

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF CERTIFICATE IN BRIDGING

MATH 0021: BUSINESS MANAGEMENT

STREAMS: CERT IN BRIDGING

TIME: 2 HOURS

DAY/DATE: THURSDAY 7/12/2017

11.30 A.M - 1.30 P.M.

INSTRUCTIONS:

- Answer Question ONE (Compulsory) and any other THREE

QUESTION ONE [30 MARKS]

(a) Simplify: -

(i) $96 \div 6 + 7 \times 15 - 14 \times 5$ [2 Marks]

(ii) $\frac{3}{8}$ of $\left(7^{\frac{3}{5}} - \frac{1}{3}\left(1^{\frac{1}{4}} + 3^{\frac{1}{3}}\right)x2^{\frac{2}{5}}\right)$ [3 Marks]

(b) The price of an article was raised by 20% and a week later the new price decreased by 20%. What is the new price if the original price was Kshs.50? [3 Marks]

(c) A businessman bought a bag containing 50 mangoes for Kshs.250. He sold the mangoes at Kshs.10 each. If 5 mangoes were bad, what was his percentage profit or loss? [4 Marks]

(d) A school bought textbooks worth 27027 from a bookseller. The bookseller allowed a discount of 10%. What was the cost of the textbooks without discount? [4 Marks]

(e) Find the length of the shortest piece of pipe that can be cut into equal lengths each 25 cm or 36 cm or 42 cm. [4 Marks]

(f) Find the ratio of a: c if a: b = 7: 1 b: d = 3: 2 d: c = 4: 1 [5 Marks]

(g) If Kshs.450,000 accumulated to Kshs.730,050 in 2 years with interest compounded quarterly, find the rate per annum. [5 Marks]

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QUESTION TWO [10 MARKS]

- (a) A salesman is paid a salary of Ksh.12000 per month. He is also paid a commission of 2% on sales up to Kshs.15,000 and 2½% on sales above 15,000. In one month, he sold goods worth 25,000. How much was he paid that month? [5 Marks]
- (b) The height of a triangle was increased in the ratio 7:4 and its base decreased in the ratio 3:5. If the original height and base were 22 cm and 32 cm respectively, find the ratio in change in area. [5 Marks]

QUESTION THREE [10 MARKS]

- (a) A customer bought 2 trousers; the first trouser was worth 1000 and was allowed a discount of 4.5%. The second trouser was worth 1200 and was allowed a discount of 5%.
(i) Calculate the total amount of discount.
(ii) What was the percentage discount on both trousers? [5 Marks]
- (b) The hire purchase price of an article is Kshs.8400. A down payment of Kshs.1600 is made and the remaining amount is to be paid in 10 equal monthly installments. Calculate the size of each installment. [5 Marks]

QUESTION FOUR [10 MARKS]

- (a) A school decides to equip its workshop with 30 jack planes at Kshs.3,000 each, 25 hacksaws at Kshs.250 each 40 hammers at Kshs.300 each and 18 vices at Kshs.2500 each. Calculate the amount of money required for these equipments. [5 Marks]
- (b) An importer imports 2050 TV sets which cost him Kshs.10,000 each. If an import duty of 100% is imposed and then sales tax of 15% is levied, calculate;
(i) Selling price of each TV set
(ii) The amount of money the government got as tax from sales of these TV sets. [5 Marks]

QUESTION FIVE [10 MARKS]

- (a) An item costs Kshs.3500. Paul has an option of buying it at cash price or making a deposit of Kshs.500 followed by monthly installments of 400 for one year on hire purchase.
(i) What is the cost of the item on hire purchase?
(ii) What is the difference between the cost of the item on cash basis and its cost on hire purchase? [6 Marks]
- (b) A man took a car loan of Kshs.1,000,000 from his bank. He paid it by 60 monthly installments of Kshs.2500 each. Given the interest is 68000, calculate the rate of interest per annum. [4 Marks]

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QUESTION SIX [10 MARKS]

Three businessmen, Kamau, Otieno and Koech decided to buy a plot of land. The land owner offered the plot at Kshs.2.8 million but agreed to be paid 65% of the value as initial deposit in the ratio 5:3:2 respectively and the remaining amount to be paid after 2 years including an additional 5% of the initial value for processing the plot documents. The total balance was to be paid in the ratio as deposit.

- (a) How much of the deposit did each contribute?
- (b) What amount of the money were they to pay at the end of the 2 years?
- (c) How much of the total value did each pay?

[10 Marks]

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