

Name: _____ Index No: _____

1031
BUSINESS CALCULATIONS
STAGE I
November 2011
Time: 2 hours

Candidate's Signature: _____

Date: _____



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THE KENYA NATIONAL EXAMINATIONS COUNCIL
CRAFT CERTIFICATE IN INFORMATION STUDIES

BUSINESS CALCULATIONS

2 hours

INSTRUCTIONS TO CANDIDATES

Write your name and index number in the spaces provided at the top of this paper.

Sign and write the date of the examination in the spaces provided above.

Answer ALL the questions.

Answers to section A should be written in the spaces provided after each question.

Answers to section B should be written in the answer booklet provided.

Show all your working.

This paper consists of 9 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

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Turn over

SECTION A (40 marks)

Answer ALL questions in this section in the spaces provided.

1. Ali bought a T.V set for Ksh. 34,500. He later sold it for Ksh. 53,400. Calculate the mark-up. (2 marks)

2. 36 masons build a wall in 45 days. Calculate the number of days that 30 masons would take to build the same wall. (2 marks)

3. A shopkeeper bought two 90 kg bags of maize at Ksh. 2,375 per bag. He sold all the maize in 2 kg tins at Ksh. 65 per tin. Calculate his profit. (2 marks)

4. Calculate value of $\frac{1}{2}$ of $(4\frac{6}{10} \div 2\frac{1}{2}) \div \frac{4}{5} + 3\frac{1}{3} \times 1\frac{1}{2}$. (2 marks)

5. A rectangular container has a base of 70 cm by 50 cm. The container holds 30 litres of water when full. Calculate the height of the container in centimetres. (2 marks)

6. The table below shows Jane's marks in an examination.

Subject	Maths	History	English	Science	Music
Marks out of 20	16	12	10	14	8

- Determine the size of the angle that would represent history in a pie chart. (2 marks)

7. Jane deposited Ksh. 65,000 at a simple interest rate of 12% per annum for n years. She received Ksh. 7,800 as interest. Calculate the value of n . (2 marks)

8. A car was travelling at a speed of 72 km/h. Calculate its speed in metres per second. (2 marks)

9. Allan bought $3\frac{1}{2}$ kg of sugar at Ksh. 110 per kg, 3 kg of cooking fat at Ksh. 95 per kg, 5 loaves of bread at Ksh. 36 per loaf and a packet of maize flour at Ksh. 95.50. He gave the shopkeeper Ksh. 1,000. Calculate his balance. (3 marks)

10. Abdi is a mechanic and he is paid at a flat rate of Ksh 550 for every car repaired. In the month of December 2010, he repaired 35 cars. If the tax rate was 15%, calculate his net pay for the month. (3 marks)

11. In an end year examinations, Peter scored a total of 720 marks. His average mark was 80. Determine the number of subjects he sat for. (1 mark)

12. A product has a price of £ 4.4 per kg. Calculate the mass in kg of the product bought at \$ 3,454. Take 1£ = \$ 1.57. (3 marks)

13. Convert 6,595 milligrams into grammes. (1 mark)

14. Determine the median for the following data.

20, 21, 22, 18, 23, 16, 20, 24

(2 marks)

15. A water authority charges for water as follows:

A fixed charge of Ksh. 75

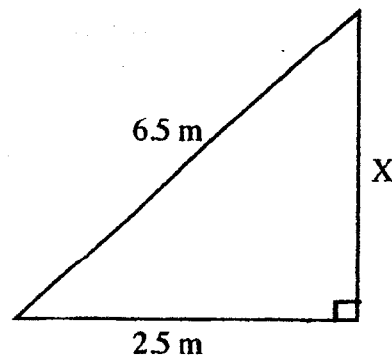
Ksh. 23.50 per unit consumed

Determine the bill for a household that consumed 60 units in one month.

(2 marks)

16. The following diagram represents the shape of a piece of land.

(2 marks)



Calculate the height, X.

17. Outline two features of a good graph. (2 marks)

18. A motor vehicle was bought for Ksh. 950,000. It has an estimated useful life of 6 years and a residual value of Ksh. 140,000. Determine the depreciation per year using the straight line method. (2 marks)

19. The hire purchase price of a machine is Ksh. 500,000. A down payment of Ksh. 14,000 is payable followed by 12 equal monthly instalments. Calculate the amount for each monthly instalment. (1 mark)

20. An employee earns a monthly salary of Ksh. 20,800 and contributes 2% of the salary towards Widows and Children Pension Scheme. Calculate his annual contribution to the scheme. (2 marks)

SECTION B (60 marks)

Answer **ALL** the questions in this section in the answer booklet provided.

21. (a) A salesman driving from Nairobi to Nakuru started his journey at 9.00 am. He arrived in Nakuru at 12.00 pm, after travelling for a distance of 165 km. He rested in Nakuru for 30 minutes and left for Eldoret. He drove at the same speed and arrived in Eldoret at 5.30 pm.
- (i) Calculate the total distance that he travelled.
- (ii) His car consumes 5 litres of petrol for every 40 km. One litre of petrol costs Ksh. 99.50. Calculate the amount he spent on petrol for the journey. (6 marks)
- (b) A closed cylindrical tin has a total surface area of 924 cm^2 . It has a height that is twice its radius. Calculate the capacity of the tin in litres. (Take $\pi = \frac{22}{7}$). (7 marks)
22. (a) A salesman earns a basic salary of Ksh. 8,500 per month. In addition, he earns commission as follows:
- no commission on the first Ksh. 20,000 sales
 - 5% on the next Ksh. 20,000 of sales
 - 25% on sales in excess of Ksh. 40,000
- In the month of December 2010, his total earnings were Ksh. 25,500. Calculate the total sales he made in the month of December 2010. (6 marks)
- (b) The marked price of a refrigerator is Ksh. 54,000. When bought on cash, a 10% discount is offered. On hire purchase terms, a customer pays a deposit of 10% of the marked price and 12 equal monthly instalments of Ksh. 5,500. Halima bought the refrigerator in cash terms while Onyango bought a similar one on hire purchase terms.
- Calculate:
- (i) amount paid by Halima;
- (ii) amount paid by Onyango;
- (iii) the hire purchase interest. (7 marks)
23. (a) Mary deposited Ksh. 75,000 in a bank which offers simple interest at the rate of 12% per annum. At the end of the first year, she withdrew Ksh. 8,560 from the account and left the balance in the account for another two years. Calculate the amount of money which was in the bank at the end of the 3rd year. (6 marks)

- (b) A business lady imported 25 lorries from Japan at a cost of 520,000 Japanese yen. She incurred the following additional costs:

Customs duty	20%
Freight	Ksh. 420,000
Insurance	Ksh. 360,000

She sold the lorries at a profit of 30% on cost. Determine the selling price per lorry in Kenya shillings. (Take 100 yen = Ksh. 74) (6 marks)

24. (a) Peter and Mary sell pocket radios at the same price. In the month of January 2010, Peter increased his price by Ksh. 50 while Mary reduced her price by Ksh. 100. Peter sold 12 pocket radios and Mary sold 18. They both made equal sales that month. Determine the original price of a pocket radio. (6 marks)
- (b) John, Tom and Hassan were contracted to do a job for which they were paid Ksh. 35,500. John received $\frac{3}{8}$ of the amount, Tom received $\frac{1}{4}$ of the remainder and Hassan received the rest. Determine the amount that each received. (5 marks)

25. (a) (i) Factorize $6x + 14$.
- (ii) Determine the lowest common multiple (L.C.M) of 8, 24 and 40.
- (iii) Subtract $1\frac{2}{3}$ from $3\frac{1}{2}$. (5 marks)

- (b) Francis sold 500 kg of apples at an average price of Ksh. 45 per kg. The apples were sold as follows:

100 kg at Ksh. 35 per kg
10 kg at Ksh. 38 per kg
70 kg at Ksh. 49 per kg
80 kg at Ksh. 40 per kg

Calculate the price at which the rest of the apples were sold. (6 marks)