

EXAMINATION NO. _____



2016 EXAMINATIONS

CERTIFICATE IN FINANCIAL ACCOUNTING PROGRAMME

PAPER FA 2 : PRACTICAL MATHEMATICS & COMPUTING

WEDNESDAY 1 JUNE 2016

TIME ALLOWED: 3 HOURS
9.00 AM - 12.00 NOON

INSTRUCTIONS: -

1. You are allowed **15 minutes** reading time **before the examination begins** during which you should read the question paper and, if you wish, make annotations on the question paper. However, you are **not allowed, under any circumstances**, to open the answer book and start writing or use your calculator during this reading time.
2. Number of questions on paper – 7.
3. Answer **ALL** questions in **Section A** and any **TWO** questions in Section B.
4. Marks for each question are indicated.
5. Use of programmable calculators is **NOT** allowed.
6. All workings must be **clearly shown**.
7. Begin **each** answer on a fresh page.
8. This question paper must **NOT** be removed from the examination hall.
9. **DO NOT OPEN THIS PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.**

This question paper contains 6 pages

SECTION A

Answer ALL questions in this section

1. (a) Simplify:

$$2\frac{5}{8} \times 3\frac{1}{2} \div 1\frac{3}{4}$$

3 Marks

- (b) Solve the following equation:

$$\frac{2x+1}{2} = \frac{x+2}{5}$$

4 Marks

- (c) Prices at GB Builders are shown exclusive of VAT. Mrs Banda bought 8 boxes of tiles priced at K9,995 per box, a packet of tile cement at K3,723 and mixed tile grout at K1,975.

Required:

If Value Added Tax (VAT) is at 16.5%, calculate Mrs Banda's bill including VAT. Round your answer to the nearest Kwacha.

8 Marks

(TOTAL : 15 MARKS)

2. (a) Find the equations of the following lines:

(i) L_1 has gradient 1 and y intercept 2

1 Mark

(ii) L_2 has x intercept 1 and y intercept -1

1 Mark

(iii) L_3 passes through two points with co-ordinates (-1, 4) and (1, 2)

4 Marks

- (b) Explain any **three** factors to be considered when choosing output media. **6 Marks**

- (c) State any **three** checks that might be included in data validation program.

3 Marks

(TOTAL : 15 MARKS)

Continued/.....

3. (a) A sample of shoppers are asked to taste a snack food product and then fill out a questionnaire that includes the following questions:
- (1) What is your age?
 - (2) Are you the person who does the food shopping for your household?
 - (3) How would you rate the taste of the snack food on a scale of 1 to 10 where 1 is the least tasty?
 - (4) If the snack food was on the market, how often would you buy it?

Required:

Classify the data generated from each question as quantitative or qualitative.

4 Marks

- (b) A sample of 10 shoppers from (a) were further asked how many snacks they would purchase in a week. The results were as follows:

8, 11, 13, 17, 13, 18, 13, 18, 19, 21

Required:

For the above sample find the following measures:

- (i) Median **2 Marks**
- (ii) Mode **1 Mark**
- (iii) Range **2 Marks**

- (c) Give **two** characteristics of the following measures:

- (i) Median
- (ii) Mode
- (iii) Range

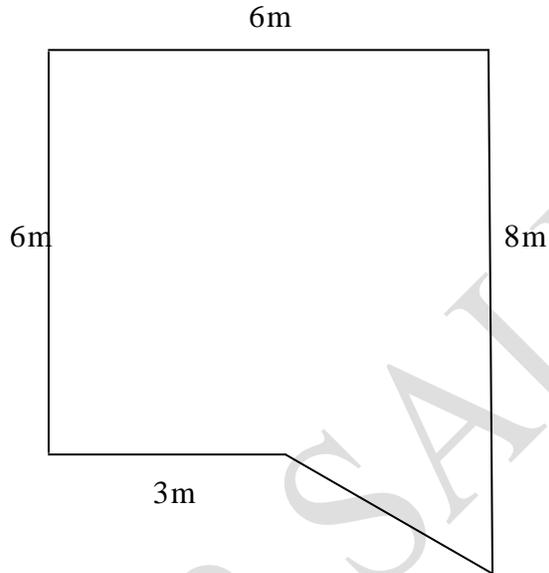
6 Marks

(TOTAL : 15 MARKS)

4. (a) Explain any **three** main functions of the Random Access Memory (RAM).

6 Marks

- (b) The figure below represents a garden.



Required:

Calculate the number of plants in the garden if each plant requires 60cm^2 .

9 Marks

(TOTAL : 15 MARKS)

Continued/.....

SECTION B

Answer any TWO Questions from this section

5. (a) A survey was carried out to determine the extent to which computers were being used by firms. 32 firms had both their stock control and payroll systems computerized. 65 firms had just one of these two functions computerized and 90 firms had a computerized payroll. 22 firms had neither of these functions computerized.

Required:

Using a vein diagram determine the number of firms that were included in the survey.

10 Marks

- (b) Outline any **five** functions of an operating system.

10 Marks

(TOTAL : 20 MARKS)

6. (a) Evaluate the following:

$$(x - y + z)^2 - (x + y - z)^2$$

$$\text{If } x = 1, y = -2, z = 4$$

5 Marks

- (b) State whether or not the following pairs of events are independent. Give a reason for your answer.

(i) “Earning a large salary” and “paying a large tax”.

2 Marks

(ii) “Being an accountant” and “having large feet”.

2 Marks

- (c) A box contains 7 black balls and 11 red balls. A ball is selected at random, its colour noted and it is then returned to the box. After shaking the box, another ball is selected.

Required:

- (i) Draw a probability tree or tree diagram to show all the possible outcomes of the selection.

3 Marks

- (ii) Using the tree diagram, find the probability of selecting:

(1) one of each type of ball (give your answer in simple form). **5 Marks**

(2) two black balls (give your answer to two decimal places). **3 Marks**

(TOTAL : 20 MARKS)

Continued.....

7. (a) A company bought a computer at K125,000 and housed it in a specially constructed suite at a cost of K20,000. The computer depreciates at 25% per annum using the reducing balance method and the suite appreciates at 5% per annum compound.

Required:

After 5 years, what will be the book value of:

- (i) the computer; **5 Marks**
(ii) the suite? (to the nearest 10 tambala) **4 Marks**

- (b) You are given the following data:

- (1) Initial cost of the car K800,000
- (2) Value of the car after 12 months: 75% of initial cost
- (3) Annual distance covered 150,000 km
- (4) Average fuel consumption : 26.5 km/lit
- (5) Petrol cost : K802/lit
- (6) Annual car tax K12,500
- (7) Insurance per month K2500
- (8) Repairs and maintenance: K32500 per year

Required:

Calculate the cost, including depreciation, of running the car for one year.

Give your answer to the nearest Kwacha.

11 Marks
(TOTAL : 20 MARKS)

E N D