

THE INSTITUTE OF CHARTERED ACCOUNTANTS IN MALAWI

JUNE 2016 EXAMINATIONS

CERTIFICATE IN FINANCIAL ACCOUNTING

PAPER FA 2: PRACTICAL MATHEMATICS & COMPUTING

GENERAL COMMENTS

Syllabus Coverage

The aim of this paper was to test the candidates' numeracy ability, understanding and interpretation of the significance of figures, statistics and computer principles. This was achieved by examining questions within the scope of the recommended syllabus. The question distribution was balanced, as the questions examined covered all the three areas of the syllabus; which are mathematical calculations, statistics and computing.

Overall Performance

In general, the overall performance of candidates in this paper was good. Most of the questions the candidates failed to answer were those that were in the statistical and computing area of the syllabus, e.g question 5. (a) Involving sets, question 6. (c) Involving probability; and one question in the statistics part of the syllabus, question 2. (c) That looked at checks that might be included in data validation program, which most candidates failed.

In summary, the candidates' good performance can be attributed to the student's adequate preparation in all the parts of the syllabus.

COMMENTS ON INDIVIDUAL QUESTIONS

The paper had two sections, A and B. Section A was compulsory while section B had three questions where candidates were required to answer any two questions.

QUESTION 1

- a) The question required the candidates to simplify multiplication and division of mixed fractions. A good number of the candidates passed this question demonstrating understanding of multiplication and division of mixed fractions. Those who failed; did not upset $\frac{7}{4}$ to $\frac{4}{7}$ when changing the $\div$ to $\times$, and other candidates did not get full marks for not simplifying the numerator and denominator further when factors could still go in for instance failing to simplify $\frac{42}{8}$ to $\frac{21}{4}$ and the candidates did not get full marks for not converting $\frac{21}{4}$ to $5\frac{1}{4}$.

- b) The candidates' were required to solve a fractional equation. Most candidates passed the question by getting all four marks. This demonstrated that the candidates know how to solve fractional equations. Those who failed, after cross multiplying and getting $5(2x + 1) = 2(x+2)$, they failed to remove the brackets for instance $2(x+2)$ they were removing brackets as $2x+2$ instead of $2x+4$. Some candidates after reaching the stage of $10x+5 = 2x+4$, they failed to change the + sign to – sign when moving $2x$ and 4 to other sides of the equation thus the candidates were writing $10x+2x=5+4$, instead of $10x-2x = -5+4$.
- c) The question required the candidates to find the total bill by including VAT at 16.5%. A good number of the candidates passed this question. Some candidates were able to calculate the total VAT of K14, 133.57 from the total bill of K85, 658 which they found after calculations, but they did not add K14, 133.57 to K85, 658 to get K99, 791.57 which is the total bill including VAT, and some candidates after getting K99, 791.57 they did not round off to the nearest Kwacha to get K99, 792. It is for these reasons that some candidates were not able to get full marks.

QUESTION 2

- a) (i), (ii), (iii) required the candidates to find the equations of the line for each. The majority of the candidates were able to get all the equations of the line correct.
- b) The question required the candidates to explain three factors to consider when choosing output media. A good number of candidates were able to come up with the factors and considerable good explanations on the factors to be considered. But some were able to come up with the factors but failed to explain why those factors should be considered, which cost them marks.
- c) The question required the candidates to state any three checks that might be included in data validation program. Almost all the candidates failed this question. For just a few who attempted the question got only one mark for stating completeness. But they failed to mention the other factors which are range check, limit check, existence check, format check, consistence check and digit check.

QUESTION 3

- a) The question requested the candidates to classify the generated data from each of the four questions as quantitative or qualitative. An average number of candidates managed to get all four marks, with those failing to get full marks demonstrating lack of understanding of what quantitative data and qualitative data is.
- b) (i), (ii), (iii) the candidates were required to find the median, mode and range respectively of the given set of data. The majority of the candidates passed this question. Some

candidates who failed on the median were taking and adding the two middle numbers of the given set of data and dividing the answer by two, instead of rearranging the given set of data from the lowest number to the highest number and adding the two middle numbers and dividing the answer by two. Thus they were taking $(13+18)/2=31/2=15.5$ instead of $(13+17)/2=30/2=15$.

- c) (i), (ii), (iii) the candidates were required to give two characteristics of the median, mode and range respectively. The majority of the candidates were able to come up with the required characteristics.

QUESTION 4

- a) The question requested the candidates to explain any three main functions of the Random Access Memory (RAM). An average number of candidates passed the question. Signaling that few candidates concentrate on the computer part of the syllabus.
- b) The candidates were given a diagram with dimensions in *metres* and were required to calculate the number of plants in the garden if each plant required 60 cm^2 . A good number of candidates managed to get some marks from the question for coming up with the area of the given figure, but the majority of the candidates failed to find the number of plants in the garden. This was largely because the candidates failed to convert the m^2 to cm^2 . Thus $1\text{ m}^2 = 10,000\text{ cm}^2$, therefore $39\text{ m}^2 = 390,000\text{ cm}^2$. But the candidates were writing $39\text{ m}^2 = 3900\text{ cm}^2$ which was wrong.

QUESTION 5

- a) Using a vein diagram, the candidates were required to determine the number of firms that were included in the survey. The majority of the candidates failed this question.
- b) The question required the candidates to outline five functions of an operating system. A good number of candidates came up with the required functions, demonstrating knowledge of operating systems.

QUESTION 6

- a) Required the candidates to substitute the given values of x, y and z, in a given algebraic expression. A good number of candidates were able to substitute the given values and solve to come up with the answer. But some of those who failed had problems with multiplication of signs, for instance $- - 2$ they were writing $- 2$ instead of $+ 2$.
- b) The candidates were required to state whether the given pairs of events were independent or not, and to give a reason for their answer. Most candidates were able to state which

pairs were independent and which pairs were not and giving good reasons for their answers.

- c) (i) Required the candidates to draw a tree diagram showing all the possible outcomes of the selection. An average number of the candidates managed to attain full marks on the question.
- (ii) 1. The candidates were required to find the probability of one of each type of ball. The majority of the candidates failed this question, demonstrating a lack of understanding on how to solve probability questions.
2. The candidates were required to find the probability of two black balls. The majority of the candidates failed this question, signaling the student's lack of mathematical skills in solving probability questions.

QUESTION 7

- a) Required the candidates to find the book values of the computer and the suite after they depreciated and appreciated in value respectively. The majority of the candidates were able to find the book value of the computer, but failed to find the book value of the suite because when solving for the appreciated value they were using the formula for depreciation instead of appreciation.
- b) The candidates were given data from which they were required to find the cost of running a car including depreciation. An average number of candidates passed this question. Some failed to attain full marks due to the reason that they were including the value of the car after depreciation of K600,000 to the cost of running the car instead of the actual depreciation of K200,000.

CONCLUSION

In conclusion, the questions were within the recommended syllabus. The questions examined were balanced covering all the three major areas of the syllabus; that is the Mathematical, Statistical and Computing parts. Many candidates did demonstrate lack of knowledge on many aspects of computing. It was noted that computer knowledge is not well mastered by the candidates. While a good number of candidates showed calculation abilities, some still showed lack of skill in handling arithmetic signs and manipulation. Even converting one measurement (e.g. m^2) to another (e.g. cm^2) proved too difficult to most candidates who attempted this paper.

RECOMMENDATION

In order to improve the performance of candidates in future examinations, the following recommendations are made:

- i. The candidates are also requested to focus on the discursive part of the syllabus when studying; they must do a lot of reading so that they can master some definitions and facts.
- ii. The tuition providers are advised to also pay attention to the discursive part of the syllabus when teaching.
- iii. Candidates must practice finding solutions to mathematical and statistical problems by applying mathematical knowledge to come up with the solutions in preparation for examinations.
- iv. Candidates must follow the given instructions.
- v. The candidates are advised not to copy the question, but should just go straight to answering the question, as copying the question will not earn them marks and it is just a waste of time.
- vi. Candidates must read the question carefully and understand what it is demanding before they start answering.