 11 hours a week and earns $8.25 per hour. What is Goldman's straight-time pay for each week?
    A. $90.75
    B. $80.75
    C. $80.25
    D. $90.25

2. Samantha Hayes worked 38.75 hours at Tech Pro. She is paid $14.625 an hour. What is her straight-time pay?
    A. $582.454
    B. $566.719
    C. $676.353
    D. $565.255

3. Carleen Bailey works at CD Warehouse eight hours a day, earning $9.48 an hour. She is asked to work two additional hours at time and a half to help prepare for an incoming shipment. How much will she earn for these two hours of overtime?
    A. $28.00
    B. $28.75
    C. $28.44
    D. $26.40

4. Pauline Doyle worked at Simon Medical Institute for 6 ½ hours on Monday and from 8:00 A.M. until 4:00 P.M. on Tuesday. What is the total number of hours she worked?
    A. 14 ½ hours
    B. 13 ½ hours
    C. 15 hours
    D. 15 ½ hours

5. Justin Joseph presses shirts at All Day Cleaners. He gets paid $0.37 per shirt. Last week he pressed 649 shirts. What was his total pay?
    A. $240.00
    B. $240.13
    C. $295.25
    D. $220.25

6. Benjamin Foster's job as a social worker pays $43,500 a year. What is his monthly salary?
    A. $3,625.00
    B. $3,265.00
    C. $3,525.00
    D. $4,625.00

7. Anthony Patella earns $300.00 per week working part-time at his uncle's restaurant. How much does he make in a year assuming he works the entire year?
    A. $15,000.00
    B. $14,300.00
    C. $13,500.00
    D. $15,600.00

8. Colleen Truman earns a 4.5 percent commission on all sales. In October her sales totaled $40,000.00. How much did she earn in commission?
    A. $18,000.00
    B. $1,800.00
    C. $1,080.00
    D. $14,500.00

9. Cody Summer sells tires for tractor trailers. He earns 4.5 percent commission on the first $6,000.00, 8 percent on the next $6,000.00, and 12 percent on sales over $12,000.00. Last month he sold $18,000.00 worth of tires. What was his total commission?
    A. $1,470.00
    B. $1,450.00
    C. $1,540.00
    D. $1,560.00

10. Liana Lytle's gross pay is $26,300.00. She takes a married exemption of $4,000.00. Her state income tax rate is 5.5 percent. How much will she pay in state tax?
    A. $1,226.50
    B. $1,115.00
    C. $1,281.50
    D. $1,821.25

11. Jill Janzen's gross weekly pay is $298.00. Her earnings to date for the year total $14,900.00. What amount is deducted from her pay this week for Social Security, which is taxed at 6.2 percent?
    A. $21.33
    B. $14.52
    C. $18.48
    D. $30.88

12. Dalton Alexander's gross weekly pay is $576. His earnings to date for the year total $12,824. What amount is deducted from his pay per week for Medicare, which is taxed at 1.45 percent?
    A. $6.00
    B. $19.95
    C. $8.35
    D. $15.60

13. Sakima Lena is employed at Taste of Thai. He has family medical coverage through the group medical plan that Taste of Thai provides for its employees. The annual cost of Lena's family membership is $3,700. The company pays 35 percent of the cost. How much does Lena pay annually for medical insurance?
    A. $2,100
    B. $3,670
    C. $5,400
    D. $2,405

14. Harold Chung keeps records of his expenditures. He wants to know how much he spends each month, on the average. His records for three months are shown below. What is his average monthly expenditure?

Month	Expenditure
September	$1,988.00
October	$2,234.50
November	$2,099.00

A. $2,107.17
B. $2,300.90
C. $1,999.17
D. $2,234.50

15. Marilyn and Thomas Meyer keep records of their expenditures. They want to know how much they spend each month, on the average. Their records for four months are shown below. What is their average monthly expenditure?

Month	Expenditure
January	$3,878.54
February	$2,465.27
March	$3,232.98
April	$2,768.09

A. $2,887.22
B. $3,777.65
C. $2,980.00
D. $3,086.22

16. The Flynns' monthy budget allowed them to spend $555 for household expenses. During June and July they had a room in their home remodeled and spent a total of $2,035 for household expenses. How much did they overspend?
    A. $1,200
    B. $675
    C. $897
    D. $925

17. Rafiq Jackson's monthly budget allows him to spend $175 for groceries. In August he spent $85 and in September he spent $123. How much more or less did he spend than budgeted?
    A. $132 less
    B. $175 more
    C. $152 more
    D. $142 less

18. Oliver Kite tracks his transportation expenses to and from work for one month. His expense sheet looks like this:

Gas/Oil	$45.75
Parking	7.23
Tolls	10.25
Commuting	61.00

Kite budgets $115.00 per month for transportation. How much more or less are Kite's expenses than the $115.00 budgeted?

A. $10.50 more
B. $9.23 more
C. $6.54 less
D. $13.00 more

19. Aneas Arnold sells lighting supplies. She travels all over New England. Her total monthly expenses for August, September, and October were $2,700.00, $1,100.00, and $2,200.00. What was her average monthly expenditure?

A. $2,200.00
B. $2,000.00
C. $3,000.00
D. $6,000.00

20. Jackie Pope is a professional singer. She tracks her transportation expenses to and from her performances. Her expense sheet looks like this:

Gas/Oil	$30.00
Parking	5.00
Tolls	7.00
Commuting	45.50

Pope budgets $100.00 per month for transportation. How much more or less are her expenses than the $100.00 budgeted?

A. $13.50 less
B. $12.50 less
C. $19.50 less
D. $12.50 more

21. The Yoon family's monthly budget allowed them to spend $175.00 for personal expenses. To prepare for an upcoming camping trip in June, their personal spending totaled $455.00. By how much did they exceed their budget that month?

A. $235.00
B. $195.00
C. $260.00
D. None of the above.

22. How much more or less is the amount spent than the amount budgeted?

    Budgeted: $76,540.90 Spent: $67,987.34

    A. $8.559.98 more
    B. $8,567.45 less
    C. $8,765.56 less
    D. $8,553.56 less

23. Lincoln Jefferson sold his motor scooter and received a check for two hundred eighty-one and 01/100 dollars. What is the amount of the check written as a numeral?
    A. $281.00
    B. $821.10
    C. $281.01
    D. $218.10

24. Colleen McHugh wishes to deposit checks for $13.75, $92.08, and $8.21 into her account. She would like to receive $15.00 back in cash. What is her total deposit?
    A. $114.04
    B. $99.04
    C. $115.94
    D. $99.54

25. Which of the following is the correct word form to write on a check for the amount $756.50?
    A. Seven hundred fifty-six and 05/100
    B. Seven hundred fifty-six and 50/100
    C. Seven hundred fifty-six and 50/100 dollars
    D. Seven fifty-six and 0.50 dollars

26. Eric Schneider's bank statement shows a previous balance of $974.95. He made deposits of $260.00 and $98.48. He wrote checks for $721.00 and $35.35. He has a $3.00 service charge and earned $0.75 in interest. What is his present balance?
    A. $506.83
    B. $486.08
    C. $560.08
    D. $574.83

27. Chica Sanchez's checking account had a balance of $678.22. She wrote a check to pay her gasoline charge card for $17.21 and a check to the grocery store for $172.71. What is her new balance?
    A. $661.01
    B. $478.30
    C. $488.30
    D. $668.01

28. Julie Lonneman deposited her paycheck for $568.87 and a check from her father for $15.65. What was her total deposit?
    A. $564.85
    B. $584.52
    C. $568.87
    D. $656.98

29. Clinton Zooks purchased two cans of paint from Pamela's Paints for $21.99 each. What was the amount of his check, expressed in words?
    A. Forty-three and 98/100 dollars
    B. Twenty-one and 99/100 dollars
    C. Forty-eight and 98/100 dollars
    D. Forty-three and 99/100 dollars

30. The previous balance in Calvin Harris' check register was $978.22. He wrote a check to Murray's Grocery for $77.21 and a check to The Photo Depot for $276.90. What is his new balance?
    A. $504.16
    B. $714.16
    C. $624.55
    D. $624.11

31. Lincoln Cook has a check for $295.50 and a check for $6.25. He also has a $10.00 bill. He would like to receive $5.00 in cash and deposit the rest of the money in his savings account. What is the total deposit?
    A. $304.75
    B. $306.75
    C. $206.75
    D. $311.75

32. Seven hundred sixty-six and 70/100 dollars as a numeral is:
    A. $676.50
    B. $765.70
    C. $766.70
    D. $666.70

33. The previous balance on Hector Todd's savings account if $618.21. He has $4.31 in interest, $466.26 in deposits, and $10.10 in withdrawals. What is his new balance?
    A. $1,078.90
    B. $1,178.68
    C. $1,078.68
    D. $1,068.78

34. Stephen Snell has $400.00 in his savings account. His annual interest rate is 4 percent. What is the interest after six months?
    A. $7.00
    B. $8.00
    C. $6.00
    D. $16.00

35. Ginger Yiu has a principal of $900.00 in her savings account. It earns 6 % APR interest compounded quarterly. What is the amount in the account at the end of the third quarter?
    A. $945.22
    B. $941.11
    C. $935.67
    D. $987.33

36. Lincoln Cook has a check for $667.50 and a check for $126.25. He also has $482.00 in bills. He would like to receive $25.00 in cash and deposit the rest of the money in his savings account. What is the total deposit?
    A. $1,275.75
    B. $1,250.75
    C. $1,375.50
    D. $1,275.00

37. Cordell Johnson purchased a snow blower for $237.00 and two bags of rock salt for $3.15 each. What is the sales tax on his purchases if he lives in Maine where the sales tax rate is 5 percent?
    A. $12.17
    B. $12.01
    C. $12.21
    D. $13.02

38. Bill Aitkins bought a new television set for $327.85. The sales tax rate is 5 percent. What is the total purchase price?
    A. $344.24
    B. $354.24
    C. $356.77
    D. $234.88

39. Martin Long purchased a roast beef sandwich for $2.55. He had a coupon for $0.50. What is the final price of the sandwich?
    A. $2.05
    B. $1.55
    C. $1.95
    D. $2.35

40. Thomas Peters purchased a new SUV for $32,984.00. He received a $2,175.00 rebate from the car dealer and a $500.00 rebate from the manufacturer. What is the final price?
    A. $29,309.00
    B. $32,309.00
    C. $30,309.00
    D. $31,309.00

41. Tracy's Trends Store sells a line of dresses at a regular price of $40.00. The store marks down the dresses 25 percent. What is the sale price of one of these dresses?
    A. $32.00
    B. $42.00
    C. $10.00
    D. $30.00

42. Sally Rose's charge account statement showed a previous balance of $6,472.82, a finance charge of $12.95, new purchases of $1,697.08, and a payment of $4,900.50. What is her new balance?
    A. $3,454.99
    B. $3,282.35
    C. $3,566.44
    D. $3,112.78

43. Find the average daily balance (no new purchases included).

Dates	**Payment**	**End-of-Day Balance**	**X**	**Number of Days**	**Sum of Balances**
6/3-6/16		$385.99	X	14	$
6/17	$87.55	298.44	X	1	
6/18-7/3		298.44	X	16	
		Total		31	

    A. $378.33
    B. $337.98
    C. $298.11
    D. $265.78

44. Lena Craig's charge account statement showed a previous balance of $1,100.00, a finance charge of $6.00, new purchases of $700.00, and a payment of $180.00. What is her new balance?
    A. $1,766.00
    B. $1,866.00
    C. $1,626.00
    D. $1,888.00

45. Reka Rahim's charge account statement showed a previous balance of $6,242.22, a finance charge of $22.12, new purchases of $497.50, and a payment of $6,750.00. What is her new balance?
    A. $15.72
    B. $11.84
    C. $0.00
    D. $132.00

46. What is the average daily balance (no new purchase included)?

Dates	**Payment**	**End-of-Day Balance**	**X**	**Number of Days**	**Sum of Balances**
9/4-9/18		$147.01	X	15	$2,205.15
9/19	$135.00	12.01	X	1	
9/20-10/3		12.01	X	14	
		Total		30	

    A. $88.01
    B. $79.51
    C. $76.23
    D. $80.00

47. Tim Hanes' bank granted him a single-payment loan of $1,000 for 100 days at 12 percent ordinary interest. What is the maturity value of the loan?
    A. $1,033.33
    B. $1,578.01
    C. $1,044.55
    D. $1,120.00

48. Cloe Dow purchased a hot tub for $5,000. She made a 50 percent down payment and financed the remainder. What amount did she finance?
    A. $3,000.00
    B. $2,400.00
    C. $2,500.00
    D. $2,000.00

49. Gilbert Siegel obtained a $1,500.00 loan at an interest rate of 10 percent. The monthly payment is $131.85. What is the interest on the first monthly payment?
    A. $13.20
    B. $12.50
    C. $15.50
    D. $25.00

50. John Simms is shopping for a new sport utility vehicle. A portion of the sticker for an SUV is shown below. What is the sticker price?

SUV	
Base Price	$28,150.00
Optional Equipment Description	
Anti-Lock Brakes (ABS)	$900.00
Automatic Transmission (ATO)	$630.00
Destination Charge	699.00

A. $29,680.00
B. $30,379.00
C. $40,256.00
D. $31,379.00