

Name of Student _____ Student ID _____



CHRISTIAN SERVICE UNIVERSITY COLLEGE

CSUC SCHOOL OF BUSINESS

DEPARTMENT OF MARKETING, LOGISTICS AND CORPORATE STRATEGY

END OF FIRST SEMESTER EXAMINATION, 2019

BUSINESS MATHEMATICS (CSBP 149)

LEVEL 100 (REGULAR AND WEEKEND SESSIONS)

TIME ALLOWED: 2 HOURS

DATE: 18th May, 2019

Instructions to Students:

1. This paper is in two (2) sections; Section A (Multiple Choice Questions) and Section B (theory).
2. Answer all questions in the answer examination booklet.
3. The total score for this examination is 70 marks. Please pay attention to the number of marks awarded for each question.
4. Answer all questions in section A by providing the letter corresponding to the right answer for each question
5. Answer three (3) questions in all in section B. Begin each question on a fresh page. Leave two (2) lines between sub-questions.

Section A: (25 Marks). Answer all the questions in this section. Each question is 1 mark.

1. Convert $\frac{3}{14,123}$ to its decimal equivalent value rounded to three-figure accuracy.
 - a) 2.124
 - b) 0.0002124
 - c) 0.2124
 - d) 2124
2. How much is $0.08\bar{3}$ % of GH C 5,000?
 - a) 4.13
 - b) 4.33
 - c) $4.1\bar{6}$
 - d) $4.\bar{16}$
3. An investor accumulated 1,800 shares of Microtel Corporation over a period of several months. She bought 1,000 shares at ₵15.63 per share, 500 shares at ₵19.00 per share, and 300 shares at ₵21.75 per share. What was her average cost per share?
 - a) ₵17.59
 - b) ₵18.23
 - c) ₵20.50
 - d) ₵16.78
4. A hospital ward has 10 nurses caring for 60 patients. Use the colon notation to express the quantities as ratios in its lowest terms.
 - a) 1 : 6
 - b) 2 : 3
 - c) 6 : 1
 - d) 3 : 2
5. Connie's neighbour's sold 14.5 hectares of land for ₵128,000. If Connie were to sell her 23.25 hectare parcel at a proportionate price, what amount would she receive?
 - a) ₵204,342.89
 - b) ₵205,241.38
 - c) ₵223,234.45
 - d) ₵212,223.22
6. Which of the following is a fixed cost?
 - a) Packaging materials for products
 - b) Wages of hourly paid workers
 - c) Wages of sales staff paid on salary plus commission basis
 - d) Insurance

7. Which of the following is a variable cost?
- Fuel
 - Rent
 - Property tax
 - Insurance
8. How much interest will be earned on ₱5000 in five months if the interest rate is 5.50% per annum?
- ₱115.53
 - ₱115.88
 - ₱114.58
 - ₱212.66
9. The interest owed on a loan after five months was ₱292.50. If simple interest rate charged on the loan was 0.9% per month, what was the amount borrowed?
- ₱6500
 - ₱6300
 - ₱6800
 - ₱6600
10. For a nominal interest rate of 8.4%. What is the compounding frequency if the periodic interest rate 4.2%?
- 3
 - 4
 - 2
 - 5
11. What is the effective rate of interest corresponding to 10.5% compounded monthly?
- 11.02%
 - 10.32%
 - 12.11%
 - 11.23%
12. Richard owes Lola ₱1000 payable on December 10. If the money earns a risk-free rate of 7.50% per annum what amount should Lola accept in settlement of the debt 30 days before the scheduled payment date?
- ₱987.83
 - ₱993.87
 - ₱877.82
 - ₱933.54

13. What is the effective rate of interest corresponding to 10.5% compounded annually?
- a) 10.50%
 - b) 13.23%
 - c) 11.02%
 - d) 12.32%
14. The monthly payments for the first five-year term of a ₵20,000 mortgage loan were based on a 10-year amortization and an interest rate of 7% compounded semi-annually. Calculate the size of the monthly payment.
- a) ₵231.19
 - b) ₵230.90
 - c) ₵320.16
 - d) ₵332.17
15. A ₵57,000 mortgage loan at 6.9% compounded monthly requires monthly payments during its 20-year amortization. Calculate the monthly payment rounded to the nearest pesewa.
- a) ₵428.50
 - b) ₵435.80
 - c) ₵348.61
 - d) ₵438.51
16. A purified water manufacturer encloses a 50 pesewa rebate coupon in a package of six bottles retailing for GH ₵ 4.29. What percent rebate does the coupon represent?
- a) 17.7%
 - b) 117%
 - c) 11.7%
 - d) 71.7%
17. A company's actual expenses of GH ₵ 169,400 for the first fiscal quarter were 110 % of the budgeted expenses. What were the budgeted expenses?
- a) ₵154,000
 - b) ₵150,000
 - c) ₵164,000
 - d) ₵152,000
18. A sales manager received a bonus of GH ₵ 7,980 on the year's sales of GH ₵ 532,000. What was the bonus as a percentage of sales?
- a) 15%
 - b) 0.15%

- c) 1.5%
 - d) 0.015%
19. What is 40 % of GH ¢ 140.25?
- a) ¢5.61
 - b) ¢56.10
 - c) ¢65.10
 - d) 55.10
20. What percentage is 7.38 kg of 4.39 kg?
- a) 168.1 %
 - b) 1.681 %
 - c) 16.81 %
 - d) 116.8 %
21. Frank receives an annual salary of ¢54,600 based on a 40-hour workweek. Find his gross earnings if he is paid semi-monthly.
- a) ¢2275
 - b) ¢2265
 - c) ¢2375
 - d) ¢3365
22. A farmer pays apple pickers ¢10 per hour plus ¢ 5 per 100kg of apples picked. If a worker picks, on average, 180kg of apples per hour for a 40-hour workweek, what are the gross earnings for the week?
- a) ¢750
 - b) ¢760
 - c) ¢670
 - d) ¢570
23. What will be the maturity value of ¢10,000 invested for five years at 9.75% compounded annually?
- a) ¢16,096.07
 - b) ¢16,234.98
 - c) ¢15,503.78
 - d) ¢17,007.65
24. If an investment can earn 4% compounded monthly, what amount must you invest now in order to accumulate ¢10,000 after 3.5 years?
- a) ¢6743.54
 - b) ¢8735.67

c) ₱8695.61

d) ₱9845.43

25. Timothy has been contributing ₱300 at the end of each month for the past 15 months to a saving plan that earns 6% compounded monthly. What amount will he have one year from now if he continues with the plan?

a) ₱9738.98

b) ₱9832.43

c) ₱8928.98

d) ₱8648.11