The Co-operative University of Kenya

END OF SEMESTER EXAMINATIONS AUGUST-2018

EXAMINATION FOR THE CERTIFICATE IN PURCHASING & SUPPLIES MANAGEMENT / BUSINESS MANAGEMENT (YR I SEM I)

UNIT CODE: CPS / CMB 0104

UNIT TITLE: BUSINESS CALCULATIONS

DATE: 27TH AUGUST, 2018   **TIME: 9:00 AM – 11:00 AM**

INSTRUCTIONS:

- Answer question **ONE (compulsory)** and any other **TWO** questions

QUESTION ONE

(a) Describe any THREE (3) forms of business entities   (6 Marks)

(b) Solve the following linear equations:
   - i. $3x + 4 = -8$ (2 Marks)
   - ii. $y/3 = -4$ (2 Marks)

(c) Solve the following simultaneous equations:
$$2x - 3y = 8$$
$$3x + 4y = -5$$
                    (4 Marks)

(d) The procurement officer of Yazin Limited bought a computer at Kshs 25,000. He later sold it for Kshs 30,000. Calculate:
   - i. Mark-up percentage   (3 Marks)
   - ii. Margin percentage   (3 Marks)

(e) MzeeAlimMatendo shared a sum of money among his five children; Nduta, Mwangi, Sifuma, Mwenge and Nafula. Nafula got 11/60 of the total amount while the rest of the amount was shared among Nduta, Mwangi, Sifuma and Mwenge in the ratio of 12:12:15:10 respectively.

Required:

Suppose Nafula receives Shs. 132,000. Calculate the amount of money that was received by each of the remaining 4 children   (10 Marks)

QUESTION TWO

(a) A tourist visiting East Africa had with him 30,000 Swiss francs. While in Kenya, he converted the Swiss francs into Kenya Shillings and incurred the following expenses:
   - Paid bank charges 2%
   - Bought an African necklace for 3 US Dollars
   - Bought an African basket for £4
   - Before leaving for Uganda, he converted the remaining money into Uganda Shillings. Determine the total amount of Uganda Shillings that he received.

   Use the following conversion table
   - 1 Swiss franc = Kshs. 80.8
   - 1 U.S Dollar = Kshs. 100.2
   - 1 Sterling pound = Kshs 136.4
   - 1 Kshs = Ug. Shs 30   (8 Marks)

(b) Yobra Ltd, a manufacturing water company has a fixed cost of Kshs 20,000, a production cost of Kshs 20 per unit and selling price of Shs 30 per unit. Find:
   - i. Cost function   (2 Marks)
   - ii. Revenue function   (2 Marks)
   - iii. Profit function   (2 Marks)

(c) A housewife buys a washing machine for Ksh. 140,000. She pays a deposit of 25% and interest at 20% per annum is charged on the balance of the purchase price. If the

balance has to be paid in 12 monthly installments, calculate the amount of each payment (6 Marks)

QUESTION THREE

(a) Name and describe any FOUR (4) factors that influence sales turnover (8 Marks)

(b) In the year 2017, hunja earned Shs 300,000 and Mbatia earned Shs 450,000 as freelance artists. Hunja paid Shs 56,000 in taxes while Mbatia paid Shs 85,000. They know that $T = a + bI$ is the linear equation used in computing their tax payments where I stands for income and T stands for the amount of tax to be paid

Required:

What are the values of the constants a and b? (5 Marks)

(c) A business man imported 1,000 radios from Japan at a cost of 2,500 Japanese Yen per radio. He incurred additional expenses totaling to Kshs 40,000. Calculate the total cost of the consignment in U.S. dollars. Take 1 U.S. dollar = Kshs 100.3 and 100 Japanese Yen = Kshs 80.5 (5 Marks)

(d) Benson bought a radio at Kshs 3,000 and later sold it at Kshs 2,800. Determine the percentage loss he made (2 Marks)

QUESTION FOUR

(a) The cash price of a refrigerator is Kshs 18,000 and its hire purchase price is 33.33% higher. The payments on the hire purchase terms include a deposit and 18 Monthly installments of Kshs 950 each. Determine the amount of the deposit. (5 Marks)

(b) Determine the value of x in the following equation:
$$4x + 20 - 8(13 - x) = 0$$ (2 Marks)

(c) Mary bought a radio at Kshs 3,000 and later sold it at Kshs 3,800. Determine the percentage profit that she made (3 Marks)

(d) Solve the following linear equation:
$$4(x + 5) - 6(2x + 3) = 3(x + 14) - 2(5x - x) + 9$$ (4 Marks)

(e) A clerk earns Kshs 200 per hour. He works for 8 hours a day. Calculate the total earnings if he works for 23 days. (2 Marks)

(f) An employee's life is assured for Kshs 600,000 at a monthly premium of Kshs 2,000. Calculate the percentage annual premium on the sum assured (2 Marks)

(g) A job can be completed by 20 workers in 50 days. Determine the number of workers required to complete the same job in 25 days (2 Marks)

QUESTION FIVE

(a) A freelance insurance salesman sells insurance for two companies A and B under the following terms: Company A pays the salesman Kshs 4,000 per month as good will plus a commission of 10% of the gross sales in shillings in the month whereas Company B pays the salesman Kshs 2,000 good will and a commission of 12% of the gross sales per month

Required:

i) Equation showing how total earning from each company is related to gross amount of sale (3 Marks)

ii) The single amount of gross sales in shillings that will make the salesman earn the same amount from the two companies (3 Marks)

iii) The total amount the salesman earns when his gross sales are Shs 75,600 for Company A and Kshs 86,000 for company B (3 Marks)

(b) A sales lady is entitled to a basic salary of Kshs 9,000 per month and a commission of 12.5% on total sales made. In the month of June, 2018, she sold 200 items at Shs 180 per item. Calculate the total earnings for that month (3 Marks)

(c) A Kenyan exported coffee worth Kshs . 350,000 to Japan. Calculate the value of the exports in Japanese Yen. (Take 100 Japanese Yen = Kshs 90,000 (2 Marks)

(d) The profit of Zawadi Ltd for the year 2017 was Kshs 15,000,000. This was an increase of 25% from the profit of the year 2016. Determine the profit made in the year 2016 (3 Marks)