



TECHNICAL UNIVERSITY OF MOMBASA
Faculty of Business & Social Studies

DEPARTMENT OF BUSINESS STUDIES

CERTIFICATE IN HUMAN RESOURCE MANAGEMENT
CERTIFICATE IN BUSINESS MANAGEMENT
CERTIFICATE IN STORES MANAGEMENT

BAC 1103: BUSINESS CALCULATIONS

SPECIAL/SUPPLEMENTARY EXAMINATIONS

SERIES: FEBRUARY 2015

TIME: 2 HOURS

INSTRUCTIONS:

- This paper consists of **FIVE** questions.
- Answer question **ONE (Compulsory)** and any other **TWO** questions.

This paper consists of Three printed pages.

QUESTION 1 (Compulsory)

- a) James has deposited sh. 10,000 in a fixed account. This deposit increases by 10% each year for 3 consecutive years. Find the total amount of this deposit at the end of third year. **(10 marks)**
- b) A machine was purchased for sh. 36,000. It is to be depreciated at $\frac{1}{5}$ of its written down value every year. What will be its book value after 3 years? **(6 marks)**
- c) The original price of a T. V set was sh. 15,000, it was increased by 20% 6 months before but was reduced by 30% 4 months later. What is its present price. **(6 marks)**
- d) It cost Mark Otieno sh. 25,000 to make 24 pairs of trousers and 16 shirts. The cost of 10 pairs of trousers and 22 shirts is sh. 37,000. Mark Otieno makes a profit of 20% for each pair of trouser made and sold and 30% on each shirt made and sold.

Required:

Ascertain the cost of making a pair of trouser and shirt.

(8 marks)

QUESTION 2

- a) An American tourist came to Kenya with US dollar 3,870. He changed all his dollar to Ksh. paying bank charge of 1%. How much did he get?

Note:

1 Us dollar = sh. 78

(4 marks)

- b) A Kenyan businessman imported 30,000 watches from Thailand at a cost of 30 Thailand franks per watch. He incurred additional cost as follows:

Freight Ksh. 26,000

Insurance Ksh. 44,000

Custom duty at Ksh. 90 per watch

Calculate:

- i) Total cost of consignment in Ksh. **(6 marks)**
- ii) Price at which he should sell each watch if he were to make a profit of 10% on total cost.

(5 marks)

NB. Thailand Franks = Ksh. 8.80

- c) The population of a country is 20,000 at present. If it increases by 5% every year. Find the population after end of 4 years. **(5 marks)**

QUESTION 3

- a) Mary Jane and Joy shared some amount in the ratio 2:3:1 respectively, if Joy got sh. 6,000 more than Mary, determine:
- i) The amount each of them got **(6 marks)**
 - ii) The total amount of share **(2 marks)**
- b) An agent charges for the sell of property at 4% on the 1st sh. 300,000 and 2 ½ % on the remainder. If the seller received sh. 772,000, how much did the purchaser pay for the house. **(6 marks)**
- c) Kingi sales his products at Ksh. 200 per unit. He gives a trade discount of 20% to customers who buy 500 to 1,000 units and 30% to more than 1,000 units. A customer bought 800 units. Calculate
- i) Trade discount
 - ii) Net amount paid by the customer. **(6 marks)**

QUESTION 4

- a) A machine was sold under hire purchase on a deposit of sh. 1,600 and 12 monthly instalment of sh. 450 each. If hire purchase price is 25% higher than the cash price. Calculate the cash price. **(10 marks)**
- b) If sh. 80,000 is deposited to earn 10% interest for 3 years and then 12% in the subsequent years. What will be the total amount of deposit at the end of 5 years. **(10 marks)**

QUESTION 5

- a) Solve the following quadratic:
- i) $4x^2 - x = 3$ **(4 marks)**
 - ii) $3x^2 - 7 + 2 = 0$ **(4 marks)**
- b) Solve the following simultaneous equation:
- $$4x + 3y = 7$$
- $$3x - 2y = 9$$
- (6 marks)**
- c) 30 men working for 8 hours a day can finish a job in 50 days. How many hours will 20 men require to work everyday in order to finish the job in 40 days. **(6 marks)**