DO NOT WRITE ON TEST

BUSINESS PROFESSIONALS of AMERICA
Giving Purpose to Potential

FINANCIAL MATH & ANALYSIS CONCEPTS ~OPEN EVENT~

(190)

REGIONAL 2022

TOTAL POINTS _____100 Points

Test Time: 60 minutes

MULTIPLE CHOICE

Identify the choice that *best* completes the statement or answers the question.

1. Travis gets paid $1,750 per week. His company is changing from paying weekly to paying monthly. What will Travis's monthly gross pay be?
    a. $7,000.00
    b. $7,583.33
    c. $5,250.00
    d. $6,644.23

2. Rachel's hourly wage is $12.50. Rachel worked 55 hours last week. What will Rachel's gross pay be for the week?
    a. $500.00
    b. $831.75
    c. $781.25
    d. $735.00

3. Cindy's gross pay is $4,564 per pay period. FICA taxes equal 7.5% and income tax is 12.5%. How much is Cindy's net pay?
    a. $4,564.00
    b. $4,221.70
    c. $3,993.50
    d. $3,651.20

4. Mark sold $1,100,000 worth of product last year. Mark's company pays him 7.5% commission. How much commission did Mark earn?
    a. $77,000
    b. $85,200
    c. $79,250
    d. $82,500

5. Charlotte works for Cells-R-Us and makes a regular wage, but also earns 5% commission on phone sales. Charlotte sold $27,851 worth of phones last month. How much would her commission for the month be?
    a. $278.51
    b. $1,392.55
    c. $1,393.55
    d. $1,114.04

6. Santa's Watching Security Alarms pays their employees $250 per sale of a security system as well as 25% of any upgrade features sold as part of the system. How much pay would an employee earn if they sold 13 systems and $43,240 worth of upgrades?
    a. $10,810
    b. $11,060
    c. $3,250
    d. $14,060

7. Trent needed a loan to buy his tools for his job as an auto mechanic. He got a loan for $3,232 with 7% interest to be paid back in one year. How much will he have to pay back to pay the loan in full?
    a. $3,782.32
    b. $3,766.23
    c. $3,458.24
    d. $3,494.42

8. Lenny got a payday loan for $500. The loan charges monthly interest of 12.5%. How much will Lenny pay in interest when the loan becomes due in one month?
    a. $57.50
    b. $62.50
    c. $67.50
    d. $60.00

9. Charles decided to get a small loan for some house repairs. His bank offered him a $1,500 loan with an annual interest rate of 3.5% to be paid back in six months. How much will Charles need to pay back?
    a. $1,545.00
    b. $1,548.75
    c. $1,552.50
    d. $1,526.25

10. ABC Market has five salespeople. Four of the salespeople had sales of $145,309, $157,489, $215,980, and $175,655. If the average sales for all five salespeople is $167,345, what would the sales of the fifth salesmen be?
    a. $195,444
    b. $142,292
    c. $153, 878
    d. $125,375

11. King's Retail stores had quarterly average department sales of $171,359. The department
    sales were as follows: clothing - $115,345; seasonal - $187,980; toys - $220,132; housewares
    - $164,368; and hardware - $168,970. Which department quarterly average is the median?
    a. Seasonal - $187,980
    b. Average - $171,359
    c. Housewares - $164,368
    d. Hardware - $168,970

12. A local restaurant was tracking how many customers they had last week. The number of
    customers they had each day is representing in the table below.

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
176	56	63	88	90	185	225

    What is the mean for daily number of customers for this restaurant (rounded to nearest whole
    number)?
    a. 169
    b. 147
    c. 126
    d. 111

13. Colten used his personal truck at work for 32% of the 53,248 miles he drove last year. His
    employer reimbursed work usage mileage at $.56/mile. What was Colten's reimbursement at
    the end of the year?
    a. $9,542.04
    b. $12,779.52
    c. $17,039.36
    d. $29,818.88

14. Tacoma Co. renews their six-month insurance policy for $5,400 April 1. How much will
    Tacoma adjust the Prepaid Insurance account for on June 30, the end of Quarter 2?
    a. $1,800
    b. $2,700
    c. $3,750
    d. $4,000

15. A shoe store has a large amount of red and green shoes. The ratio of red shoes to green shoes
    is 3:4. If the store has 120 green shoes, how many are red?
    a. 160
    b. 45
    c. 135
    d. 90

16. Last week, Sips n' Burgers sold $45,000 worth of burgers, $33,000 worth of chicken sandwiches, $27,250 worth of french fries, and $13,700 worth of drinks. What percentage of their sales came from drinks?
    a. 37.8%
    b. 27.7%
    c. 22.9%
    d. 11.5%

17. Luigi's Rentals rents out all types of cars. They found that 35% of their rentals are from SUV's. If they had a total income of $148,390 from their rentals, how much of the income would have come from SUV rentals?
    a. $44,517.00
    b. $51,936.50
    c. $59,356.00
    d. $51,056.39

18. The bill at a restaurant is $34. How much would a 15% tip be?
    a. $5.10
    b. $4.76
    c. $5.44
    d. $5.78

19. Data shows that ¼ of all restaurant sales are fast food hamburgers. If all restaurant sales for the past month were $2,450,000,000, what are the hamburger sales?
    a. $588,000,000
    b. $612,500,000
    c. $490,000,000
    d. $808,500,000

20. Of all retail sales, 1/8 of sales end up being returned. If revenues were $215,000, how much should be expected to the final net sales?
    a. $174,687.50
    b. $201,562.50
    c. $192,675.00
    d. $188,125.00

21. Sedans account for 3/7 of vehicle sales. Trucks account for 2/5 of vehicle sales are trucks. What is the fraction of sales of both sedans and trucks?
    a. 29/35
    b. 6/7
    c. 5/12
    d. 31/35

22. Last month, 21,246,000 pairs of shoes were sold. Of those sold, 8,923,320 pairs sold were white. What fraction of shoes sold were white?
    a. 41/100
    b. 21/50
    c. 2/5
    d. 19/50

23. Gas is $3.98 per gallon. How much would 6.5 gallons cost?
    a. $25.87
    b. $23.88
    c. $27.86
    d. $29.85

24. If you get three apples for $2 and four oranges for $1.50, how much would you pay for 12 apples and 10 oranges?
    a. $11.25
    b. $10.50
    c. $12.50
    d. $11.75

25. A college student does research about how many purses and jewelry items are sold in a local market. The student found that 320 jewelry items and 240 purses were sold. What is the proportion of purses sold per jewelry piece?
    a. 4 jewelry pieces per 3 purses
    b. 3 purses per 4 jewelry pieces
    c. 4 purses per 3 jewelry pieces
    d. 3 jewelry pieces per 4 purses

26. A business has 480 employees. The ratio of those working day shift to night shift is 8:7. How many people work the day shift?
    a. 212
    b. 224
    c. 256
    d. 322

27. Derek received six job offers from the 15 interviews he did last month. What is the ratio that best describes the relationship between the number of jobs he was not offered and the number of jobs for which he interviewed?
    a. 6/15
    b. 15/6
    c. 3/5
    d. 2/3

28. In doing research on customers, a company surveyed 850 customers. They found that they had four customers in their target demographic for every one customer that did not fit their target. How many customers were part of the target demographic?
    a. 650
    b. 680
    c. 710
    d. 675

29. Tina purchased items from the grocery store that cost $31.20, $48.30, $127.45, and $76.20. If sales tax is 7%, how much did Tina pay in sales tax for the items?
    a. $19.82
    b. $19.83
    c. $19.75
    d. $19.76

30. Snow Gear buys gloves for $15 a pair. They mark up the gloves 75% for resell. How much do they sell each set of gloves for?
    a. $26.25
    b. $25.50
    c. $27.00
    d. $26.40

31. Water Gear marks up all products 40%. If they get a product from a wholesaler at $45.35, how much would they sell it for?
    a. $61.22
    b. $63.49
    c. $65.76
    d. $68.03

32. The Soda Guzzle typically marks up their products at 60%. If they have a product listed for sale at $3.50, what is the highest discount they can give on the item and still make a profit?
    a. $1.00
    b. $1.50
    c. $2.00
    d. $2.50

33. Greater Groceries buys their freezer meals for $5.60 each and markup the product 75%. Greater Groceries needs to make room for a new brand of freezer meal, so they have discounted these meals down 50%. What price are they selling the freezer meals for?
    a. $4.90
    b. $6.53
    c. $4.80
    d. $9.80

34. The Sweet Bakery makes donuts costing $0.55 each. Experience has shown that 5% of the donuts will spoil before they can be sold. The Sweet Bakery needs a 62% markup based on cost. What should the selling price be if 1,300 donuts are made?
    a. $0.89
    b. $0.94
    c. $1.10
    d. $1.25

35. If your company posts a profit margin of 25% and had revenues of $250,000, how much net income did your company earn?
    a. $60,000
    b. $62,500
    c. $65,000
    d. $67,500

36. RJ Consulting experienced a quarterly revenue of $575,757. The expenses for the quarter totaled $246,821. What is the net profit margin for the quarter?
    a. 57.1%
    b. 46.5%
    c. 63.3%
    d. 54.7%

37. In looking into the financials of EZ Textbooks, they had a net profit of $67,220. Their net profit margin was 51.73%. How much revenue did EZ Textbooks have?
    a. $129,944
    b. $131,804
    c. $131,161
    d. $129,231

38. Office Supplies, Inc. bought two shipments of pens. The first shipment included 150 pens at $1.50 per pen. The other shipment included 500 pens at $.90 each. If they sold 225 of the pens, what is the cost of the leftover inventory if they use the LIFO method?
   a. $382.50
    b. $510.00
    c. $441.35
    d. $472.50

39. You just bought a new car for $21,453. The salvage value of the car is $1,500 after 10 years. If you use a straight-line depreciation method, how much would your car depreciate each year?
    a. $2,217.00
    b. $1,500.00
    c. $1,995.30
    d. $2,145.30

40. Clean Sweeps, Inc. offers cash discounts at different levels. Customers can get 5% off by paying invoices within 15 days, 4% within 30 days, and 3% within 45 days. A customer pays their invoice of $2,780.13 three weeks after invoice date. What is the amount this customer will pay?
    a. $2,641.12
    b. $2,668.92
    c. $2,696.73
    d. $2,780.13

41. Lemony Fresh offers a trade discount of 7.5% if their customers purchase over $10,000 in goods. If a customer orders $14,546 worth of goods, what is the amount they will actually pay?
    a. $13,455.05
    b. $13,796.00
    c. $14,546.00
    d. $13,123.05

42. Sports Retailers offers a trade discount of 6.5% on bulk orders over a quantity of 1,000 per line item. A customer orders 800 of one item at $3.50 each and 1,100 of another item at $5.35 each. What will this customer be charged?
    a. $8,685.00
    b. $8,302.48
    c. $8,120.48
    d. $8,503.00

43. J's Music offers a cash discount on invoices paid in full within 30 days. The discount is 3%. If a customer owes $6,587.05, how much discount will they receive if they pay before the 30-day deadline?
    a. $131.74
    b. $263.48
    c. $65.87
    d. $197.61

44. Patrick deposited $1,000 into a CD with 1.25% interest compounded quarterly. How much will Patrick have in the account after three years?
    a. $1,038.15
    b. $1,009.40
    c. $1,012.50
    d. $1,160.75

45. Bobbi created a mutual fund account and deposited $7,000 into the account. The fund has an 8% interest rate compounded annually. What will the future value of Bobbi's money be in 5 years?
    a. $7,728.56
    b. $10,285.30
    c. $10,342.19
    d. $9,800.00

46. Lance saved an extra $500 from his paycheck this month. He decided to put it into an interest-bearing account. The account has 4% interested compounded monthly. How much will Lance's account be valued at after one year?
    a. $506.70
    b. $520.00
    c. $520.37
    d. $800.52

47. Petty cash has an initial balance of $100. There are currently petty cash tickets totaling $76, and there is $20 in the petty cash envelope. Is petty cash over or short and by how much?
    a. Short $4
    b. Over $4
    c. Short $24
    d. Over $24

48. Globe Corp. is sending their employee to London for a week. If the hotel bill is ₤1,200 for the week, how much will the bill be once it is converted to US dollars, assuming the conversion rate is $1.35?
    a. $1,620.00
    b. $1,200.00
    c. $888.89
    d. $1,235.00

49. Gallo Solutions grants all employees a 3.5% pay raise. If Joey currently earns $84,000 per year, by how much will his salary increase after the pay raise?
    a. $1,440
    b. $2,940
    c. $29,400
    d. $49,440

50. Adolis buys a new car with a sticker price of $24,999. Adolis agrees to make monthly payments of $555 for 5 years. How much will Adolis have actually paid for the car by the time he finishes paying for it?
    a. $33,300
    b. $24,999
    c. $27,750
    d. $24,444
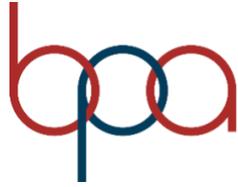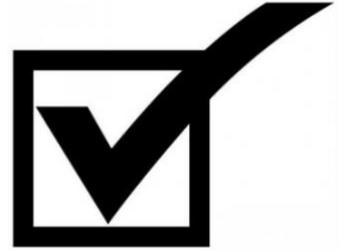
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~OPEN EVENT~

(190)

REGIONAL 2022

TOTAL POINTS   _____100 Points

Test Time: 60 minutes

MULTIPLE CHOICE ANSWER KEY:

1.	B	26.	C
2.	C	27.	C
3.	D	28.	B
4.	D	29.	A
5.	B	30.	A
6.	D	31.	B
7.	C	32.	C
8.	B	33.	A
9.	D	34.	B
10.	B	35.	B
11.	D	36.	A
12.	C	37.	A
13.	A	38.	D
14.	B	39.	C
15.	D	40.	B
16.	D	41.	A
17.	B	42.	B
18.	A	43.	D
19.	B	44.	A
20.	D	45.	B
21.	A	46.	C
22.	B	47.	A
23.	A	48.	A
24.	D	49.	B
25.	B	50.	A