

Contents

0505 – ACCOUNTING	2
0510 – BIOLOGY	9
0515 – CHEMISTRY.....	16
0520 – COMMERCE.....	22
0525 – ECONOMICS	26
0530 – ENGLISH LANGUAGE	32
0535 – LITERATURE IN ENGLISH	38
0540 – FOOD AND NUTRITION	41
0545 – FRENCH	44
0546 – SPECIAL BILINGUAL EDUCATION FRENCH.....	50
0550 – GEOGRAPHY.....	52
0555 – GEOLOGY.....	65
0560 – HISTORY	68
0562 – CITIZENSHIP EDUCATION	73
0565 – HUMAN BIOLOGY.....	78
0570 – MATHEMATICS.....	86
0575 – ADDITIONAL MATHEMATICS	100
0580 – PHYSICS	118
0590 – LOGIC	122
0595 – COMPUTER SCIENCE	127

0505 – ACCOUNTING

I – INTRODUCTION

The Ordinary Level Accounting is a dual culturally orientated syllabus comprising of the **OHADA Accounting System Approach** and the **IAS Accounting System Approach**. The subject **0505 – Accounting** is a two-paper examination at the Ordinary Level. The purpose of the examination is to place candidates in a rank order with marks distribution ranging from **0** to **100** so as to reflect candidates' depth of understanding and application of Accounting Principles and Procedures.

Paper One (1) is made up of fifty (50) Multiple Choice Questions (MCQs) covering the entire 0505 Accounting harmonized syllabus and candidates are expected to answer all the questions. The duration for this paper is 1 hour 30 minutes, representing a weighting of 40% of the marks for the whole Accounting examination. On the other hand, Paper Two (2) comprises eight (08) questions drawn from the whole syllabus. Questions in this paper are grouped under Section A and Section B. Section A consists of five (05) questions based on the **OHADA Approach** which candidates are required to answer any three (03) questions of their choice. Section B consist of three (03) questions based on **IAS/IFRS Approach** of which candidates are required to answer any two (02) questions of their choice. The duration for Paper 2 is three (3) hours and the weighting of the paper is **60%** of the marks for the whole subject. In this paper, each question carries 20 marks.

In the 2022 session of the GCE examination about 277 candidates actually wrote the 0505 Accounting Examination and in the 2023 session, the number of candidates for the same subject witnessed an increase to about 325 candidates representing an increase of 17.33%. This was due to increasing awareness of the continuous availability of the subject in the GCE ordinary level program, and the importance of this subject to most candidates in understanding the financial and accounting operations in their potential careers in the future.

II – OVERALL PRESENTATION OF THE EXAMINATION

In both Paper One (1) and Paper Two (2) during of 2023 examinations session, the questions were of standard and appropriate for the Ordinary Level candidates. The rubrics were clear and understandable. Questions were equally within the reach of the candidates and could be readily attempted. As a matter of fact, the following Test Blueprint gives a summary of the content of Paper Two (2) questions;

Table 1: Content of Paper Two (2) questions

QUES TION NUM BER	SYLLABUS TOPIC (s)	AIMS			OBJECTIVES			DIFFICULTY LEVEL		
		1	2	3	Knowled ge	Comprehens ion	App licat ion	*	**	***
1	a) Accounting terminology drawn from different topics									
	b) End of year adjustments (Depreciation)	•	•		•	•	•		•	
2	Inventory Costing Methods	•	•		•	•	•	•		
3	End of year adjustments (Inventory and Adjustments on Cash Account; Bank Reconciliation Statement)	•	•	•	•	•		•		

4	Payroll Accounting	•	•		•	•			•	
5	Trading transactions (Purchase and Sales of goods)	•	•	•	•	•		•		
6	Presentation of Final Accounts of Sole Traders	•	•		•	•	•	•		
7	Accounting for Non Profit Organisations	•	•	•	•	•	•			•
8	Control accounts	•	•		•	•		•		

The questions for the 2023 examination session in Paper 2 were spread to cover the entire syllabus. However, it was noticed that most candidates exhibited an attitude of speculative syllabus coverage of about 80%. Most candidates respected the instructions of the paper which required that candidates should answer any three (03) questions of their choice from Section **A** and any two (02) questions from Section **B**. Those who answered more than the required number of questions from any section were not penalized but only the answers were marked and the best number from each section considered.

III – GENERAL PERFORMANCE OF CANDIDATES

In spite of the fact that the current syllabus for 0505 – Accounting has been in use since 2012 session, a majority of the candidates in the 2023 Session unlike previous years still performed poorly in paper two (2). That is to say, the performance was below average for the following reasons which have persisted for over the years:

- It would appear there was no thorough mastery of the harmonized syllabus by candidates during the preparatory phase for the 2023 examination, probably because the syllabus has a bi-cultural nature. This phenomenon has been noticed for over the years;
- Non mastery of the various techniques and principles involved in the treatment of certain transactions in Accounting. For example, in preparing the bank reconciliation statements, some candidates transposed the entries in the various accounts i.e. the entries in the bank account kept by the business were entered in the bank statement, equally they could not calculate and apply the reducing balance on depreciation of fix assets, most of them completely avoided the question on Accounting for Non Profit Organizations. Preparing simple financial statements seem a difficult task. Surprisingly, most candidates avoided question (1) which the first part required the explanation of some accounting terms and the second part depreciation of fixed assets. Those who attempted the question performed very poorly;
- Many candidates demonstrated a lack of adequate preparation due to no devotion of sufficient time for personal studies;
- Also, poor quality of syllabus coverage was highlighted as cause for concern.
- There was equally some evidence that students did not have qualified accounting teachers who master the two systems of accounting to teach them.

IV – QUESTION BY QUESTION ANALYSIS

IV.1 – ANALYSIS OF CANDIDATES PERFORMANCE AND APPROACH TO QUESTIONS IN PAPER ONE

Since Paper one (1) comprises of Multiple Choice Questions, a comprehensive analysis of the candidates' performance will be made available in a separate report when possible and necessary.

IV.2 – ANALYSIS OF CANDIDATES PERFORMANCE AND APPROACH TO QUESTIONS IN PAPER TWO

The eight (08) problem solving- questions in paper two (2) covered a wide range of the current syllabus in use. The analysis of candidates' performance and their approach to questions varied from one question to another.

A) Popularity of Questions

Table 2: Popularity of questions in Paper 2

From about 323 scripts, the popularity of questions in Paper 2 could be rated as follows;

RANKING	QUESTION NUMBER	NUMBER OF CANDIDATES WHO ATTEMPTED EACH QUESTION (OUT OF about 323)	RATE	TOPIC
1 st	Q2	275	85.14%	Inventory Costing Methods
2 nd	Q5	247	76.47%	Trading transactions (Purchase and Sales of goods)
3 rd	Q6	225	69.66%	Presentation of Final Accounts of Sole Traders
4 th	Q8	220	68.11%	Control accounts
5 th	Q3	168	52.01%	End of year adjustments (Inventory and Adjustments on Cash Account; Bank Reconciliation Statement)
6 th	Q4	150	46.44%	Payroll Accounting
7 th	Q1	068	21.05%	Accounting terminology drawn from different topics and End of year adjustments (Depreciation)
8 th	Q7	028	08.69%	Accounting for Non Profit Organisations

B) Candidates' Performance per Question

Table 3: Performance of candidates

In paper Two (2), the performance of candidates was noted as follows:

RANKING	QUESTION NUMBER	RATIO OF PASSESS	SUCCESS RATE	No. Of Zero scores	% zero scores	No. Of 20/20 score
1 ST	Q5	182 out of 247	073.68%	006	02.43	24
2 nd	Q6	100 out of 225	044.44%	019	08.44	09
3 rd	Q3	065 out of 168	038.7%	040	23.81	06
4 th	Q8	053 out of 220	024.1%	035	15.91	04
5 th	Q1	012 out of 068	017.65%	006	08.82	00
6 th	Q2	046 out of 275	016.73%	038	13.81	00
7 th	Q4	023 out of 150	015.33%	061	40.67	09

8 th	Q7	001 out of 028	003.71%	006	21.43	00
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Relatively, candidates in Paper Two (2) for the 2023 Session; performed averagely the better than candidates the 2023 examination session. Candidates performed poorly in most of the questions except in question 5. Despite the poor performances in most of the questions, candidates still scored 20/20 in questions 5, 6, 3, 8 and 4. The highest scores in the other questions 1 and 2 were 19/20 each and 10.5/20 for question 7. Unfortunately, more than 40% of candidates who attempted question 4 obtained zero scores in the question.

A critical look at the tables 2 and 3 above displaying the popularity of questions and candidates' performance per question portrays that more than 65% of the candidates attempted questions 2, 5, 6 and 8 and less than 40% of these candidates had a pass mark. Most candidates avoided questions 1 and 7 recording the worst performances in questions 7, 4, 2, 1 and 8 respectively. However, questions five (5) recorded the best performance with 073.68% success rate compared to 034.56% of the best question performance in 2022.

The table that follows illuminates the strength and weakness of each question in paper two (2) as well as the difficulties expressed by candidates' responses:

Table 4: Strength and weakness of each question/difficulties expressed by candidates' responses

QUESTION NUMBER	SYLLABUS TOPIC	COMMENT
1	a) Accounting terminology drawn from different topics b) End of year adjustments (Depreciation)	The first part of this is question tested candidates' knowledge and understand of basic accounting terms and definitions. The second part tested candidates understanding of depreciation methods and application of the reducing balance method of depreciation. In terms of performance, only 012 out of 068 candidates who attempted the question scored a pass mark. Candidates recorded very poor performance in this question scoring only 017.65% and two candidates recorded the highest scores of above 18 on 20 on this question. Six (06) candidates recorded zero on 20 on the question. The candidates' attitudes and performance in this question indicates speculative learning and non-mastering of accounting theory.
2	Inventory Costing Methods	This was the most popular question though recording one of the worst performances. Candidates were required to prepare a stock slip using the weighted average cost after all entries method using a given sample format. No candidates scored a zero in this question. From observation candidates demonstrated lack of knowledge on the weighted average method after all entries. They could not calculate and apply the average cost of goods for a period. This is an important topic in the examination syllabus and candidates are encouraged to study and master the topic
3	End of year adjustments (Inventory and Adjustments on Cash Account; Bank Reconciliation Statement)	This was ranked the fifth popular question on the paper with an improvement from being the most avoided question in the 2022 session. The question was structured to test candidates' knowledge on the preparation of the bank reconciliation statement on a given format designed for them. Only 0168 (One Hundred and Sixty-eight)

		candidates attempted this question and sixty-five (065) candidates scored a pass mark. In this question, the highest score recorded by 6 candidates was 20 on 20 and 040 (23.8%) candidates scored a zero. Examiners noticed that candidates had no mastery of the topic though the topic have been tested continuously for some years now. 103 (61,31%) candidates who attempted the question failed scoring less than 10 on 20 marks on the question. Given the importance of this topic, teachers and future candidates should lay a lot of emphasis on it. Majority of candidates demonstrated lack of coverage or very poor coverage of this topic.
4	Payroll Accounting	This was the third most avoided ranking as the sixth popular question testing candidates on knowledge and application. It was testing candidates on the calculation of employees pay, knowledge on overtime calculation, gross pay and net pay. Less than 50% of candidates attempted this question and 09 (nine) candidates scored 20 on 20 on the question. This question ranked the seventh performance in terms of the other questions. 09 (nine) candidates scored zero on this question. Students seem not to have covered this topic before sitting in for the examination which is the main topic in the examination syllabus. They do not master especially the rates of overtime pay and those who do have not understood how the overtime rates are applicable.
5	Trading transactions (Purchase and Sales of goods)	This question required candidates to complete a simple invoice calculating the various deductions to determine the net payable. They were to journalize the invoice. This was the second most popular question recording the best performance in the examination. 024 candidates scored 20 on 20 on this question and unfortunately 06 scored 00 on 20. Some candidates could not do simple multiplication and additions on an invoice given.
6	Presentation of Final Accounts of Sole Traders	This was the third most popular question and recording the second best performance in the examination. This question tested candidates on knowledge and application. Only the income statement section was required to be prepared to show the net result of operations for the period. Out of 225 candidates who attempted this question only 100 scored a passed mark on the question with 019 candidates recording a 20 on 20 score. 09 zero scores were recorded. The question was a straight forward question as observed by examiners. Remedial measures need to be exploited by both teachers and learners, given the importance this topic holds in the domain of Accounting.
7	Accounting for Non Profit Organizations	This question tested knowledge and application on accounting for non-profit making organisations. Candidates where required to prepare an adjustment account for subscriptions, competition prices and prepare an income and expenditures account for a given period. Despite the fact that this was a straight forward question, it was the most avoided question with only 28 out of the 323 candidates who sat for the examination attempting the question.

		Out of the 28 candidates who attempted the question only 01 candidate scored a pass mark of above 10 on 20. The highest recorded score on this question was 10.5 on 20 and 06 (40.67%) candidates scored a zero. There was enough proof to show that this topic was not covered by most candidates and is the main topic on the published examination syllabus for 0505 Accounting.
8	Control accounts	The question was based on the syllabus topic 'The Control Accounts' and tested candidates on knowledge and application specifically on the preparation of debtors and creditors ledger control accounts. Candidates were required to prepare both the debtors and creditors ledger control accounts. A total of 220 candidates attempted this question out of which 053 scored at least 10 on 20 giving a percentage pass of 24.1%. The question in terms of rank in popularity was the 4th out of the 8 questions for the examination. It was observed during the marking exercise that candidates on this topic included cash purchases and cash sales in the control accounts which should not have been. They equally did not understand the treatment of contra items. Treatment of balances given was also a problem to candidates. 04 candidates nevertheless score 20 on 20 in this question and 35 scored zero on 20.

V - RECOMMENDATIONS AND SUGGESTIONS

Candidates need to be adequately prepared before sitting for the paper 0505-Accounting at the Ordinary level GCE examination. Different stakeholders are expected to have well-trained and competent accounting staff to help them manage and control their entities. Entrepreneurs need basic accounting knowledge to analyze the performance of their ventures. The following recommendations and suggestions should be given keen attention:

A) - RECOMMENDATIONS AND SUGGESTIONS TO STUDENTS

For performance to be ameliorated in the paper 0505 - Accounting, the following points should be taken into consideration;

- Students who aspire to be Accountants should be interested in General Mathematics, Business Mathematics, Commerce and other Business related subjects;
- Candidates should be psychologically ready and allocate enough time for the mastery of Accounting principles, Accounting concepts, Accounting terminologies, Calculations, journal entries, double entry principles and others;
- They should endeavour to buy Text Books in Accounting and master the basic accounting principles.
- They should avoid speculative learning and resort on regular and repetitive solving of exercises in past G C E and other accounting examination question papers.
- They should work with the published examination syllabus from the GCE board.

B) - RECOMMENDATIONS AND SUGGESTIONS TO TEACHERS

In order to ensure that the performance of candidates be ameliorated, teachers should;

- make sure that candidates are sufficiently taught Accounting principles, concepts, and terminologies;
- ensure that candidates do a reasonable number of practical exercises on each topic of the syllabus;

- make sure they do not only have a copy of the examination syllabus but it should be covered before candidates register and sit in for the GCE examinations;
- assess the students regularly;
- avoid working on speculative methods;
- avoid rushing over topics;
- try as much as possible to arouse the interest of learners by providing simplified explanations on each topic;
- attend and participate actively in seminars.
- be grounded on accounting principles and their application especially on International Financial Reporting Standards given the introduction of the SYSCOHADA.
- avoid discriminating between different accounting systems and be grounded on conceptual framework in accounting, understanding that all accounting systems operate under the same principles.

C) - RECOMMENDATIONS AND SUGGESTIONS TO OTHER STAKEHOLDERS

- The Administration of schools should provide enough periods for the teaching of Accounting;
- They should provide enough funding for Pedagogic Seminars;
- The Administration of schools should scrupulously follow-up the coverage of Syllabuses;
- They should ensure that this Report be read to students.
- They should equip their libraries with useful and standard text books in accounting and encourage students and teachers to own and make use of such text books.
- School administrations should encourage students to take examination of the 0505 Accounting especially in grammar schools.

VI - CONCLUSION

The fact that most candidates were unable to explain basic accounting terms, and principles or even select, organize, interpret and accurately use Accounting information, it is necessary for all schools offering the subject 0505 – Accounting to be provided with a copy of this Report so that teachers and future candidates can get in touch with the observations made by Examiners. Also, schools should accept to encourage the teachers to have a mastery of both the SYSCOHADA and the IAS/IFRS approaches.

Despite the poor performances recorded by the candidates in this examination, the examination was of standard and within the reach of an average student. Students and teachers have to sit up especially those concern with 0505 Accounting examination.

0510 – BIOLOGY

INTRODUCTION

The June 2023 Ordinary Level Biology Examination was of the same strength as those of the previous years. The examination covered the whole syllabus, table of specifications was respected and all the rubrics were clear. The questions were clear and within the reach of the average candidates.

Paper 1

It is made up of 50 compulsory Multiple Choice Questions (MCQs) covering the whole syllabus. The paper is divided into six sections comprising the following: **Section 1:** 7 simple questions, **Section 2:** 13 questions relating to biological diagrams, **Section 3:** 5 questions with multiple responses, **Section 4:** 5 questions on assertion and reasoning, **Section 5:** 10 questions relating to biological terms and **Section 6:** 10 questions relating to biological situations and experiments. All questions were within the reach of the candidates who prepared for the examination. All the sections of the syllabus were covered. Candidates are called upon to always respect all instructions in this paper. Worthy of note is the fact that this paper is marked electronically.

Paper 2

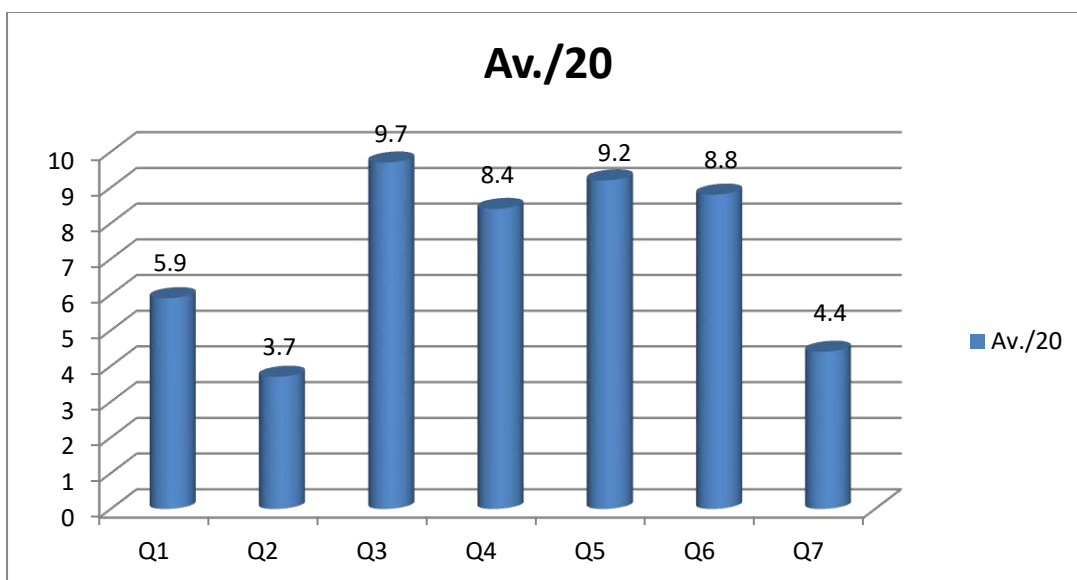
This paper is made up of **Seven** essay-type questions, divided into **two sections A and B**. **Section A comprises of three compulsory questions, Section B, four questions from which the candidates are expected to answer any two.** The seven questions cover all the three sections of the syllabus. The questions were designed to give objectivity and fairness in the evaluation of the candidates thus avoiding speculations. All questions were within the reach of the candidates who prepared for the examination.

GENERALITIES

All questions were within the reach of the candidates who prepared for the examination. However, **question 2 c which had an average mark of almost zero, was a real challenge to the candidates.** All the sections of the syllabus were covered and in the right weightings' vis a vis knowledge, comprehension and application.

1) PERFORMANCE PER QUESTION

Question No.	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Av.	5.9	3.7	9.7	8.4	9.2	8.8	4.4
In order of merit	5 th	7 th	1 st	4 th	2 nd	3 rd	6 th



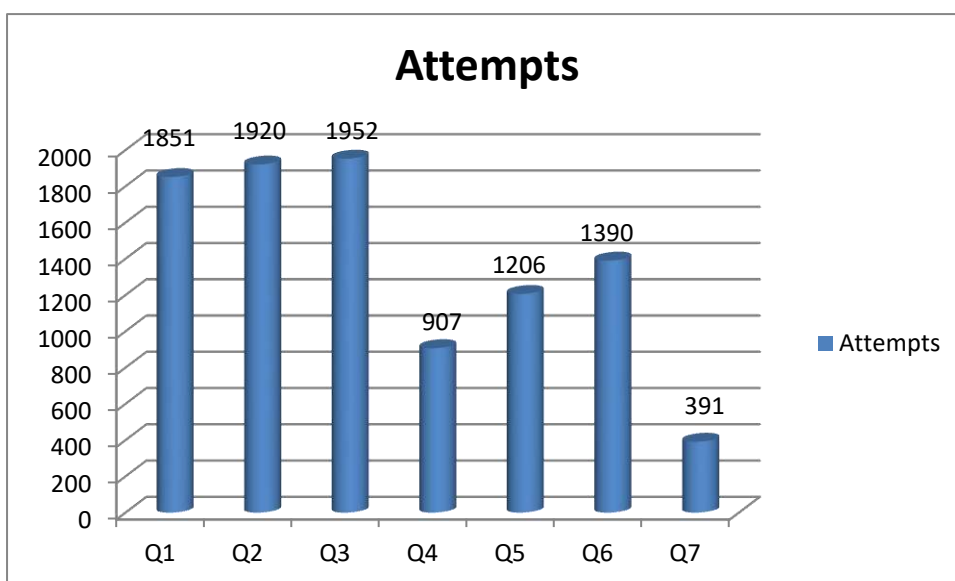
All Questions were below the average pass mark of **10/20**.

2) QUESTION POPULARITY

Although Section A was compulsory, some candidates didn't attempt some sub questions. For Section A, Q3 was very popular, followed by Q1 and least popular Q2.

The most evident Question popularity is seen in Section B where they were allowed to choose with Q6 being the most popular, followed by Q5, Q4 and least popular Q7.

Question No.	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Attempts	1851	1920	1952	907	1206	1390	391
Posn.	3 rd	2 nd	1 st	3 rd	2 nd	1 st	4 th
Performance	5.9	3.7	9.7	8.4	9.2	8.8	4.4
Position	5 th	7 th	1 st	4 th	2 nd	3 rd	6 th
Topic	Variety of Life	Transport	Ecology	Coordination	Transport	Reproduction	Nutrition



In decreasing order, we have 3, 2 and 1 for Section A, 6, 5, 4 and 7 for Section B.

The highest attempted questions were question 3 and 6 with average scores of 9.7 and 8.8 respectively, followed by Questions 2 and 5 with average scores of 3.7 and 9.2 respectively and the least attempted were Question 1, 4 and 7 with average scores of 5.9, 8.4 and 4.4 respectively.

3) Question popularity and average score per question were as follows.

Question No.	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Attempts	1851	1920	1952	907	1206	1390	391
Posn.	3 rd	2 nd	1 st	3 rd	2 nd	1 st	4 th
Performance	5 th	7 th	1 st	4 th	2 nd	3 rd	6 th
Posn.	5.9	3.7	9.7	8.4	9.2	8.8	4.4
Topic	Variety of Life	Transport	Ecology	Coordination	Transport	Reproduction	Nutrition

The following could be drawn from Question popularity and performance;

The most popular questions; 3 and 6 had Av. Scores of 9.7 and 8.8 respectively.

The least popular questions 1, 7 and 4 had Av. scores of 5.9, 4.4 and 8.4 respectively.

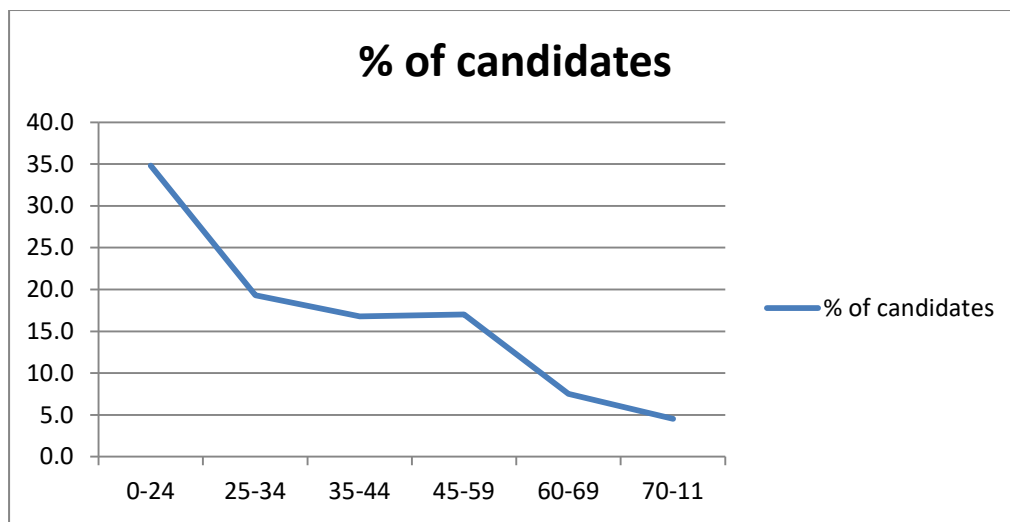
If Question 1 with an average of 5.9/20 and Question 2 with an average of 3.7/20 had better scores, the performance would have been better (above 50%), since they were compulsory questions.

Question 3 which was a compulsory question came first with an av. of 9.7 because sub-sections a, b & c. were well answered (though this is still below average). The lack of mathematical skills by candidates could account for the poor performance in sub-section d.

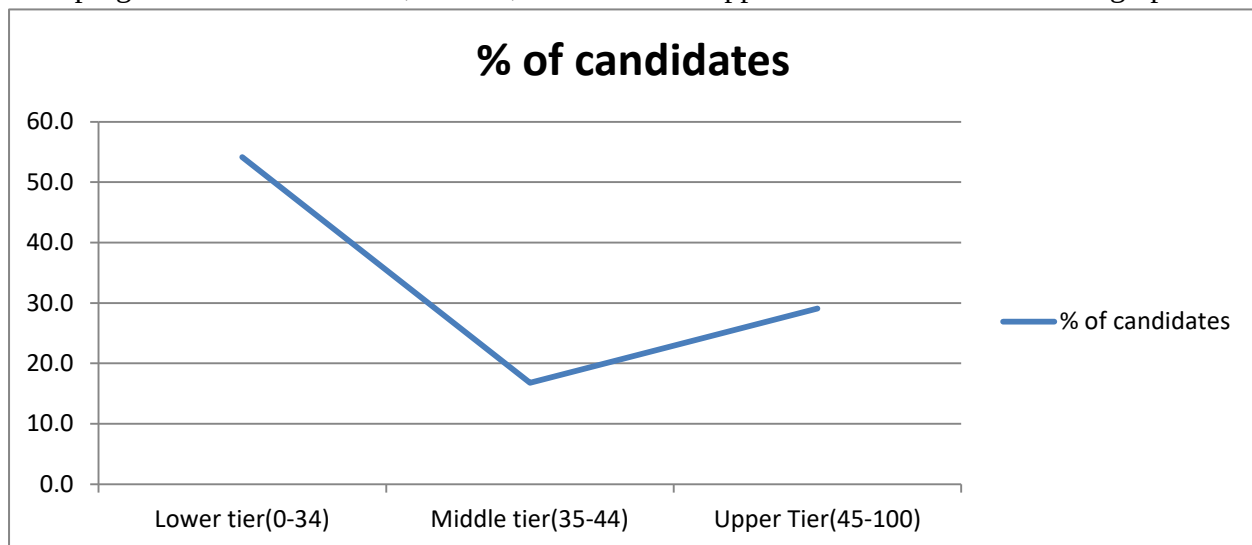
For Section B, Question 6 and 5 which were very popular had averages of 8.8 and 9.2 respectively (Overall 2nd and 3rd). The performance of candidates in Q7 (average score of 4.4) and Q4 (average score of 8.4) could account for the below average performance in this paper.

GENERAL PERFORMANCE

The paper 2 as a whole scored **48.6 %** against **59.8%** for 2022 and **28.8%** for 2021 showing a drop of **11.2%**. 51.1 % of the candidates fell between the **0-34%** ranges, a great increase of 17.8 from 33.3 % last year which shows a drop. At close examination, the distribution of marks does not follow the expected Gaussian distribution where the bulk of the candidates are expected to fall in the middle range (33.5%). The bulk this time around fell in the 0-34 range (51.1%) while just 29% fell in the upper tiers. If a graph is plotted, it will give a parabola, tilted to the left, which shows that the expected performance for an average exam was not respected.



Grouping this into three tiers; Lower, Middle and Upper tiers we will have the graph below;



This is the direct opposite of the dome-shaped Gaussian Distribution Curve.

The following weaknesses were observed from candidates

- Lack of in depth knowledge of the subject matter.
- Poor mastery of English language.
- Inability of some candidates to answer essay-type questions properly, for example, differentiating biological organisms and concepts, describing biological experiments, defining biological terms, analyzing and interpreting data, drawing biological diagrams etc.
- Wrong spellings and wrong use of biological terms such as:
 - Polline for pollen.
 - Fission, fussion, feusion' fuser for Fusion.
 - Pseudopia for pseudopodium.
 - Garment for Gamete.
 - Clothing for clotting.
 - Anta for anther, Stickma for stigma,
 - Epydimis for epididymis.
 - Overy, ovry for Ovary

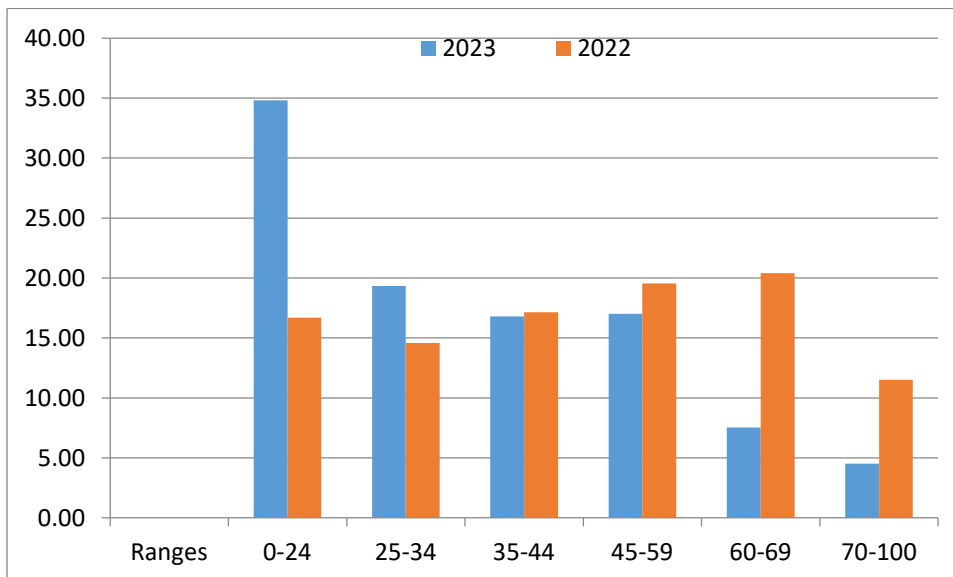
- Spiranoid for pyrenoid.
- Spectrum for septum.
- Similuma valve for semi lunar valve.
- Cytoplasmic strent, thread, stand etc for cytoplasmic strand.
- Doll for dull.
- Acetylclorin, acetochilin for acetylcholine
- Inhabittant, habitant for habitat.
- Nucluse, nuclas, nuclouse for nucleus.
- Sent for scent.

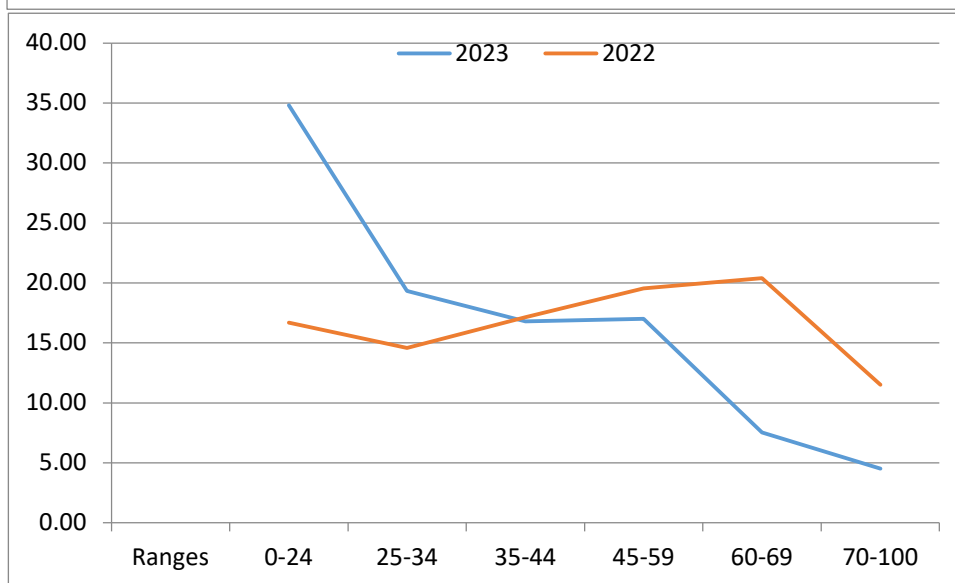
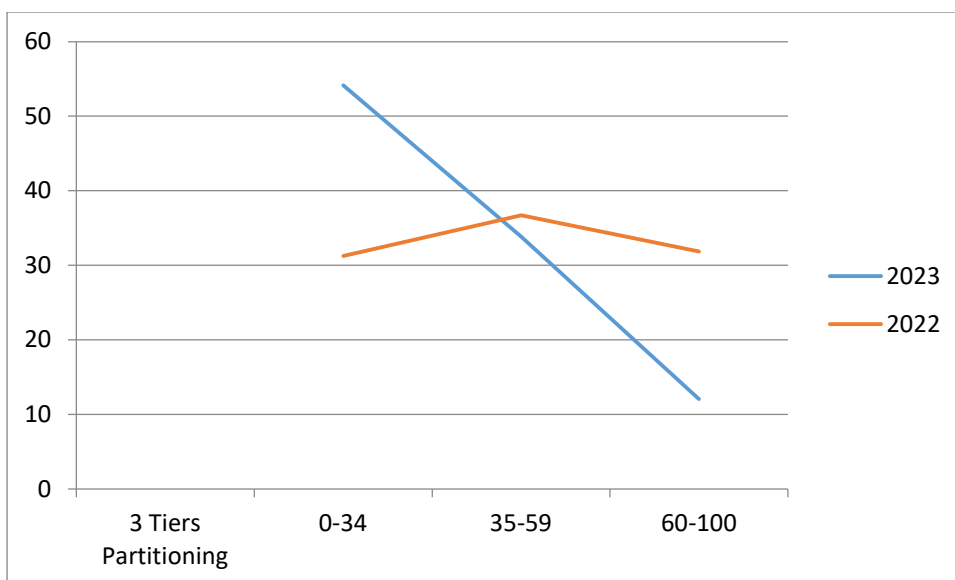
RANGE OF COMPARISON BETWEEN 2023 AND 2022

2022	0-24	25-34	35-44	45-59	60-69	70-100
Candidates	5977	5224	6143	7005	7310	4123
% of candidates	16.67	14.57	17.14	19.54	20.39	11.50
3 Tiers Partitioning	31.24		36.68		31.83	

2023	0-24	25-34	35-44	45-59	60-69	70-100
No. Candidates	9451	5250	4562	4622	2045	1229
% of candidates	34.80	19.33	16.80	17.02	7.53	4.53
3 Tiers Partitioning	54.13		33.82		12.06	

COMPARISON OF 2022/2023 RESULTS FOR VARIOUS RANGES





RECOMMENDATIONS

A) STUDENTS:

- Students should have basic skills in mathematics to enable them transform data provided to plot and interpret graphs.
- Students should have a good mastery of the English Language since this would permit proper expression of biological facts.
- Students should have an understanding of how the examination is structured and above all, understand the examination format.
- Students should take mock examinations seriously as it stimulates examination conditions and gives them a chance to see how they might perform.

B) TEACHERS

- Teachers should cover the syllabus on time and work done in the lower classes must be revised in Form 5.
- Teachers should avoid using students to dictate notes to other students to avoid wrong spellings, omissions and wrong knowledge.
- Biological terms should be written on the board.
- Evaluation in schools should follow the GCE pattern, involving both MCQ and essay-type questions.

- Teachers should drill students on the ability to answer essay-type questions.
- The table of specifications in the syllabus should be respected during question setting even in classroom examinations.
- Teachers are encouraged to carry out outdoor lessons with their students for a better understanding of organisms and their adaptations in their natural habitat.
- Teachers are encouraged to be involved in Departmental meetings, Subject Associations, attend Seminars/Workshops. During such meetings, difficulties can be addressed and subject reports discussed with emphasis on the recommendations.
- New teachers in the field should work closely with more experienced colleagues in order to gain from their experience.
- Teachers are encouraged to drill their students on the spelling of biological words as well as the proper drawing of well-labelled biological diagrams/ annotated biogeochemical cycles.

C) OTHER STAKEHOLDERS

- Parents should be encouraged during PTA meetings to buy textbooks, workbooks, notebooks and other didactic materials for their children.
- Parents should guide their wards on social media involvement.

CONCLUSION

- The examination was balanced, respecting the syllabus.
- Candidates who prepared performed well as could be seen with the maximum scores per question.
- Best answered questions were Q 3 on Ecology and Q5 on Transport.
- The performance for 2023 (48.6%) witnessed a drop of 11.2% as against 59.8% for 2022. Performance is generally below average.
- Although below average, the performance is still better when compared to previous years when we didn't have this format of setting.
- It is clear that questions with poor performance are sections which are treated early i.e Form 1-4 programme.
- We pray that Biology teachers should continue to put in their plausible best to make Biology the best, not concentrating only on Form 5 material but spanning the entire syllabus with stimulus and revision questions.

0515 – CHEMISTRY

1. INTRODUCTION:

The structure and format of the examination was the same as that of 2022. Paper 1 comprised of 50 MCQs. Paper 2 was made up of 10 Questions arranged in three (3) sections: **A**, **B** and **C**. Section **A** and **C** were testing principally the cognitive abilities of the candidates. Section **B**, **Alternative to Practical**, comprised of 2 compulsory questions, testing mostly skills and aptitudes in experimental Chemistry.

This report is based mostly on paper 2 as Paper 1 was marked electronically and information on performance was not available at the time of reporting.

2. PAPER BY PAPER ANALYSIS

2.1 PAPER 1 ANALYSIS

Paper 1 was about the same strength as that of 2022. It was made up of 50 MCQs. A test blue print ex-rayed the following:

- The 50 MCQ test items were drawn from the entire evaluation syllabus.
- Each of the 6 activities spelled out in the syllabus was proportionately tested.
- The test items covered all four aims of the evaluation syllabus.
- The test items covered the four assessment objectives: knowledge (30 %), comprehension (40%), application (19%) and analysis (11%).

Based on the TOS, one can conclude that a candidate with basic knowledge, understanding and application of concepts and principles in Chemistry could make a pass in this paper.

2.2 PAPER 2 ANALYSIS.

Paper 2 had a slightly higher difficulty index than that of 2022.

The questions were testing knowledge, comprehension, application and analysis of concepts and principles in Chemistry. The paper generally covered over 90% of the evaluation syllabus.

The following table of specification (TOS) is the Test Blueprint for paper 2.

Question No.	Content: Topics on the syllabus	Process dimension (Assessment Objectives)				Question Difficulty level
		Knowledge (A)	Comprehension (B)	Application (C)	Analysis (D)	
1.	1.3b,c 1.4b,g 1.5.1a,b	(a)i, (b)ii	(a)ii, (b)i,	(c), (d), (e)	--	***
2.	13.5a,c,d	(a)i ii, (b), (c), (e)	(d)i,ii	--	--	*
3.	7.2.5a,c,d,f	(a)i ii, (b)iv	(b)i, ii, (c)	--	(b)ii	***
4.	12b,e,h,i	--	(b), (c)I, ii	(a), (d)	--	****
5.	11b,e 14.1a 14.2a 8d	(a),(b),(e),(f)	(c)	(d)I, ii	--	***
6.	15.3a,15.3(b)iii,iv 15.1c	(a)(i)	(e)	--	(a)ii, (b)i, ii, (c)i, ii (d)i, ii	****
7.	15.1a 15.4a,b,d 15.5a,b,c,d,e 9f	(a), (d)ii, (e)i	(b), (b)(c), (d)I, (e)ii, (f)	(d)iii,	(e)(iii)	****
8.	13.1f 5.1a 13.2e 13.3e	(a), (b), (c), (d)	(a), (b), (c), (d)	--	--	*
9.	8e	(a)	(a)	(b)	--	***
10.	9a,e	(c)	(a), (b)			***

Question No.	Content: Topics on the syllabus	Process dimension (Assessment Objectives)				Question Difficulty level
	TOTAL	29%	38%	21%	12%	100%

Table of specification (TOS) for paper 2

General observations:

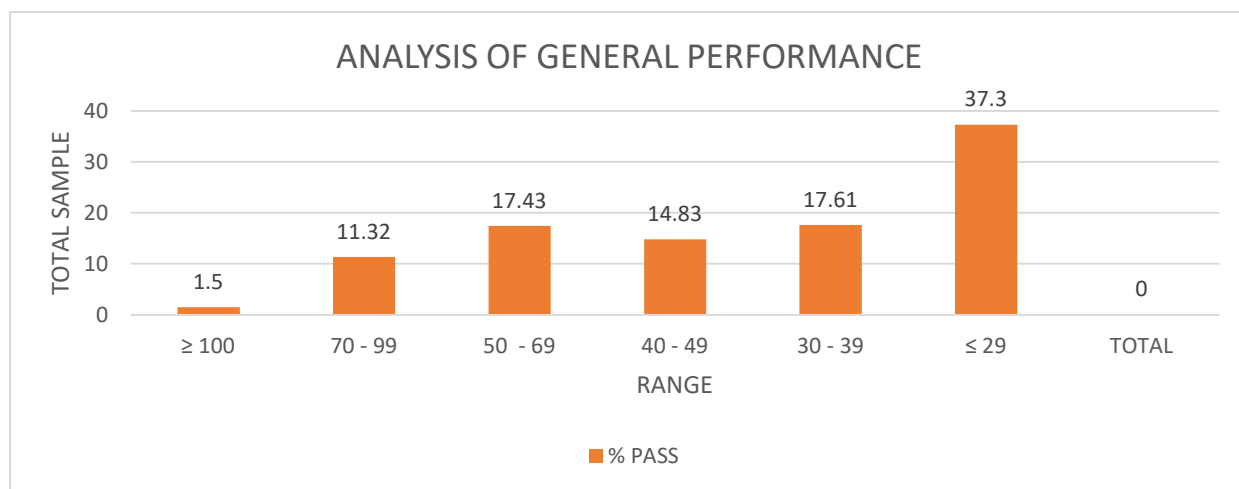
- Most of the questions required understanding, application and analysis of concepts and principles in Chemistry. To score a good grade, candidates needed to go beyond just knowledge of the course content.
- An average candidate would be able to score a grade C.

3. SAMPLE ANALYSIS OF PERFORMANCE IN PAPER TWO

3.1 ANALYSIS OF CANDIDATES SCORES IN PAPER 2 June 2023

3.1.0 ANALYSIS OF GENERAL PERFORMANCE

RANGE	≥ 100	70 – 99	50 - 69	40 - 49	30 - 39	≤ 29	TOTAL
TOTAL	126	942	1450	1234	1465	3103	8320
% PASS	1.5	11.32	17.43	14.83	17.61	37.30	POPULATION



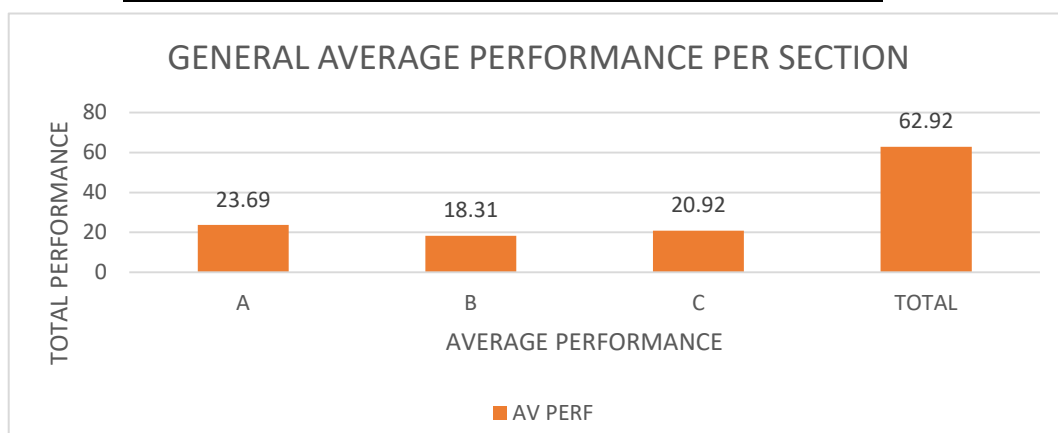
From the analysis, we can predict that;

- Above 60% of the candidates are likely to pass with a C grade or above.
- About 37% of the candidates are likely to score below 30/100.

3.1.1 SECTION BY SECTION ANALYSIS

3.1.2 GENERAL ANALYSIS OF PERFORMANCE PER SECTION

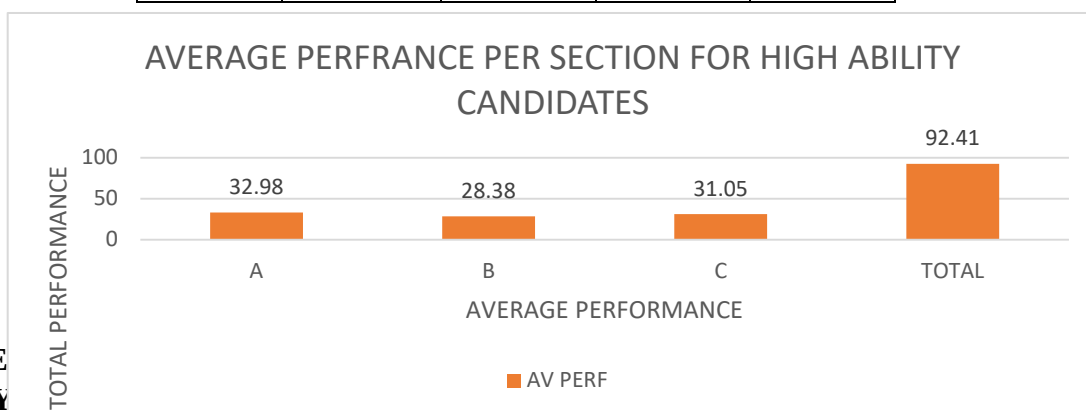
SECTION	A	B	C	TOTAL
TOTAL	5590	4322	4938	14850
AV PERF	23.69	18.31	20.92	62.92



3.1.3 GENERAL ANALYSIS OF PERFORMANCE PER SECTION FOR HIGHER ABILITY CANDIDATES

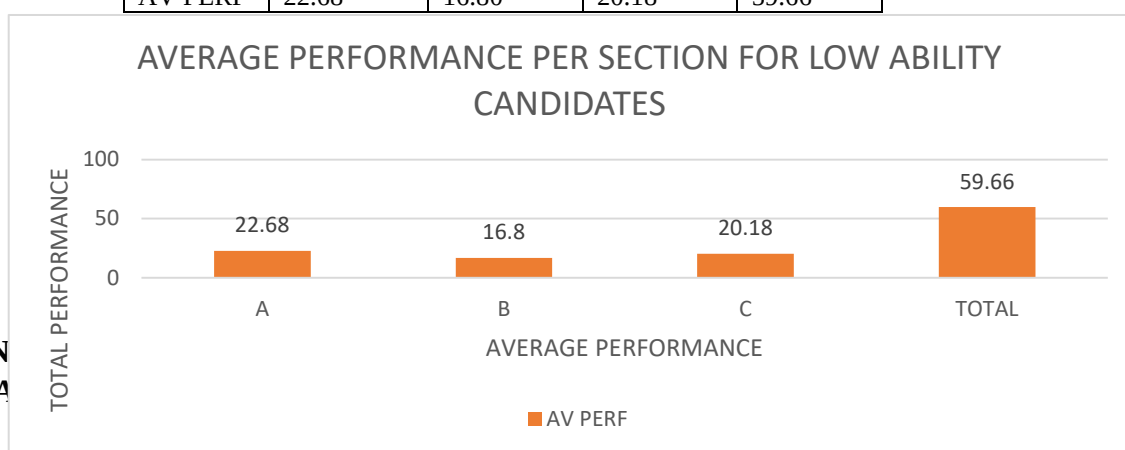
SECTION	A	B	C	TOTAL
TOTAL	2671	2299	2515	7485
AV PERF	32.98	28.38	31.05	92.41

3.1.4 GENERAL ABILITY

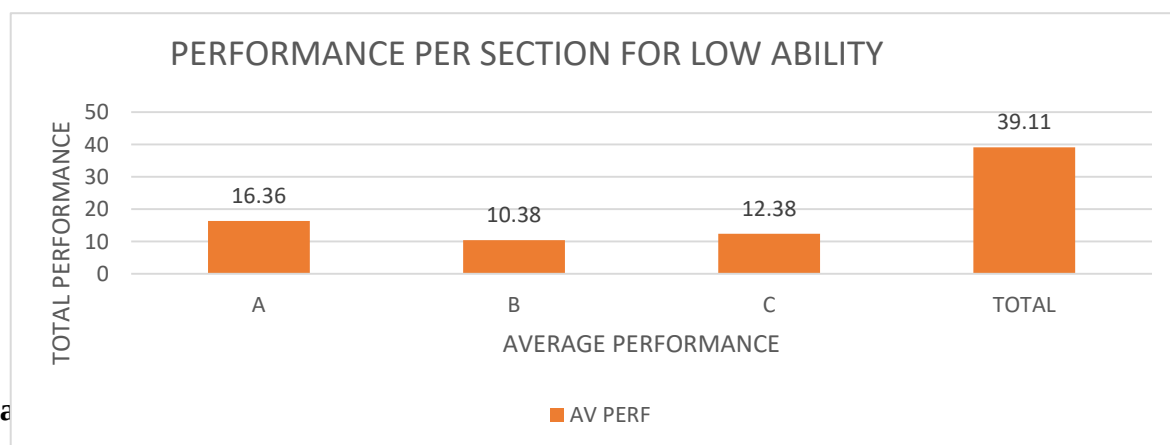


SECTION	A	B	C	TOTAL
TOTAL	1610	1193	1433	4236
AV PERF	22.68	16.80	20.18	59.66

3.1.5 GENERAL CANDIDATES



TOTAL	1309	830	990	3129
AV PERF	16.36	10.38	12.38	39.11



From the a

- Best performances were seen in Section A for all candidates.
- Section B contributed most to the poor performance of candidates.
- The higher ability candidates performed very well in Section B.
- The lower ability candidates performed very poorly in Section B.
- Qualitatively, Sections A and B contributed most to candidates' performance.

4. QUESTION BY QUESTION ANALYSIS

This analysis is based on paper 2.

SECTION A

QUESTION 1. The question was on Atomic structure, chemical bonding, periodic classification and families of elements. It was testing knowledge, comprehension and application of the concepts and principles involved.

Most candidates attempted this question. The performance of candidates was very good.

Suggestions: Teachers should emphasize to learners on the need to apply the concepts and principles they learn to novel situations. Emphasis should be on application of electronic configuration in deriving valency, writing chemical formulae, predicting bond types and writing chemical equations.

QUESTION 2. The question is on Alcohols. It was testing the knowledge and understanding of identification, reactivity and uses of alcohols.

Most candidates demonstrated a mastery of the identification and uses of alcohols. They were however limited in understanding of reactivity of alcohols. The performance was below expectation.

Suggestions: Teachers should emphasize on the fact that the –OH group is the functional group in alcohols then look at specific reactions of alcohols required at this level, bringing out the reagent, reaction condition and products for each reaction.

QUESTION 3. It was based on Chemistry of Carbon. The question was testing knowledge, understanding and application of the chemistry of Carbon and its compound. Though most candidates performed well in this question, many were unable to distinguish between crystalline forms (allotropes) and non-crystalline forms of carbon.

Suggestions: Learners should be able to identify the crystalline and non-crystalline forms of carbon, their differences in physical properties and diverse uses.

QUESTION 4. The question was based on Electrolysis of an aqueous solution of a salt. It was testing knowledge, understanding of the observations and reaction taking place at the electrodes and application of Faraday first law. This was the question with worst performance in section A.

Suggestions: Learners should be made to understand the mechanism of electrolysis: from the ionization of the electrolyte to the discharge of ions at the electrodes. Candidates should be able to write ionic equations to explain observation at the electrode and in the electrolyte.

QUESTION 5. The concept of Reversibility and its application in industrial manufacturing processes. This question was testing knowledge, understanding and application of the concept. Most candidates attempted this question with poor performance as they were unable to distinguish between yield and equilibrium position. Most candidates did not know the role played by a catalyst in a reversible system. They got confused with the general effect of a catalyst in altering reaction rate.

Suggestions: Teachers should lay more emphasis on Le Chatelier principle and the use of this principle to explain what happens to the equilibrium position and the yield when the various factors are altered. Teachers should let learners know that the factors that affect a system at equilibrium are the same factors that affect reaction rate but their effects are explained differently.

SECTION B: ALTERNATIVE TO PRACTICAL

This section is intended to test the following science process skills: reading skills, recording skills, manipulating skills, reporting skills, critical/creative thinking skills, logical thinking/inferential skills, problem-solving skills and skills in carrying out simple calculations based on experimental

results. Candidates are also expected to show a mastery of elementary experimental design and safety laboratory procedures.

QUESTION 6. The question was testing skills in qualitative analysis and experimental design. Candidates were expected to show proof of knowledge and understanding of laboratory safety and procedures. They were also expected to show a mastery of salt analysis and identification of functional groups in organic compounds. This was the question with a better performance in Section B, though a few demonstrated poor skills in laboratory procedures.

Suggestions: There is need for learners to be involved in activities during the teaching learning process. Learners are expected to be able to analyze a salt to come out with the anion and cation through a series of tests. The use of multiple media in instruction is highly encouraged as this will make it easier for candidates to be able to describe simple laboratory procedures, observe and interpret results of laboratory tests.

QUESTION 7. The Question was testing Acid-base titration, identification and uses common laboratory apparatus and laboratory preparation of gases. Most candidates performed well on this question. A few candidates however demonstrated poor skills in calculations.

Suggestions: Learners should be exposed to much laboratory work during the teaching learning process. This will reduce crude memorization and learners will be able to better use the available laboratory material placed at their disposal to perform assigned task.

SECTION C: ESSAY

This section is designed to give candidates the ability to arrange their material in a logical and organized manner, using diagrams where needed to illustrate their answers.

QUESTION 8. The question was on short notes on types of reactions. It was testing learners' knowledge and understanding of different reaction types in organic and inorganic chemistry

Suggestions: In writing short notes emphasis should be on definition of concepts and the use of examples and/or equations to illustrate the understanding of the concept.

QUESTION 9. The question was testing knowledge and understanding of laboratory procedures for determination of enthalpy changes and related calculation. Most candidates performed well in this question though some lacked a mastery of reporting skills.

Suggestions: Teachers should emphasize on the need to report experiments following standard protocol: material, procedure, results, analysis of results.

QUESTION 10. The question was testing knowledge and understanding of the Factors affecting the rate of a chemical reaction. Most of the candidates attempted this question, with performances below average as they were unable to select the appropriate factors for a specific reaction.

Suggestions: An experimental approach with well appropriate reactions should be used in treating factors that affect reactions rate. The use of demonstration experiments is recommended where the resources are limited.

5. SUGGESTIONS/RECOMMENDATIONS

Students are advised to;

- Associate what they learn in class to real life situations.
- Show positive change in behavior as a result of what they have learned.
- Take more interest in group learning.
- Use the available technology in their learning rather than for fun. There is enough out there on the internet. Exploit it positively.

Teachers are encouraged to;

- Stimulate students' interests in Laboratory work in Chemistry.
- Appropriately integrate learners' activities in the teaching of Chemistry.
- Integrate the selection and use of appropriate and relevant media in their lesson.
- Take more interest in Pedagogic workshops/ seminars as this will enable teachers to share classroom experiences.
- Adopt modern learner-centered methods of teaching such as laboratory, lecture-demonstration, illustrated-lecture as these approaches stimulate critical thinking.
- Use of teaching strategies such as cooperative learning that enhance learner's interactions and encourage peer tutoring.
- Learn to reach out. There is enough instructional material out there in the community that can be donated, borrowed or bought cheaply.
- Create awareness of technology; learn how to use them and to properly integrate the available technology into the teaching/learning process. The use of virtual labs is highly encouraged.

Principals and school proprietors are encouraged to

- Acquire the necessary chemicals and equipment to enable teachers do Laboratory work. Chemistry is an experimental science and should be taught and learned as such.
- Acquire the Microchemistry kits when standard laboratory is absent.
- Facilitate and ensure that teachers attend seminars/workshops in Chemistry.

6. CONCLUSION.

The Subject Panel should continue to minimize errors so that all examination questions are barrier free, thereby ensuring that all candidates are given the opportunity to demonstrate what they know in multiple ways.

In line with the **UNESCO** declaration on equal opportunities for education, Chemistry teachers must ensure that their teaching approaches are in line with the 3 pillars of the Universal Design for Learning, **UDL**, thereby ensuring that education is inclusive. Activity Based teaching, using multiple media of instructions is therefore recommended as a better teaching strategy that enables students to engage and express themselves in multiple ways.

0520 – COMMERCE

INTRODUCTION

The examination had two papers:

- Paper one is a multiple choice question (MCQ) paper. This paper comprised of (50) fifty questions. The duration of the paper was One Hour Thirty Minutes. The weighting of the paper is forty (40%) percent of the whole examination. The scoring of this paper was by an Optical Mark Reader (OMR).
- Paper two was an essay type question paper. The paper met with the aims and objectives of the syllabuses. There were six questions and candidates had to answer any FOUR. The duration of the paper was Two hours, thirty minutes. The weighting of the paper was sixty (60%) percent of the whole examination.

The scripts scored by examiners revealed the following;

- The most popular questions were questions 5, 2 and 1 in that order
- The least popular questions 4 and 3
- The best scores were recorded in questions 5 as a good number of candidates scored 20 on 20 while the least scores were recorded for questions 4 and 3.
- The best score of the paper was 78/ 80 and the worst score was zero
- On the whole the performance of the candidates was quite above average.

I - SYLLABUSES COVERAGE AND TEST ITEMS (TOS)

a) SYLLABUSES COVERAGE

Question No.	Section	Topic
1	a), b) and c)	Business Ownership
2	a) and b) c)	Enterprise. Warehousing
3	a) b) and c)	Buying and Selling operations. Intermediaries of trade.
4	a) b) c)	Assessing Business performance. Advertising. Consumer Protection.
5	a) and b) c)	Banking and Operations. Insurance.
6	a) b) and c)	Foreign or International Trade. Transport.

The table shows there is a more than 85% of syllabus coverage.

b) TEST ITEMS (TOS)

QUESTION	Q1	Q2	Q3	Q4	Q5	Q6	TOTAL
TEST ITEM							
Knowledge	13	12	6	04	06	16	55
Comprehension	07	08	14	08	08	04	45
Application	-			08	06		14
Analysis	-	-	-	0	-	-	-
TOTAL	20	20	20	20	20	20	120

Percentage coverage of test items of the examination paper;

TEST ITEM	TOTAL MARKS	PERCENTAGE
Knowledge and Comprehension	80	67%
Application	34	33%
Total	120	100 %

II - QUESTION BY QUESTION ANALYSIS OF PAPER TWO

Question One.

The questions examined in this number were on Business Units:

- (a) This part of the question was on the differences between incorporated (joint stock companies and Corporations) unincorporated (One-man business and Partnership) enterprises in terms of Own Legal entity, Liabilities, amount of capital, liabilities etc. It was fairly attempted by candidates scoring above 70 % of the total marks. Some candidates however were instead giving the differences between private and public companies which were all private enterprises.
- (b) Candidates were tested on the advantages of a sole trader such as easy to start and manage, have close contact with customers, flexible to business environment, enjoy profits alone, etc. Scores were however average.
- (c) The question tested candidates on the knowledge of the features or characteristics of co-operative societies such as open membership, democratic control, limited liabilities, etc. Scores were average.

Candidates understood question as the percentage pass was above 65% with the highest score being 18/20 and the least score being 01/20.

.Question Two.

The topic examined was Enterprise and warehousing.

- (a) The question tested candidates to simply define Enterprise, Entrepreneur and entrepreneurship.
Enterprise is simply a business, Entrepreneur as owner and manager of a business, while Entrepreneurship is the process of developing, organizing, and running a new business to generate profit while taking a financial risk in the hope of making profits. Above 60% of the candidates who attempted the question recorded above 60% of the marks.
- (b) This question was simple knowledge testing of the various departments of an enterprise and in this case the production, marketing and stores departments. It was fairly attempted by candidates and most scored above 70 % of the total marks.
- (c) The question tested candidate's importance of warehousing as a branch of commerce such as safety of goods, stabilize prices, employment creation, ensure continuous availability of goods, etc. It was averagely attempted as only about 50% of the candidates obtained good marks.

The highest score recorded was 18/20 and the lowest score was 04/20.

On the whole candidates performed above average in answering the question.

Question Three.

The topic examined was on buying and selling operations and intermediaries of

trade:

- (a) This part of the question expected candidates to explain three business documents- Catalogue, invoice and credit note. Most of the answers were below expectation. Marks registered were below average.
- (b) The second question was on the functions of the wholesaler to the retailer in the chain of distribution.
Many candidates obtained all the marks and only a few registered below average marks.
- (c) Candidates were tested on the advantages of shopping in a department store such as free parking, buying on one spot, enjoy loss-leadership, etc.

Most candidates attempted the question and recorded average marks. It was a popular question to candidates.

Question Four.

This question was set on assessing business performance, advertising and

Consumer protection:

- a) The question was a data response question where candidates were required to calculate gross profits, net profits, rate of turnover and net profits as a percentage of sales from extracts of a trial balance of a hypothetical firm. More than 70% of the candidates did not attempt the question. Those who answered the questions had very low marks.
- b) Candidates were examined on the various methods of advertising including TV, Radio, Newspapers, Poster, etc. This is an example of an applied question. Here also answers were below average.
- (d) Question was on consumer protection where candidates were expected to simply outline the
various reasons why consumers need to be protected. Many candidates that attempted the
question obtained low marks. This was the least attempted question. Marks obtained by
candidates were far below average for a majority of candidates who attempted the question.

Question Five.

This question is on banking and insurance:

- (a) Candidates were expected to explain functions or importance of the Central Bank to the economy. These include government bank, bankers' bank, lender of last resort, managing the national debt, etc. Answers provided by candidates were above average.
- (b) This question tested candidates to give the differences between a current and a deposit account etc. These differences include withdrawal of notice, interest earnings or charges, credits facilities available to holders. Answers from candidates were satisfactory.
- (c) This question was to explain the importance of insurance to businessmen candidates who attempted the questions obtained average marks.

Question Six.

The question examined candidates on foreign trade and transport:

- (a) The question was on the factors that have led to the growth of foreign trade. These include Differences in natural endowment, improvement in transport and communication, improvement in technology etc. More than 95% of the candidates who attempted the question understood the question as scores were far above average.
- (b) The question of this section examined candidates on the advantages of sea transport. These could be examined under speed, availability, tonnage, delivery costs etc. Question was popular and marks obtained were above 70%.
- (c) This last question was on the advantages of containerisation for the conveyance of goods. These include fast loading and offloading, safety of goods from pilfering and bad weather, ease customs procedures, etc.

This was the popular question among candidates.

III – GENERAL IMPRESSION

Syllabuses coverage for Paper 1 is 100% while for Paper 2 it was above 85%.

Candidates' performance was quite above average. This is confirmed with the data below based on a sample size of 37390 scripts.

Marks Range	0-25	26-34	35+	Total
No. of Scripts	11055	8191	18144	37,390
Percentage	29.56%	48.52%	18.93%	100%

Figure shows the mode distribution of marks recorded from a sample size of 37,390 scripts. From the distribution, we can estimate the percentage pass of candidates to be between 58 % and 68% which is above average as a majority of candidates (71.7%) is noticed from the data obtaining above 30 marks on a total of 80. The performance from the sample size can be used to conclude that the results of 0520 Commerce for the 2023 GCE session will be above average.

IV - RECOMMENDATIONS

1. Teachers are advised to take seminars serious, equip themselves with necessary textbooks and manuals. Ensure proper coverage of the syllabus during the year than rely on last minute revision classes.
2. Seminars should be organized on the various types of ships in sea transport, business ownership and business performance (types of expenses, trading and profits and loss accounts and the balance sheet) and on insurance.
3. Parents and guardians should buy the necessary textbooks and other didactics materials (work books, subject dictionary) for their children.
4. Principals and school authorities should finance teachers' attendance during commerce seminars.

0525 – ECONOMICS

1. INTRODUCTION

The examination consisted of two papers: Paper I which comprised of 50 Multiple Choice Questions (MCQs) and Paper 2 which consisted of 8 Essay type questions. Candidates were expected to answer all questions in Paper 1 and 5 questions out of the 8 questions in Paper 2. The questions in both papers adequately covered the entire syllabus and were within the reach of the average candidates.

2. STRUCTURE OF PAPER 2

- 2.1 **GENERAL OBSERVATION:** During the workshop at the end of the marking session, the examiners observed that this paper was slightly above average in the sense that it was a little bit technical but not demanding as compared to last year.
- 2.2 **LANGUAGE:** The language used was simple and straight forward.
- 2.3 **RUBRICS:** The instructions were very clear.
- 2.4 **NUMBERING:** The questions were properly numbered from Question 1 to Question 8, with all sub sections clearly indicated.
- 2.5 **MARK ALLOCATION:** Marks were properly allocated.
- 2.6 **TYPING:** The questions were well typed and very clear with no typing error.
- 2.7 **WEIGHTING OF QUESTIONS:** Each question carried 20 marks, thus weighting was equitably distributed.

3. GENERAL PERFORMANCE IN PAPER 2

This year, Candidates' performance is about the same strength as compared to 2022. From a random sample of 1,500 marked scripts, it was observed that candidates' performance is still below average.

4. QUESTION ANALYSIS: Question Analysis of Paper 1 and Paper 2

4.1. Paper 1

Paper 1, which is MCQs was scored by the computer. Consequently, the Analysis of Paper 1 could not be done by the Subject Panel.

4.2. Paper 2

The paper consisted of 5 star one questions (Q1, Q2, Q4, Q6 and Q7), 2 star two questions (Q3, and Q8) and 1 star three question (Q5).

4.2.1. QUESTION BY QUESTION ANALYSIS

The analysis was made from a sample of 1,500 marked scripts

4.2.1.1 QUESTION POPULARITY RANKING:

RANKING	QUESTION NO.	SYLLABUS AREA	NO. ATTEMPTED	% ATTEMPTED
1 st	Question 8	POPULATION	1396	93.07%
2 nd	Question 3	PUBLIC FINANCE	1298	86.53%
3 rd	Question 2	INTERNATIONAL TRADE	1213	80.87%
4 th	Question 7	MONEY AND BANKING	1088	72.53%

RANKING	QUESTION NO.	SYLLABUS AREA	NO. ATTEMPTED	% ATTEMPTED
5 th	Question 4	PRICE AND MARKET	832	55.47%
6 th	Question 5	BUSINESS UNITS	462	30.80%
7 th	Question 6	NATURE AND SCOPE OF ECONOMICS	413	27.53%
8 th	Question 1	PRODUCTION	238	15.87%

4.2.1.2: QUESTION PERFORMANCE RANKING (taking 10/20 as a pass mark)

RANKING	QUESTION N^o.	SYLLABUS AREA	N^o. ATTEMPTED	N^o. PASS	% PASS	N^o FAILED	% FAILED
1 st	Question 8	POPULATION	1396	757	54.23	639	45.77
2 nd	Question 2	INTERNATIONAL TRADE	1213	561	46.25	652	53.75
3 rd	Question 3	PUBLIC FINANCE	1298	576	44.38	722	55.62
4 th	Question 5	BUSINESS UNITS	462	193	41.77	269	58.23
5 th	Question 6	NATURE AND SCOPE OF ECONOMICS	413	132	31.96	281	68.04
6 th	Question 7	MONEY AND BANKING	1088	322	29.60	766	70.40
7 th	Question 1	PRODUCTION	238	50	21.01	188	78.99
8 th	Question 4	PRICE AND MARKET	832	142	17.07	690	82.93

One could further analyze the above sample size of 1,500 marked scripts in terms of percentage and number of successful candidates.

5.1.1: STATISTICAL PERFORMANCE ACCORDING TO RANGE OF PAPER 2 ON A SAMPLE OF 1,500 SCRIPTS

Range	Number of scripts	Cumulative Frequency of Sampled Scripts
0 <= X <= 10	170	170
10 < X <=20	203	373
20 < X <=30	271	644
30 < X <=40	216	860
40 < X <=50	233	1,093
50 < X <=60	206	1,299
60 < X <=70	111	1,410
70 < X <=80	57	1,467
80 < X <=90	29	1,496
90 < X <=100	04	1,500

5.1.2: COMMULATIVE STATISTICAL PERFORMANCE

Range of scores	FREQUENCY	CUM FREQ	% pass
90-100	04	04	0,27
80-89	29	33	2,20
70-79	57	90	6,00
60-69	111	201	13,4
50-59	206	407	27,1
40-49	233	640	42,7
30-39	216	856	57,1
20-29	271	1,127	75,1
10-19	203	1,330	88,6
0-9	170	1,500	100

If 50% is considered as a pass mark, the percentage pass from the sample will be 27.1 % as compared to 28.6 % in 2022 which means that 407 candidates out of a sample size of 1,500 will be successful as compared to 286 candidates out of a sample size of 1,000 in 2022

Also, if 40% is considered as a pass mark, the percentage pass from the sample size of 1,500 will be 42.7% as compared to 43.7% in 2022. This means that 640 candidates will be successful in a sample of 1,500 as compared to 437 candidates out of a sample size of 1,000 in 2022.

5.1.3: COMPARATIVE ANALYSIS OF POSSIBLE PASS MARKS FROM 2021 TO 2023.

RANGE	%PASSED 2021	% PASSED 2022	% PASSED 2023
50+	26.7	28.6	27.1
40+	46.3	43.7	42.7

Therefore, the conclusion at the level of performance can be interpreted as a slight drop of about 1% compared to last year.

6.1: SECTION BY SECTION QUESTION ANALYSIS:

QUESTION N ^o .	SECTION	SYLLABUS AREA	SPECIFIC TOPIC	N ^o . ATTEMPTED	N ^o . PASS	% PASS
Question 1	a. i)	PRODUCTION	Internal economies of scale	239	99	41.2
	ii)		Internal economies of scale	161	67	41.61
	iii)		Internal economies of scale	237	61	25.74
	iv)		Internal economies of scale	234	91	38.89
	b)		External economics of scale	237	50	21.10
	c)		Reasons for growth of firms	237	53	22.36

QUESTION N ^o .	SECTION	SYLLABUS AREA	SPECIFIC TOPIC	N ^o . ATTEMPTED	N ^o . PASS	% PASS
Question 2	a. i)	INTERNATIONAL TRADE	Visible trade	1216	344	28.29
	ii)		Invisible trade	1213	315	25.96
	iii)		Current account	1212	160	13.20
	iv)		Capital account	1213	226	18.63
	b)		Advantages of international trade	1215	702	57.78
	c)		Methods of trade restrictions	1212	844	69.64
Question 3	a. i)	PUBLIC FINANCE	Direct And Indirect Taxes	1297	828	63.84
	ii)		Tax structure or system	1298	571	43.99
	b)		Advantages of direct Taxes	852	302	35.45
	c)		Sources of government revenue	1295	713	55.06
Question 4	a. i)	PRICE AND MARKET	Joint demand	831	502	60.41
	ii)		Joint of demand	833	429	51.5
	iii)		Joint of supply	569	339	59.58
	iv)		Competitive of supply	568	167	29.40
	b)		Determinants of PED	569	74	13.01
	c)		Determinants of PES	564	107	18.97
Question 5	a)	BUSINESS UNITS	Capital structure of companies	460	333	72.39
	b)		Disadvantages of Ltd	459	87	18.95
	c)		Ordinary shareholders And debenture holders	459	169	36.82
Question 6	a) i.	NATURE AND SCOPE OF ECONOMICS	Measure of central tendency	414	140	33.82
	ii.		Measure of central tendency	414	222	53.62
	iii.		Measure of central tendency	412	201	48.78
	iv.		Measure of central tendency	413	228	55.20
	b)		Functions of an economic system	412	121	29.36
	c)		Characteristics of Mixed Economy	412	112	27.18
	d)		Advantages of Market Economy	408	200	49.02
Question 7	a. i)	MONEY AND BANKING	Central bank	1087	738	67.89
	ii)		Cheque	1087	510	46.92
	iii)		collateral	1086	457	42.08
	iv)		Token coin	1085	291	26.82
	b. i)		Advantages of using a cheque	1087	334	30.73
	ii)		Functions of BEAC	1082	335	30.96
Question 8	a. i)		Birth rate and death rate	1396	897	64.26

QUESTION N ^o .	SECTION	SYLLABUS AREA	SPECIFIC TOPIC	N ^o . ATTEMPTED	N ^o . PASS	% PASS
	ii)	POPULATION	Emigration & immigration	1396	915	65.54
	iii)		Over and Under Population	1396	317	22.70
	iv)		Growing & Aging Population	1396	657	47.06
	b)		Population census	1394	862	61.84

7.0 SOME DIFFICULTIES / CHALLENGES THAT COULD HAVE AFFECTED THE PERFORMANCE OF CANDIDATES.

7.1 Environmental challenges

- The socio-political crises in the North West and South West Regions of Cameroon.
- Crash programmes in the Evening schools resulting to poor syllabus coverage.
- Some students wait for online questions and they don't study.
- Some students are involved into drugs consumption because of easy accessibility to drugs.
- Poor usage of social media.
- Proximity of drinking spots and gambling spots to schools.

7.2 Students

- Many students skip classes after staying at home for some years without going to school because of the crises.
- Some students have the impression that Economics is easy and can write anything as answer for Economics.
- Many students do not have textbooks and are not willing to buy.
- Many students don't study as they are constantly on their mobile Phones.
- Most candidates neglect Forms 3 and 4 work and most don't have notes for these classes.
- Language barriers especially for the francophone candidates who sometimes cannot understand the questions.
- Many candidates do not go to school after the Mock GCE examination.
etc.

7.3 Teachers

- Some teachers do speculative teaching.
- Some teachers do not take enough time to prepare their lessons and make new notes.
- Absenteeism rate is very high amongst Government school teachers.
- Some teachers derail students with tollgate classes.
- Some teachers overload themselves with too many teaching hours in the private schools.
- Many teachers give sub-standard exams because of large class sizes and laziness.

7.4 Parents

- Most parents of government and lay private schools do not buy textbooks for their children.
- Some parents encourage their children to skip classes.
- Lack of follow up of the children by parents because they are too busy with looking for means to take care of the home.
- Some provide more of what is not needed by the children e.g. Phones.
- Some parents overload their children with domestic work.

7.5 The Government

- Mass promotion policy of the government results to the promotion of students with low level to the next class.
- Inadequate teachers in most government schools especially in the rural areas.
- Government law on the sequence system of evaluation where teachers are restricted to test only on what has been taught in the sequence.
- The government law that students should not be sent out of class for lack of textbooks is seriously affecting studies.

8.0 SUGGESTIONS / RECOMMENDATIONS

Teachers:

- Should be duty-conscious.
- Teachers/Parents should buy textbooks for their children.
- Teachers should attend seminars, have at least three textbooks, revise notes yearly and endeavour to complete the syllabus.
- The government should continue Peace building measures in the North West and South West Regions.
- School Administration should equip the school libraries with more relevant subject materials.
- Bars and Off-licences should not be located near schools.
- Regional Pedagogic Inspectors should carryout inspections in schools regularly.
- The skipping of classes by students should be discouraged.

9.0 GENERAL IMPRESSION OF EXAMINERS

- The 2023 marking session took place in a serene atmosphere. The certainty and accuracy rate of this year`s examination was evaluated at above 95%.

15.0: CONCLUSION

If all these suggestions are taken into consideration, it will go a long way to improve the performance of 0525 Economics in the subsequent years.

0530 – ENGLISH LANGUAGE

GENERAL REMARKS: The examination met the aims and objectives as prescribed by the syllabus, in that, it tested Listening Comprehension, Reading Comprehension, Grammar and Vocabulary, Directed Writing, and Composition. However, this report is based on paper 2 since paper 1 was scored electronically.

SECTION A: DIRECTED WRITING.

The stimulus material for Directed Writing was familiar, educative and true to life. Performance was above average. Nevertheless, some candidates performed poorly for the following reasons:

- Inability to understand the task, that is, writing a talk to co-workers on how to stop gossip.
- Poor mastery of the format for writing a talk, which should include:
 1. A salutation / theme embedded in the talk.
 2. The closing; (thanks for listening).
- Non-respect of instructions: word and paragraph limits.
- Inability to select **ALL** relevant material.
- Lifting, that is, indiscriminate copying of the stimulus/source material or re-copying the material for an answer.
- Poor mastery of expression and slanting techniques.
- Inability to correctly use transitional words such as *firstly, also, however, nevertheless, moreover, furthermore, in addition* etc.
- Use of *moreso* as a connective instead of using *more so* for intensity.
- Use of non-existent connectives such as *better still, more still, more again, further still, nextly* etc.
- Repetition of transitional words to express the same idea in the same sentence.
- Poor mastery of the role they had to assume in the task, that is, *workers` representative*.
- Un-cancelled plans.
- Poor handwriting.
- Addition of their own knowledge of how to gossip.
- Poor mastery of paragraphing:
 - listing points rather than writing in continuous prose
 - leaving unnecessary gaps between sentences/lines
 - Introducing subtitles to within paragraphs
- Writing in one or more than one paragraph.
- Use of pencil instead of black or blue ink.
- Use of strange language other than English.
- Use of French vocabulary and structure.
- Crossing out of the entire answer without providing an alternative.
- Failure to attempt the question.
- Disclosure of identity.

RECOMMENDATIONS

Teachers should:

1. teach the different writing tasks such as talks *articles, formal and informal letters, speeches, reports, debates, minutes of a meeting, etc.*
2. emphasize on the format/layout of the above tasks.
3. teach students to interpret tasks appropriately and assume assigned roles.
4. constantly remind students to avoid disclosing their identity in their answers, e.g. name, school, parentage, telephone numbers, etc.
5. teach learners to use only the stimulus/source material and not their life experiences/knowledge.
6. teach learners to select and present **ALL** relevant material.

7. lay emphasis on aspects of expression, such as correct use of transitional devices (addition, contrast, cause and effect) and sentence structure in general.
8. teach grammar, spelling and punctuation thoroughly.
9. teach learners to strictly respect instructions on paragraph and word limits.
10. drill learners on making plans and crossing them out before writing the final answer.
11. teach learners to write following appropriate tones.
12. teach the proper shapes of letters of the alphabet.
13. remind learners to always read over their work.
14. remind learners not to cross out their work unless they have provided an alternative.

On the whole, constant drills and practice will help learners master Directed Writing tasks better.

SECTION B: COMPOSITION

The topics were varied, relevant and familiar to the candidates and this enabled most of them choose easily. A good number scored above average for **content** and **organization**, below average for **expression**, and below average for **accuracy**. Overall performance for this section was below average. This was as a result of the following:

- inconsistency in the use of tenses.
- lack of appropriate vocabulary to express thoughts effectively.
- thinking in the mother tongue or Pidgin English or French and translating such into English, thereby imposing the syntax of these languages on the English Language.
- writing on more than one topic.
- attempting all the questions rather than one.
- writing two compositions on the same topic and forgetting to cancel one.
- copying the instructions and/or topics repeatedly.
- writing unintelligibly in a language that is not English.
- segmenting topics under the marking rubrics instead of writing continuously, e.g. paragraph 1: Content; paragraph 2: Accuracy; paragraph 3: Expression.
- listing ideas instead of writing in continuous prose.
- Illustrative diagrams.
- copying portions of/or the entire Directed Writing text as their compositions.
- writing out of topic / pre-prepared composition.
- not attempting the section at all.
- revelation of identity.
- writing and crossing out the entire work.
- writing short and /or unnecessarily long and irrelevant compositions.
- poor paragraphing:
 - writing the whole essay in one paragraph
 - lack of knowledge paragraph unity
 - use of obscene language
 - writing the entire paragraph in a single sentence

Generally, most candidates showed poor mastery of writing skills.

TOPIC BY TOPIC ANALYSIS

Topic A: Tell a story that ends with, ‘...I wish I had listened to the advice of my teachers and parents.’

This was the most popular topic. Content and organization was average. However, a few candidates failed because they failed to respect the scope of the topic, that is, failure to heed to the advice of their teachers and parents and the consequences of their actions.

- candidates did not understand the scope of the topic, which is stating the problem, the nature and the negative effects of the intervention.
- some did not end as instructed.
- some concentrated more on the poor behaviour leaving out the advice.
- some used obscene language.
- some wrote compositions that had no bearing with the ending.

Topic B: Describe a famous place you have visited and would like to visit again.

It was not a popular topic. A few who attempted performed below average.

- candidates failed to describe and dwelled on narration.
- many candidates wrote about many places rather than one.

Topic C: Your relative or friend who lives in the village has dropped out of school. Write a letter to him/her bringing out the importance of education to one's life and convincing him/her to go back to school. Your name is Dada Vita, P.O Box 1146 Dimba and your relative's or friend's name is Emblem Dibo.

It was a popular topic. Performance was average. Nevertheless, candidates performed poorly for the following reasons:

- failure to sufficiently convince the friend or relative to go back to school.

respect the scope of the composition, that is, the candidates' inability to adequately bring out news about themselves, their families and their towns.

- non mastery of the format for an informal letter.
- failure to use the given address and names.

Topic D: Madness.

The topic was not popular. The few who attempted performed averagely. However, some did not perform well because;

- they did not delimit the scope of the topic.
- they presented sketchy/underdeveloped essays.

Topic E: Electricity has just been installed in your locality. How has this affected life in your area?

It was not a popular topic. The few who attempted performed poorly because they focused only on the advantages of electricity and failed to link it to their locality.

- some candidates did not give a picture of life before and after the installation of electricity.

Topic F: The teaching of mother tongue in schools is necessary. Do you agree?

This was not a popular topic. Performance was poor because:

- the right approach for argumentative essays was not respected, that is, acknowledging the opposing view, refuting it, raising arguments for the motion and developing them to a logical end.
- some candidates wrote on the advantages and disadvantages of mother tongue.
- many wrote a one sided argument.
- a few did not know the meaning of mother tongue.
- a few tabulated their work.
- a few focused on the use of mother rather than the teaching of mother tongue in school.

Topic G: Tell a story to illustrate the proverb: Action speaks louder than words.

It was not a popular topic. Performance was below average because candidates could not interpret the proverb correctly. That is, it is more effective to act directly than to speak of actions.

Topic H: Write a story, a description or other form of composition suggested by one of the following pictures. Your composition may be directly about the subject of the picture or take some central suggestion(s) from it. There must be a clear connection between the picture and your composition.

Pictures A and B

They were not popular. Those who attempted, performed averagely. nevertheless, a few performed poorly because;

- their compositions had no link with the pictures.
- a few candidates simply described the pictures thus rendering their essays sketchy.
- a hand full wrote on both pictures.
- a few reproduced the picture as their compositions.

OBSERVATIONS

Most candidates did not show mastery of grammar (the correct use of tenses, subject/verb agreement etc), mechanics (punctuation, spelling, capitalization) and expression (vocabulary and sentence structure).

Many words were misused and wrongly spelt. Some examples are

- | | |
|---|--|
| <ul style="list-style-type: none">- Wrongly expressed- See television for watch television- 8 am in the morning for 8 am- In the following paragraph below- end a living for earn a living- still yet for yet/still- me and my mother for my mother and I- moving under the rain for in the rain- was going in the abroad for travelling abroad- Frustrate for frustrate- Off lights for turn/switch/put off- Write a test/exam for sit for/take an exam- Writing equipment for writing material- Recompense for reward- Pass time for spend time- Married for marriage- Call my mother's number for call my mother- Turn to for tend to- Leave for live- Doing copy work for cheating- Orphant for orphan- Legs for foot- Pregnant for impregnate- Rooming for roaming- Stilling for stealing | <ul style="list-style-type: none">- Always for all ways- Harrasment for harassment- Drive for send away- If in case for in case- Wrongly spelt- Berial for burial- Perent for parent- Expecially for especially- Elicpter for helicopter- Honger for hunger- Kwater for quarter- Nebo for neighbour- Fada for father- Early for earlu- Untill for until- Soposed for supposed- They for there- Wish crafty for witchcraft- Querel for quarel- Cryme for crime- Juvinile for juvenile- Atsleep for asleep- Right for write- Lock for luck- Hole for whole- Smooking for smoking- Thieving for stealing |
|---|--|

- Truly for truly
- Greatful for grateful
- Attain for attend
- Practice for practise
- Thought for taught
- No for know
- New for knew
- Faithful for fateful
- Being for been
- Classmade for classmate
- Were for where
- Writting for writing
- Cut for caught
- Went for when
- Bit for beat
- Now our days for nowadays
- Each other for themselves
- Earn for end
- Fine for find
- Morestill/nextly/moresover/moreso
for moreover et
- Most best for best
- Chosed for chose
- Carry water for draw water
- School belongings for school needs
- Smoothing for soothing
- Site for sight
- Site for side
- First mother for step mother
- Off late for recently
- In other for in order
- House choice for house chores
- Resume back for resume
- Bitting for beating etc
- Gentlement for gentlemen

RECOMMENDATIONS

- Learners should be encouraged to speak English and to avoid pidgin as much as possible.
- Teachers should constantly remind their students to avoid writing their names and schools in their answers.
- Teachers should encourage extensive reading.
- Learners should be drilled on all forms of compositions. Particular attention should be paid to the argumentative, picture, process, proverb and the open-ended compositions.
- Handwriting should be taught.
- Drills on planning compositions should be encouraged.
- Paragraph development should be taught, especially the proper use of linking devices, topic sentences, facts, details, examples, explanations, illustrations etc.
- Paragraph types (indented and block) should be taught and students advised to be consistent. Emphasis should be laid on the indented type for manual writing.
- Learners should study English language as a subject and not just as a language of communication.
- Teachers should do more drills to improve on learners' writing skills.
- Teachers should teach traditional grammar which will help in competence and performance.
- Learners should be encouraged to possess and use textbooks, dictionaries and other reference material.
- Learners should be taught to always cross out their plans.
- Emphasis should be laid on spelling, punctuation and correct usage
- Teachers should be taught on the importance to respect instructions on both questions
- Learners should be encouraged to follow instructions respect the word limit for Directed Writing in 150 words and composition (450-500 words).
- Teachers should constantly mark and do remedial work for Directed Writing and Composition.

Overall appraisal

Performance in this paper was slightly below average.

0535 – LITERATURE IN ENGLISH

1. INTRODUCTION

This subject being a transitional year, tested the OLD AND NEW SYLLABUSES. The aims and the objectives of the syllabuses were reflected in the questions as follows:

Knowledge 60%

Comprehension 30%

Application 10%

The paper was thus about the same level as compared to that of last year. The style of questions setting was the same as the previous years. There was a 50/50% weighting of questions in each of the FOUR SECTIONS A, B, C and D. – old and New Syllabuses. There was equally a balance in the allocation of marks. However, it was observed that comparatively the Old Syllabus was more demanding than the New Syllabus. The reasons advanced were that in some schools the old syllabus was not taught and students were abandoned on their own especially those who were repeating. In fact, those who were repeating took things for granted that they had treated the books and only opened their texts at the dawn of the examination.

The New Syllabus was more popular than the Old because many schools focused on the teaching of the new syllabus. Also, being the first time of testing this syllabus, questions were tested mostly at the beginning of the texts especially *Macbeth* by William Shakespeare. Therefore, many candidates performed better in the new syllabus with scores of 91%, 83%, 81%, 79%, and 77% respectively.

The overall performance of the candidates is **MEDIOCRE** as seen in the grade boundaries below.

SCORE	0-20	21-30	31-39	40	41	42	43-60	61-74	75+
CANDIDATES	7725	6413	4656	1753	1385	1173	7941	1481	221
PERCENTAGE	22.96	19.22	13.84	05.21	04.11	03.48	23.61	04.40	0.65

The scores for this year read 36.27%, a slight drop in performance as compared to the previous year of 36.93%. For Paper 1 we did not mark and therefore we could not give the performance rate.

2. PAPER BY PAPER ANALYSIS

PAPER 1: There were 50 MCQs for candidates to answer all. Paper 1 was marked electronically. The structure remained the same for both the old and new syllabuses.

PAPER 2: Most candidates (about 90%) attempted all questions from SECTIONS A, B, C and D. This was an indicator that most schools attempted to treat the entire syllabus. The structure of the paper did not change as eight (8) questions were tested each for both the old and new syllabuses following the rubrics of the examination.

3. QUESTION BY QUESTION ANALYSIS.

PART ONE- OLD SYLLABUS

SECTION A: DRAMA: WILLIAM SHAKESPEARE: AS YOU LIKE IT

QUESTION 1

The question was more popular and about 75% of the candidates attempted to answer the question. It was popular because the theme of love was more appealing to the candidates. The performance rate was about 60% and candidates had no difficulties in answering the question.

QUESTION 2

In question 2, 25% of the candidates attempted the question and the performance rate was about 40%. Candidates had difficulties of answering this question because the theme of rescue was not interesting as compared to theme of love in question 1.

SECTION B: AFRICAN LITERATURE: TAH PROTUS: THE IMMORTAL SEED

QUESTION 3

The question was very popular and it was rated at about 80%. The candidates' performance was excellent as it was rated at about 90%. The question was straightforward as it tested the main character of the novel - Assi (that is character traits and role played).

QUESTION 4

It was unpopular, and about 20% of the candidates answered the question. The performance was very poor and was rated at about 10%. The specific difficulties were encountered in the candidates' inability to give a detailed account of the encounter between Fon Jiggang and Tebene at the River Juajua. The candidates could not determine where the account started and ended.

SECTION C: CAMEROON ANTHOLOGY OF POETRY: BOLE BUTAKE

QUESTIONS 5 and 6

About 80% of the candidates answered the questions 5 and about 20% answered question 6. The performance rate for question 5 stood at about 60% while question 6 was scored at about 40%. The difficulty faced in question 6 was that the poem was lengthy with many characters. Equally, candidates rather brought in their own experiences, which was irrelevant.

SECTION D: PROSE: GEORGE ELIOT: SILAS MARNER

QUESTIONS 7 and 8

About 75% of the candidates attempted questions 7 and about 25% attempted question 8. The panel concluded that Question 7 attracted the candidates because it had to do with a popular and likeable character, while in Question 8, the candidates were not comfortable with the testing of style and themes.

PART TWO - NEW SYLLABUS

SECTION A: DRAMA: WILLIAM SHAKESPEARE: MACBETH

QUESTIONS 1 and 2

Question 1 was popular as about 80% of the candidates attempted to answer the question. The performance rate was about 60%. The popularity and performance rates were high because the extract came from the early part of the text *Macbeth*. Question 2's popularity rate stood at about 20% while the performance rate was about 40%. The difficulties encountered were based on Questions 1e and 2e. In questions 1e and 2e there was a mixed up. Candidates talked about three witches in question 1e whereas this was the answer for question 2e. The same goes with question 2e, which the candidates wrote more about war, which was meant for question 1e.

SECTION B: AFRICAN LITERATURE: LINUS T. ASONG: THE CROWN OF THORNS

QUESTIONS 3 and 4

Question 4 was more popular and its popularity rate stood at about 85%, while performance rate was 80%. The reason for the high performance rate was that the question was set on one of main characters in the novel – The D.O.

Question 3 was unpopular. Its rate of unpopularity stood at about 15% while performance rate was about 20%. The candidates found it difficult to pick out instances of disagreements between Chief Nchindia and the council of elders.

SECTION C: MODERN ANTHOLOGY OF POETRY: HANS BOKWE ITOE

QUESTIONS 5 and 6

Question 5 was more popular with about 80% of the candidates attempting to answer the question. The performance rate stood at 70%. The reason for this success and popularity rates was that the poem was familiar as well as the theme.

Question 6 was unpopular with about 20% of the candidates answering it. The performance rate stood at about 30%. The poor performance and popularity rates came from the fact that the candidates were unable to give a detailed account of the poem, "I am an African Child." Instead they focused their attention on accounting for their personal experiences about the continent.

SECTION D: PROSE: WILLIAM GOLDING: LORD OF THE FLIES

QUESTIONS 7 and 8

About 80% of the candidates attempted questions 7 while about 20% attempted question 8. The performance rates for question 7 and 8 were rated at 70 and 30% respectively. The only difficulty in question 8 was that the candidates could not bring out how the difficulties encountered by the boys in the island were surmounted.

4. SUGGESTIONS/RECOMMENDATIONS

The following recommendations were made to:

a) The Students

They Should

- own individual copies of the original texts and read them.
- avoid watching Literature videos on the texts.
- attend classes regularly and do assignments.

b) The Teachers:

They should

- buy the original texts and read them at home.
- teach all the texts and come to the marking Centres with their texts.
- be enthusiastic to teach.
- organize and attend seminars and hold conferences in their various schools for those who are examiners.
- focus their teaching on contextual analysis and forget about the backgrounds of authors.

c) The Parents

They should

- provide textbooks for their children.
- Pay fees on time.
- the use of mobile phones should be controlled for their children.
- parents should accept responsibilities in case of divorce or broken homes.

d) The State

That the State should

- follow up teachers in the field in order to ensure quality teaching.
- make available enough subventions to the Confessional, Lay and Private schools to ensure qualitative and quantitative teaching.
- revised their policy on promotion of students to the next class.
- continue to ensure that peace and unity reigns in our schools.

5. CONCLUSION/WAY FORWARD

In recognition of the efforts and sacrifices of the state and the GCE Board in facilitating the teaching-learning process, we suggest that the number of days of marking should be increased as well as per session invigilation dues. This will go a long way to enhancing real quality evaluation.

0540 – FOOD AND NUTRITION

1- INTRODUCTION

The structure and format of the examination was the same as that of 2022

Paper 1 was composed of 50 MCQS.

Paper 2 had six questions and candidates were instructed to answer only four questions out of six.

Paper 3 had two compulsory questions testing purely the practical aspect of food and nutrition.

This report will be based mostly on paper 2 and 3 because Paper 1 was score electronically.

2.1 Paper 1 was about the same strength as that of 2022. It was made up of 50 MCQs.

The following table of specification (TOS) is the test blueprint for paper 2.

No	Topic	Knowledge	Comprehension	Application	Analysis	Level of difficulty
1	3.5, 4.2, 3.3, 11.3, 11.4	a, b, d	c, e	-	-	*
2	4.4, 3.3, 11.3, 3.3, 11.1	d	a, b	C	-	**
3	10.4, 10.4, 1.1, 8.1, 3.3, 1.1	a, c, d	b	-	-	*
4	10.5, 10.2, 1.2, 2.2, 3.3	C(i)	a, c (ii), d	-	C(ii)	***
5	5.1, 5.1, 5.2, 3.2, 6.1	a, b	c, d	-	-	*
6	10.1, 8.3, 10.4, 10.3	c	a, b, d	-	-	**

GENERAL REMARK:

From the TOS we can conclude that this exam was within the reach of an average candidate.

- The 50 MCQ test items were drawn from the entire evaluation syllabus.
- The test items covered all four aims of the evaluation syllabus.
- The test items covered the four assessment objectives: knowledge 30%, comprehension 40%, application 20% and analysis 10%. Based on the table of specification (TOS), one can conclude that a candidate with basic knowledge and understanding of Food and Nutrition could make an average pass in this paper.

2.2- Paper 2 analysis

Paper 2 had about the same level of difficulty as that of 2022.

The questions were testing knowledge, comprehension, application and analysis.

The paper covered about 96% of the evaluation syllabus.

2.3- Paper 3 analysis

Paper 3 had about the same level of difficulty as that of 2022. It was made up of two compulsory questions. The paper was testing psychomotor skills through hands-on activities. Therefore, candidates who had mere knowledge and understanding of the principles involve was not enough to score a good grade.

The following TOS is the test blue print for paper 3.

Topic	Knowledge	Comprehension	Application	Analysis	Level of difficulty
1	√	√	√	√	10
2	√	√	√	√	10

From the TOS, we can conclude that this paper was testing psychomotor skills through hands-on activities therefore 80% will score above average.

2- Question by question analysis

This analysis is based on paper 2 and 3.

Paper 2

Question 1

The question was testing the study of foods, food choices, food preparation and presentation. Most candidates attempted this question. This was the question with the best performance.

Suggestions: Teachers should emphasize to learners the need to study foods, principles of food preparation and presentation.

Question 2

This question was testing the knowledge and principles of Food and Nutrition production and processing of foods. Most candidates showed lack of mastery to this question.

Suggestions: Teachers should teach all the topics in the syllabus.

Question 3

This question was testing principles involved in kitchen safety's aims and principles of preserving and processing foods. This question was popular and therefore the performance was good. Suggestion: Teachers should have laid emphasis for the need to avoid kitchen accidents.

Questions 4

This question tested knowledge and application on the concept of entertaining. It also tested the principles of choosing a refrigerator, reasons for cooking food. This was the least attempted question. Suggestions: Teachers should lay more emphasis on these topics.

Question 5

This question was testing the digestion of food, hygiene and food safety. Most candidates attempted this question. The performance was good. Suggestions: Teachers should emphasize to the learners the importance of digestion and personal hygiene rules to follow when preparing food. Most candidates attempted this question. Therefore, had a mastery of the question.

Question 6

This question was testing the knowledge and principles of kitchen equipment. It was also testing the aims and principles of preservation of food. Candidates also had a mastery of the question. Suggestions: Teachers should follow-up the learners and lay more emphasis.

3- Paper 3

Question 1 & 2 were testing the psychomotor skill through hands on activities. The performances of candidates on this paper was good.

Suggestions: Teachers should intensify the practical work in the laboratory so as to improve the candidate's skills.

4- Suggestion/recommendations

Students are advised on:

- Take more interest in group work.
- Use modern technology in learning.
- Relate what they learn in class to their immediate society.

Teachers are encouraged to:

- Arouse students' interest in practical work.
- Attend pedagogic seminars
- Use appropriate media in teaching
- Use modern technology in learning.
- Principals and school proprietors are encouraging to:
- Facilitate and ensure that teachers attend pedagogic seminars in Food and Nutrition.
- Provide funds for practicals

5- **CONCLUSION**

To conclude, the subject panel is doing its utmost best to maximize errors to ensure that all examination questions meet the standard and evaluation syllabus.

INTRODUCTION

The 2023 session marked the 14th year of the GCE Board organising examinations on Multiple-Choice Questions (MCQs). Just like in the 13 previous sessions, the French (0545) paper for this year consisted of:

- Paper 1: 50 MCQs. This paper counts for 40% of the examination and comprises of 50 MCQs covering the entire Ordinary Level French syllabus. There were no typographical errors.
- Paper 2: Question 1: Translation.
Question 2: Essay.

For paper 1 the instructions were clearly spelt out and for paper 2, instructions were maintained as before.

The examination covered all the aspects of the current GCE Ordinary Level syllabus thus meeting the expected standards.

Paper 1 was marked electronically.

Similar to past years, many more candidates attempted the two questions in Paper 2; even though a few abysmal performances were still recorded in both the Translation and the Essay. This could be due to the following reasons among others;

1. The fact that many schools have been closed down due to insecurity in the North West and South West Regions.
2. Little mastery of the French Language mainly due to lack of seriousness on the part of the bulk of candidates and even some teachers.
3. An alarming shortage of qualified teachers of French in several schools especially in the semi-urban and rural areas.
4. The obvious lack of interest and enthusiasm in the subject by learners.
5. The lack of textbooks in classrooms which plays against the development of a good reading culture in learners also demotivates teachers thus impacting negatively on the teaching–learning process.
6. The socio-political atmosphere in the country also accounts for some of the absences and low performances registered in the entire paper.

PAPER BY PAPER ANALYSIS

PAPER 1 MCQs

Candidates' scripts were scored by the machines so we have very little to say about the paper.

PAPER 2 TRANSLATION AND ESSAY

Question 1 Translation

The 2023 translation passage was about a lonely widow sitting all alone in her house and feeling dejected. She has been sick with no money to seek medical attention. She lacked every basic need and wished she could die soon.

While in this depressive state, she hears a knock on her door and feels it's an answer to her long quest for death to take her. However, what she sees marks a turning point in her life. Behold, she sees a girl she helped several years back, who is now a doctor and has come to take her to live with her.

The text required the use of the imperfect tense in about five instances, then the past narrative tense. The "passé composé", or "passé simple" was used as the main narrative tense, one sentence requiring the use of the simple present tense, four sentences requiring the use of the pluperfect.

Generally, the candidates had little difficulties in translating the essential vocabulary of the text, such that a good number of them scored more than 70 on 80.

A few candidates jumbled up the tenses using the pluperfect (plus-que parfait) for the imperfect (imparfait); the simple past (passé composé) and the past perfect (passé simple) alternately as the main narrative tense, or mistook the pluperfect (plus- que parfait) for the simple past (passé composé) and vice versa. These were of course penalized accordingly.

Some candidates recopied the text without translating it and some very few paraphrased it to become their essay.

Question 2: Essay

Candidates were expected to write an essay of 140 -150 words on any one of the three free composition topics.

- Topic a) was a narrative/descriptive essay based on fake news spread on social media which caused chaos in school, the reaction of students and school authorities and how the truth was finally established.
- Topic b) was an informal letter to a friend's father about a malaise by the son or daughter on their way to school, how the students reacted and what happened in the hospital.
- Topic c) was picture interpretation based on six pictures about a boy who climbed a tree to harvest fruits or collect birds' eggs and the branch got broken. He falls down and is later rescued by someone and taken back home.

The mark guide for paper two was the same as that of the previous years. Discussions, interactions with examiners have helped the French panel improve on the quality of this document over the years.

The evaluation criteria were proposed as follows:

- La pertinence; which has to do with the comprehension of the topics
(Nature de la rumeur, reaction des camarades et des autorités) had to be appreciated under three specific instructions

1. The questions (Où, quand, quoi, qui) should be answered at this level;

2. The second instruction of the topic (context of the story) the development of the story line had to be presented here: for example, we should be able to see the circumstances surrounding the fake news, how it affected school life and how the truth was finally established.

3. The conclusion of the story with emphasis on his/her own reaction and how it ended.

- La coherence (logique interne des paragraphes, agencement des idées, usage des connecteurs logiques adéquats, progression logique du travail, le point de vue du narrateur,); here we laid emphasis on whether the story flows or not, the use of linking words, the circumstances of the story,

paragraphing, presentation of ideas, does he begin with an introduction and end with a conclusion? Are his ideas presented in a logical manner?

- La correction de la langue (here we evaluate for accuracy, vocabulary and grammatical categories); it has to do with evaluating the syntax and language used.
- L'originalité (personal style (liaison d'une consigne à l'autre), structure of the letter (introduction, conclusion, paragraphing at least 3, expressions of personal feelings) no use of pre-learned material, personal style of the candidate.

Topic	Nature	Main tenses	Errors	Corrections	Relevant vocabulary
b.	Informal letter involving celebration	Indicative présent -passé composé or passé simple -future tense (simple)			

Sujets d'évaluation	Session 2021	Session 2022	Session 2023
	Essay	Essay	Essay
a and b	Sujets a et b; simple narration + la lettre	Sujets a et b; simple narration + la lettre	Sujets a et b; simple narration + la lettre
	Consignes ; clairement définies. Conséquences ; les récits se présentent de façon cohérente ayant des idées pertinentes	Consignes ; clairement définies. Conséquences ; les récits se présentent de façon cohérente ayant des idées pertinentes	Consignes ; clairement définies. Conséquences ; les récits se présentent de façon cohérente ayant des idées pertinentes
c	Sujet c : les images : Présentation : photos floues ; pas faciles à interpréter. Consignes : clairement définies ; guidant le candidat dans sa production écrite. Module 1 : vie familiale et intégration sociale	Sujet c : Photos claires et facile à interpréter Module 5 : TIC	Sujet c : Photos claires et facile à interpréter Module 2 : Santé et environnement

Méthode d'évaluation	Essay : -respecte l'approche par compétence ; -évaluation respectant les critères bien définis ; - respecte un barème critérié tenant compte de la pertinence ; de la cohérence ; des idées et du lexique et surtout de l'originalité du candidat	Essay : -respecte l'approche par compétence ; -évaluation respectant les critères bien définis ; - respecte un barème critérié tenant compte de la pertinence ; de la cohérence ; des idées et du lexique et surtout de l'originalité du candidat	Essay : -respecte l'approche par compétence ; -évaluation respectant les critères bien définis ; - respecte un barème critérié tenant compte de la pertinence ; de la cohérence ; des idées et du lexique et surtout de l'originalité du candidat
	Traduction - recherche des mots ou expressions équivalents ; de tous les éléments grammaticaux de la langue source à la langue cible.	Traduction - recherche des mots ou expressions équivalents ; de tous les éléments grammaticaux de la langue source à la langue cible.	Traduction - recherche des mots ou expressions équivalents ; de tous les éléments grammaticaux de la langue source à la langue cible.
	Correction Pendant cet exercice ; le correcteur affûté : - est guidé par des consignes ; - relève le niveau d'expression du candidat et propose des éléments acceptables dans le barème ; -perçoit sans trop d'efforts la cohérence et la pertinence des idées du candidat ; relève les difficultés que présentent les sujets pour une éventuelle recherche des solutions ; - peut dès lors facilement attribuer une note peu discutable d'une copie	Correction Pendant cet exercice ; le correcteur affûté : - est guidé par des consignes ; - relève le niveau d'expression du candidat et propose des éléments acceptables dans le barème ; -perçoit sans trop d'efforts la cohérence et la pertinence des idées du candidat ; relève les difficultés que présentent les sujets pour une éventuelle recherche des solutions ; - peut dès lors facilement attribuer une note peu discutable d'une copie	Correction Pendant cet exercice ; le correcteur affûté : - est guidé par des consignes ; - relève le niveau d'expression du candidat et propose des éléments acceptables dans le barème ; -perçoit sans trop d'efforts la cohérence et la pertinence des idées du candidat ; relève les difficultés que présentent les sujets pour une éventuelle recherche des solutions ; - peut dès lors facilement attribuer une note peu discutable d'une copie
	Résultats -très peu de copie ayant la note de zéro et/ou le charabia ; -la tendance d'une meilleure performance est envisagée	Résultats -très peu de copie ayant la note de zéro et/ou le charabia ; -la tendance d'une meilleure performance est envisagée.	Résultats -très peu de copie ayant la note de zéro et/ou le charabia ; -la tendance d'une meilleure performance est envisagée.

RECOMMANDATIONS/SUGGESTIONS

-Maintenir cette méthode de correction qui encouragerait beaucoup d'élèves à ne plus considérer le French comme leur bête noire.

- In essay, 1pt per box was maintained for correct grammatical and lexical use;
- 1pt maximum for each correct finite verb instead of 2pts as it had been in the past.
- La cohérence (logique interne des paragraphes, agencement des idées, usage des connecteurs logiques adéquats, progression logique du travail, le point de vue du narrateur) ; here we lay emphasis on whether the story flows or not, the use of linking words, the circumstances of the story, paragraphing, presentation of ideas, does he begin with an introduction and ends with a conclusion ? Are his ideas presented in a logical manner?
- La correction de la langue (here we evaluate for accuracy, vocabulary and grammatical categories); it has to do with evaluating the syntax and language use.
- L'originalité (personal style (liaison d'une consigne à l'autre), structure of the letter (introduction, conclusion, paragraphing at least 3, expressions of personal feelings) no use of pre-learned material, personal style of the candidate.) The table above is a summary of all the above-mentioned elements as considered per question:

SHORTCOMINGS OBSERVED IN THE CANDIDATES' WORK

Topic a) The past tenses were accepted as the main narrative tenses, but some candidates went ahead to use the simple present tense.

The topic was very appropriate and current because candidates are used to news circulation on social media. The topic obeyed the CBA rules of questioning with three specific instructions given to candidates even though some of them did not take the pain to read and understand the question before writing on it.

For topic b) The past tenses were accepted as the main narrative tenses. Some candidates used the present tense; others began with "passé compose" then switched to "passé simple" without transition. It should be noted that "passé simple" is not accepted in letter writing. This was sanctioned with a -2T penalty and some others began the essay as if it was a letter, candidates, who did so, were sanctioned with a -4m penalty. Many candidates disclosed their identity instead of using the address given thereby attracting a -4D penalty.

Topic c; The first instruction required candidates to draw inspiration from the images and describe the boys intention using the passé composé. For the second and the third instructions, any suitable tense was required here. There was therefore a mixture of tenses attracting penalties where necessary.

- Some candidates began topic a) especially as a letter
- Some candidates spent time recopying the topics,
- Some wrote their essays in English instead,
- Some mixed up both English and French,
- Some others wrote trash while others did not even attempt the essay at all.

On the other hand, there was equally a greater number of excellent candidates who scored 70/80 and above than in the past years. Notwithstanding the above-mentioned shortcomings, the performance of candidates was much better than in the previous years.

SUGGESTIONS/RECOMMENDATIONS

1. This evaluation pattern “évaluation critériée” should be maintained for the subsequent marking of the Ordinary Level GCE and other official examinations.
2. Lead Examiners, Assistant Chief Examiners and Chief Examiners agreed to take more time to explain to Examiners and Assistant Examiners the idea of « pertinence » and « cohérence » such that marking will be much easier for next sessions.
3. Students should get interested in the study of French Language, and acquire recommended text books;
4. French teachers should acquaint themselves with modern teaching and evaluation methods, especially the CBA;
5. Teachers should get their students acquainted with Essay Writing and Translation through regular drilling exercises and prompt corrections;
6. French teachers should refrain from giving their students model essays in class, as some candidates are tempted to memorize material and later reproduce it regardless of the topic proposed;
7. Teachers should endeavour to cover at least 80% of the syllabus;
8. There is a dire need to train more bilingual teachers and post them to areas in need;
9. School authorities should make extra efforts at ensuring that schools have libraries and that the French shelves in such libraries are well stocked;
10. Candidates who perform well in the subject need to be motivated with prizes, if not at certificate level, at least at the level of the various schools;
11. All stakeholders should put their hands-on deck to see to it that the present socio-political unrest which has seriously affected the school system comes to an end.
12. Certificates of new examiners should be properly verified to ensure that they are actually bilingual teachers before selection.

CONCLUSION

Given that candidates keep treating French with so much indifference, it will be helpful to further water down the level of language in the exercises so that they can be better motivated to learn and thereby perform better. Also, the recommendations made at the end of each examination session should be seriously taken into consideration by all authorities in the academic chain and the powers that be. Grammar textbooks should be such that all students can read at home and understand with ease.

0546 – SPECIAL BILINGUAL EDUCATION FRENCH

PRESENTATION OF THE SUBJECT

The Special Bilingual Education French (SBEF) 0546 is made up of three components: Intensive French, Education à La Citoyenneté et à la Morale (ECM) and Education Physique et Sportive (EPS).

The subject is made up of three papers:

PAPER		WEIGHTING
Paper 1	50 Multiple Choice Questions (20 for Intensive French; 15 for ECM and 15 for EPS)	25%
Paper 2	-Intensive French (Translation or Essay)=50% -E.C.M (Citizenship in French)=25% -E.P.S (P.E in French)=25%	50%
Paper 3	Oral Communication	25%

0546 Special Bilingual Education French was administered for the first time in Cameroon during the 2014 O/L examination session. The June 2023 Session which is the 10th, started on Tuesday the 9th May 2023 with Paper III, Oral Communication.

JUNE 2023 SESSION'S QUESTIONS

Paper 1, 50 Multiple Choice Questions were in three sections:

Section 1: Intensive French 20 questions French Language and Literature,

Section 2: ECM 15 Citizenship questions in French,

Section 3: EPS 15 questions on Physical Education in French.

Paper II respected the structure mentioned above, as follows:

- ❖ Question 1, Intensive French required that candidates should write an essay in French on either topic a, b, or c in at least 200 and at most 210 words.
The topics were on:
 - (a) *the importance of hygiene and sanitation*;
 - (b) a letter, on the importance of a healthy diet, to a sick brother living in the village,
 - (c) the importance of agriculture for the development of a country,45% of candidates chose Topic (a), 35% topic(b) and 20% topic(c). Five candidates were unable to write the essay in French.
- ❖ Question 2, ECM also required that candidates should make a choice between the two proposed sections:

Section 1: Essay type question on the various Powers in a State.

Section 2: had 7 structural questions on Citizenship, Cameroon history, and Economics. Most candidates, 95% went in for the section 2; this is because it covers a variety of lessons, unlike Section 1 which had just one point.

- ❖ Question 3 EPS was made up of 20 compulsory structural questions on athletics and gymnastic. 90% of the candidates attempted all the 20 questions while 10% attempted less than 10 questions out of 20.

About 15 candidates could not attempt this section; the general success rate for this section can be evaluated at 55%; most of those who failed did not read the instruction well to see that they were expected to answer with complete sentences in French, thus making them to loose marks for language.

Quality of Questions

The quality of the questions was good as they had no typographical and spelling errors, and no errors in printing that could affect the performance of candidates. There were no defects in the rubrics and no consequent effects in candidates' performance resulting from interpretation, ambiguity and misunderstanding.

The TOS (topics, the aims, the objectives, the level of difficulties and the number of questions) was respected in Papers I, II, III.

CANDIDATES' PERFORMANCE

For the June 2023 session, 1296 candidates sat for Special Bilingual Education French; we had the following performance in terms of percentage, for Paper II and Paper III:

Paper/ Section		PERCENTAGE					
		Highest Mark		PASSED		FAILED	
		2022	2023	2022	2023	2022	2023
Paper II	French Intensive		78/80		78.30%		21.70%
	E.C.M.		37/40		59.76%		40.24%
	E.P.S.		37/40		44.13%		55.87%
	PAPER II (Total)	140/160	143/160	56,71%	63,32%		36.68%
Paper III	Oral Communication		20/20		99.33%		0.66%
Total	Paper II + Paper III		158/180		82,45%		17,55%

PROBLEMS ENCOUNTERED

- ❖ The number of markers for *Intensive French* is not enough, if we really have to meet up with time.
- ❖ For the marks awarded for Paper III, Oral Communication, we noted that some jury were somehow hard while others were lenient.
- ❖ From some of the scripts, we noticed that some candidates don't have all the teachers or the teachers are not so serious
- ❖ In some schools, it seems there is no follow up for the syllabus coverage

RECOMMENDATIONS

- ❖ Four more Examiners for Intensive French should be added.
- ❖ Weighting for Paper III (Oral Communication) should be reviewed to 20% as (practicals at ordinary level); this is to reduce the effect of 'some subjectivity', in the marks awarded in some centres (which we noticed), in the result. -Paper II 50% then -Paper I, 30%.
- ❖ Supervisors for Paper III Oral Communication should come from different schools to ensure, some neutrality and quality assessment of candidates.
- ❖ Teachers should ensure 100% syllabus coverage
- ❖ Only students involved in the Special Bilingual Programme should sit for this subject.

0550 – GEOGRAPHY

INTRODUCTION: Since the syllabus review conference of April 2011 in Limbe; wherein geography was reviewed, the syllabus developed has been tested for the twelfth time. The aims and specific assessment objectives elaborated therein are severally applied in both papers 1 (MCQ) and 2 (essays) as follows:

Knowledge	Comprehension	Application	Analysis
57%	30%	10%	3%

From the table above, the examination represented an effective and acceptable assessment of the learning abilities for the examination. Therefore, it offered adequately the opportunities for candidates to exhaustively demonstrate their competencies as in the geographical knowledge and skills. This notwithstanding, the somewhat obvious disparity between quality and quantity of the performance has been trendy over the years. The maximum Score noted in P2 marked by the examiners was 50.40% as weighted. Table 1 shows a general presentation of the range of marks for the candidates.

Table 1: Mark Range Frequency

RANGE OF MARKS	<33	33	34	35	36 – 49	50 – 60	60+
TOTALS	61,956	1,325	1,288	1,142	7,919	1,657	489
PERCENTAGE	80.39	01.72	01.67	01.48	10.27	02.15	00.63

This is further illustrated in figure 1 and 2.

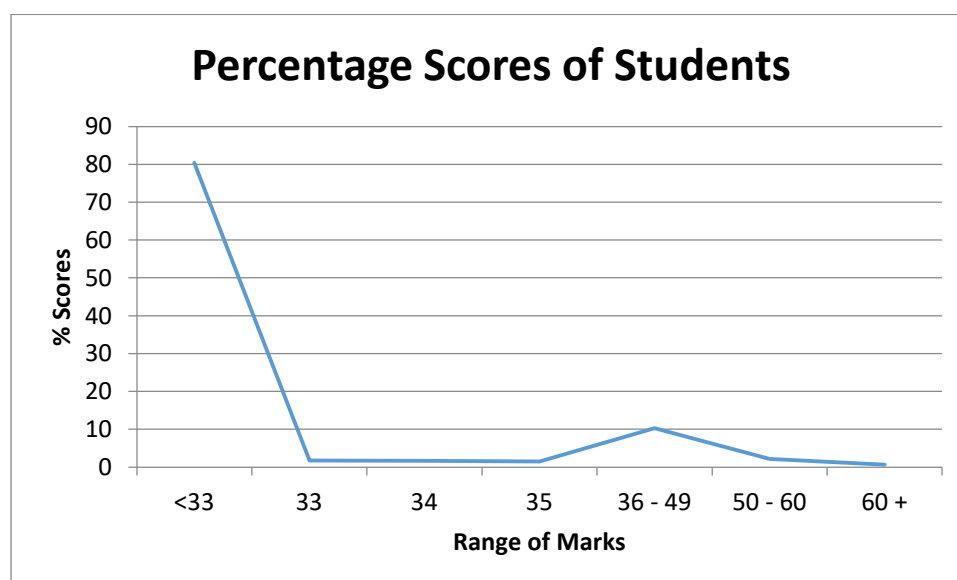


Figure 1: Percentage Scores of Students

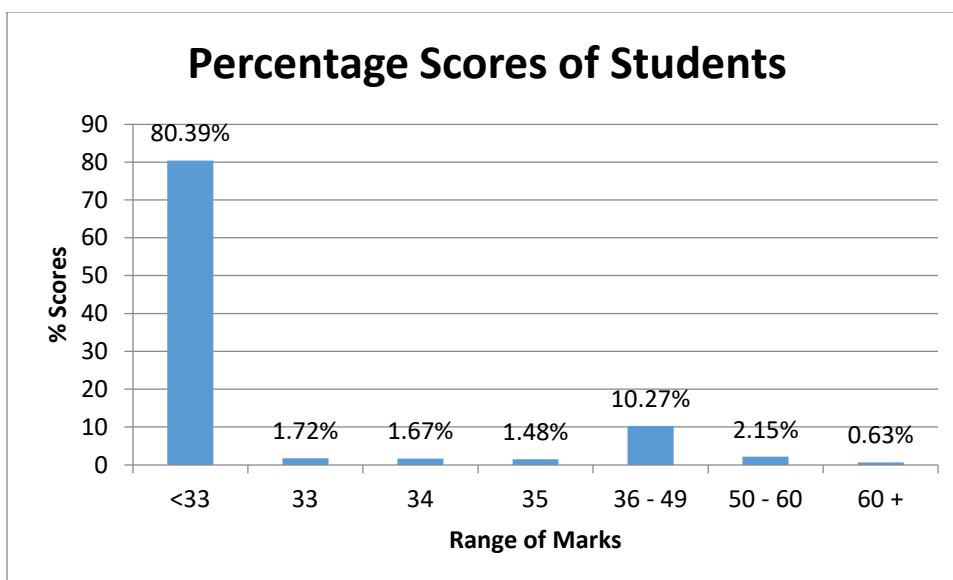


Figure 2: Percentage Range of Marks

Paper 1 was marked electronically. The overall performance was however negatively skewed for the subject as far as this paper was concerned. This trend calls for a syllabus review that will embrace the Competency Base Approach (CBA), currently adopted by the Ministry of Secondary Education. It should be noted that the content may not change much but the method of evaluating the syllabus would adopt the introduction of the CBA effectively.

Paper 1 had 50 MCQs for the candidates to answer all; based on recall of knowledge, comprehension, application and analysis respectively as 66%, 26%, 4% and 4%.

Paper two had seven questions broken up into four sections as specified by the syllabus; out of which the candidates were expected to choose one from each section. Question one (1) was compulsory and broken up into different parts as in the syllabus. In the same vein the rest of the questions in section B, C, and D were equally broken up into different parts to incorporate the aims, and objectives as specified in syllabus as well as ensuring reliability and content validity. This gave us a total of 28 sub parts; this also was to embrace specific skills on the TOS, as the need arises. Some were further broken up into i, ii, and even iii giving a total of 48 for the reasons cited above so that in addition, candidates were given maximum opportunities to exemplify their abilities and learning outcomes.

The cross-curricula demand was factorized in the building up of questions in both papers 1 and 2; including mathematics, humanities, social sciences, life sciences as well as environmental preoccupations.

Table 2. Total number of candidates per question attempted

Question Number	1	2	3	4	5	6	7
No Cand. Attempted	72788	60668	14661	51484	21113	37096	39983
% Attempted (Absolute) Quantum	90.74	75.63	18.28	64.18	26.32	46.24	49.84
% Attempted (Relative)	24.44	20.37	4.92	17.29	7.09	12.46	13.43
Rank	1	2	7	3	6	5	4

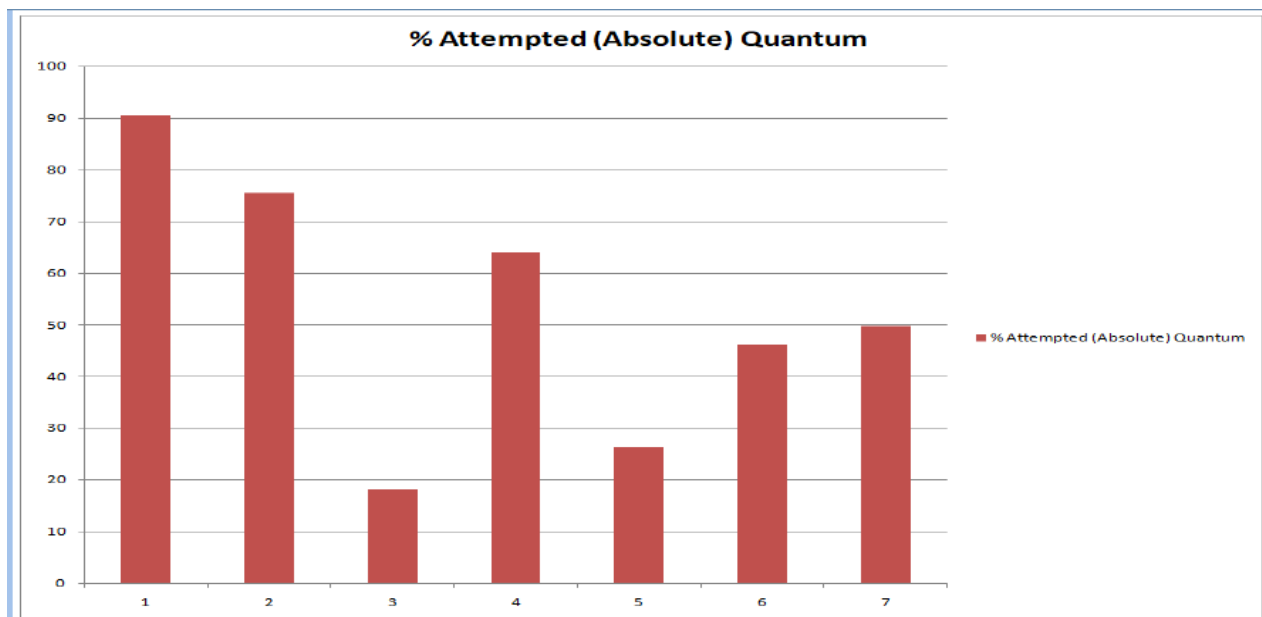


Figure 3. A Column chart of questions attempted in Absolute and Relative terms

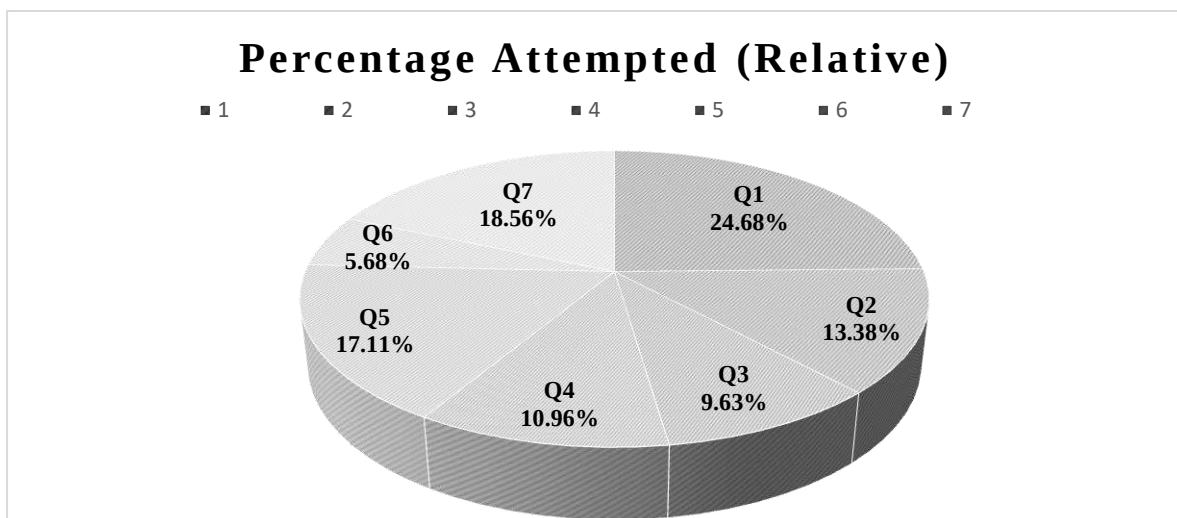


Figure 4. Percentage of questions popularity in relative terms

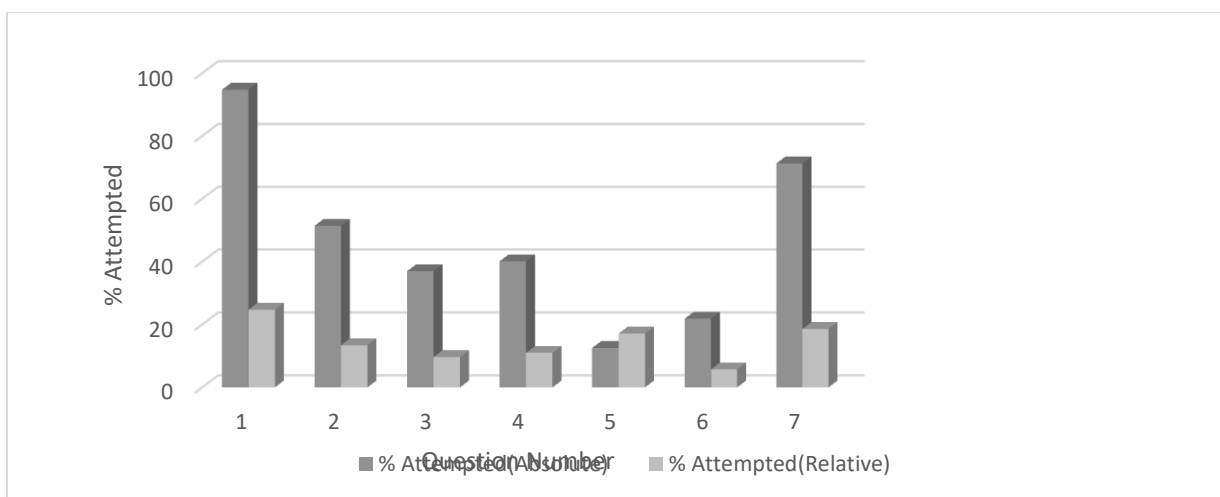


Figure 5: A Comparative Chart on the Attempted Absolute and Relative

From the figures above, it can be noticed that 9.26% of all the Candidates who wrote 0550 Geography did not attempt question 1 which was compulsory. The situation is slightly worse compared to the previous year where it was 5.93%.

In Section B, the disparity in the choice between questions 2 and 3 was largely in favour of question 2. This has been the trend and should be diagnosed. In Section C on Human geography, a similar situation is presented where there is unequal distribution of the questions attempted between 4 and 5. In Section D on Cameroon Geography, the situation between question 6 and 7 shows that both questions were equally popular with question 7 being the 4th most popular question while question 6 was the 5th. This is different from trends of last year where question 7 was very popular in comparative terms.

Q No.	Syllabus Area	Skills Tested	Level of Difficulty	Popularity of Questions	Expectation(s) Tasks	Adequacy in Candidates' Work	Inadequacies in the Work of Candidates	Others	Recommendations
1(a)	Map Interpretation	Application	**	Very popular. About 96% of candidates attempted this question.	Candidates were expected to reduce the map of Barmouth $\frac{1}{2}$ original scale and insert specific geographical feature on the map reduced.	About 70% of the candidates effectively reduced the map and inserted the required feature.	About 30% of the candidates could not effectively apply the skills of reduction while others failed to insert the features effectively.	A few candidates mistook reduction for either copy or enlargement.	Great attention should be given to this subject area or more practical work. There is the need to start the teaching of map work in form four to give more room for practice.
1(b)	Map Reading	Application	**	About 50% of candidates attempted this question.	Candidates were expected to calculate the area between main road A496 and A493.	About 20% of the candidates who attempted this question were able to calculate area and convert the map distance to actual ground distance to score full marks.	80% of the candidates attempted to measure the areas but could not effectively convert the area calculated to know.	Some did not know what to do.	Calculations in map work should be done with greater emphasis on converting map distance(s) to actual ground distances (km).
1(c)	Map Interpretation	Comprehension	**	Not very popular. About 50% attempted this question.	Candidates were expected to describe the relationship between the road and relief.	A few candidates about 15% could bring out the relationship between relief and road to score full marks.	-Most candidates about 85% could not bring out the relationship and treated relief and roads as separate accounts. -A few did not know what to do.	Some talked only on the types of roads.	The teaching of relief should be central in map analysis and its influence on human aspects should be clearly done.
1(cii)	Map Interpretation	Knowledge	*	Not very popular. About 60% of candidates attempted this part of the question.	Candidates were expected to comment on the drainage of the map.	About 20% of those who attempted this part effectively commented on the drainage to score full marks.	About 80% of candidates were unable to bring out aspects of drainage and to come out with the clear description of drainage.	Many simply named the drainage pattern.	Teachers should handle all aspects of map work with the candidates using maps to effectively lead them to describe map features.
1(d)	Map Interpretation	Knowledge	*	Very popular given that about 85% of candidates answered this question.	Candidates were expected to state four functions of the town of Barmouth with map evidence.	About 80% of the candidates who attempted this question were able to state the functions and evidence to score full marks.	About 20% of the candidates stated the functions without the evidence and some few stated evidences without function.	Many indicated land use instead of functions.	In the teaching of functions, emphasis should be on the evidence and possibly the specific location on the map. Clear differences should be given between function and land use.
Q2.									
Very Popular as compared to question 3 in the same section. Attempted by >75.6% of the candidates. All the sub aspects of the question attempted.									
	Mathematical	Compre	*	Very Popular as	Candidates were	About 75% of the	Some of the		

Q No.	Syllabus Area	Skills Tested	Level of Difficulty	Popularity of Questions	Expectation(s) Tasks	Adequacy in Candidates' Work	Inadequacies in the Work of Candidates	Others	Recommendations
2a (i)	Geography	hension		about > 90% attempted this part.	expected to classify information on the movements of the Earth under Rotation and Revolution	candidates were able to classify the information under rotation and revolution of the Earth correctly and earned the maximum score.	candidates about 20% misplaced some of the aspects to be classified under rotation and Revolution.		
(ii)	Mathematical Geography	Applica tion	**	Very popular Attempted by more than 85% of the candidates	Candidates were expected to calculate the Longitude at which Time was 18 h00 when GMT was 15h00	Only about 30 % of the candidates were able to calculate the longitude correctly.	More than 65% were unable to carry out the task. Some subtracted 15hrs from 18hrs and couldn't proceed beyond that. Yet others who went beyond that step failed to indicate that the calculated Longitude was found in the East. Consequently, they couldn't earn the full marks. This could be explained by the fact that this aspect of the syllabus is treated in Form 3 and hardly revised in Form five	This aspect of the syllabus should always be revised in form five with many practical exercises carried out with the students.	
b (i)	Hydrology	Knowle dge	*	Popular About 80% attempted.	Candidates were expected to name two types of Drainage patterns	Only about 40% of the candidates were able to name the drainage patterns correctly.	Some of the candidates rather were naming drainage basins such as the Atlantic basin, Chad basin etc	In the course of teaching/ Learning process, a clear distinction should be made between drainage pattern and drainage basin when teaching this aspect of the syllabus.	
(ii)	Biogeography	Compre	*	Popular	Candidates were	About 65% of the	Some candidates	Candidates	

Q No.	Syllabus Area	Skills Tested	Level of Difficulty	Popularity of Questions	Expectation(s) Tasks	Adequacy in Candidates' Work	Inadequacies in the Work of Candidates	Others	Recommendations
		hension		>60% attempted	asked to give a brief description of the components of the Ecosystem	candidates were able to give the correct description of the components of the ecosystem as expected.	merely dwelt only on the biotic components and wrote unnecessary lengthy essay on producers, consumers and decomposers. This didn't reflect the two marks allocated for the question and thus not time effective.	should be guided on the relationship between marks distribution and the depth of material to be written	
c	Ocean currents	Knowle dge	*	Very unpopular Only about 45% attempted this section.	Candidates were expected to state four effects of ocean currents using examples	Just about 30% could state the effects of ocean currents correctly.	Some candidates were unable to state the effects of ocean currents as expected, less talk of sitting examples. Many were instead giving the effects of strong waves and winds like destruction of properties, rise in ocean water, disruption of fishing activities etc		
d (i)	Environmen- tal Hazards	Compre hension	*	Very popular About 80% attempted	Candidates were expected to explain briefly two causes of water scarcity	More than 70% of the candidates were able to briefly explain the causes of water scarcity as expected.	Some candidates did not know what to write on.		
(ii)	Environmen- tal Hazards	Compre hension	*	Very popular About 79% attempted	Candidates were expected to explain briefly two ways of reducing water scarcity	More than 70% of the candidates could explain correctly ways of reducing water scarcity.	Less than 30% did not know what to do.		
3(ai)	Geomorpholo gy	Compre hension	***	Unpopular	Candidates were expected to classify landforms under erosional and depositional features using a table.	About 80% of candidates who attempted this section were able to classify as expected and learned marks.	-About 15% of candidates could not classify landforms correctly because distinguishing between erosional and depositional features was a problem. -About 5% were just guessing.	Most of the candidates took depositional features for erosional.	-Teachers should endeavour to revise Geomorphology in form five since it is being taught mostly in form three.

Q No.	Syllabus Area	Skills Tested	Level of Difficulty	Popularity of Questions	Expectation(s) Tasks	Adequacy in Candidates' Work	Inadequacies in the Work of Candidates	Others	Recommendations
3(aii)	Geomorphology	Comprehension	**	Unpopular	Candidates were expected to draw a well labelled diagram to show the appearance of an erosional feature from (ai)	About 50% of the candidates who attempted this section could draw and label rock pedestals and waterfalls correctly.	-60% of the candidates who attempted this section drew very poor and unlabelled diagrams. -About 5% drew depositional features instead of erosional features.		Teachers should draw simple diagrams of landforms on the board.
3(bi)	Major Biomes of the World	Knowledge		Unpopular	Candidates were expected to locate and name four biomes of the world.	About 3% could locate and name the biomes correctly.	-About 50% those who attempted this section could locate the biomes correctly but could not name them. -Some were instead giving equatorial forest in the place of savanna.		Students should revise work done in form three and form four and consult their teachers for clarification.
3(bii)	Major Biomes of the World	Comprehension	*	Unpopular	Candidates were expected to state three characteristics of the savanna vegetation.	Less than 5% could correctly state the characteristics of the savanna vegetation.	-More than 60% could not state the characteristics of the savanna. -They were instead stating characteristics of the equatorial forest and were marked down.		
3(ci & cii)	Denudational Processes	Comprehension	*	Unpopular	Candidates were expected to describe two processes of physical and chemical weathering.	About 10% of the candidates could state correctly the processes of chemical and physical weathering, for example, Temperature change.	-About 20% could state the processes but gave very poor descriptions. -About 30% of candidates who attempted this section were giving mostly definitions of physical and chemical weathering.		Teachers should clearly distinguish between definitions, and processes when teaching weathering.

Question 4: 64.19% of the Total Candidates attempted this question. Question 4 was popular than question 5 in the same section excluding Cameroon

Q No.	Syllabus Area	Skills Tested	Level of Difficulty	Popularity of Questions	Expectation(s) Tasks	Adequacy in Candidates' Work	Inadequacies in the Work of Candidates	Others	Recommendations
4(a)	Agriculture V.T.T.Y.	Knowledge	*	-Popular -Over 64% of the candidates attempted this question.	Candidates were expected to state two assumptions of Von Thunen's Model.	45% of candidates gave the assumptions correctly.	-Most candidates couldn't give the assumptions. -35% mistook assumptions for conclusions.	A distinction be made between assumptions and conclusions.	Basic notions of models and theories be emphasised during teaching.
4(b)	Agriculture "Problem of Agriculture"	Comprehension	*	-Highly Popular. -Attempted by about 65% of candidates.	-Candidates were expected to describe Agricultural Problems on the environment.	-Candidates who attempted the question gave good facts and had maximum marks.	A few candidates got mixed up and gave problems of Agriculture.	Objectives of the question were met.	Emphasis should be laid on the impacts of Agriculture.
4(c)	Concept of Development	Knowledge	*	Popular. About 60% of the candidates attempted.	-Expected to outline strategies used by N.I. Cs for Emergence.	Over 60% of candidates could state the strategies.	A few candidates gave points that were not considered.	Area of the syllabus is topical and contemporary.	Encouraging teachers to revise this aspect in form five.
4(di)	Resource Management and Development	Knowledge	*	Not too popular.	Candidates were expected to name 3 M.R.D.P in the world.	About 30% of the candidates got it right.	-About 10% of the candidates stated imaginary projects that do not exist. -30% of candidates took examples from Cameroon instead of other countries.	Most examiners had to go extra mile to google some of the stated projects before marking.	The teaching and learning process should be specific when treating the examples.
4(dii)	Resource Management and Development	Knowledge	*	Popular but poorly attempted.	Candidates were expected to state the aims or objectives of M.R.D.P.	<30% of those who attempted gave the correct aims or reasons.	-Most did not name any M.R.D.P before giving reasons why it was carried out.	4(dii) was linked/tied to 4(di)	Teachers should make it clear to the students how such questions are structured.
4(e)	Tourism	Knowledge	*	-Very popular. -More than 75% of candidates attempted this question.	Expected to give the importance of Tourism to the Economy.	Many candidates got it right and had maximum marks.	-A few candidates were giving factors of tourism and were marked down.		Teachers should differentiate importance, problems and factors of tourism.
Preamble for question 5: Generally question five was very unpopular; frequency of 2113; giving a percentage of 26.33%									
5(ai)	Manufacturing Industries	Knowledge	*	Less popular. Only about 30% of the candidates attempted this section.	Candidates were expected to classify components of industrial system, under inputs, processes and output.	A few classified correctly and earned maximum marks.	Of the 30% of candidates who attempted this section, a majority were able to classify but could not actually distinguish	Few candidates classify them under input processes and output	When teaching emphasis should be laid clearly on inputs, processes and outputs.

Q No.	Syllabus Area	Skills Tested	Level of Difficulty	Popularity of Questions	Expectation(s) Tasks	Adequacy in Candidates' Work	Inadequacies in the Work of Candidates	Others	Recommendations
							between inputs, processes and outputs.	processes.	
5(aii)	Manufacturing Industries	Comprehension	*	This section was the most popular section of question five although few candidates attempted the question.	Candidates were expected to explain Weber's Material Index.	About 20% stated correctly and earned maximum marks.	Of the 30% of candidates who attempted this section, they could not recall the material index. Some revised the explanation of material index. As such, they could not score maximum marks.	Some candidates were confused between Alfred Weber's Material Index and Von Thunen's Theory.	Emphasis should be laid on concepts when teaching.
5(bi)	Population Distribution	Comprehension	*	The section was unpopular, with about 20% attempting this section.	Candidates were expected to locate an area of low population density, transport route and a fishing ground in the Northern Hemisphere.	A few located the aspect of fishing grounds and population distribution correctly.	Of the few candidates who attempted this section, most of them located fishing grounds inside the continent and a majority could not specify the routes and there were mainly linking continents. This could not score maximum marks.		Location of items on a map should always be done in class and emphasis should be laid on the types of transport routes.
ii	Transport								
iii	Management of Primary Resources								
5(ci)	Urbanisation	Knowledge	*	Unpopular, very few candidates attempted this section.	Candidates were expected to give the meaning of conurbations.	About 5% could define conurbation.	The few candidates who attempted this section, about 95% could not actually bring out the meaning of conurbations.	Some candidates just repeated the terms and nothing was written.	The teachers should emphasise on the teaching of urbanisation aspects.
5(cii)	Urbanisation	Knowledge	*	Very unpopular and very few candidates attempted this section.	Candidates were expected to give the meaning of dormitory towns.	About 1% of the candidates could define dormitory towns.	The few candidates who attempted this section could not bring out the meaning of dormitory towns, for example, dormitory towns as towns with more urban facilities.	Most of the few who attempted could not score a mark here because they could not give the meaning of dormitory town.	Teachers should emphasise on the various aspects of urbanisation.
5(d)	Interrelationship between Human	Comprehension	*	Very unpopular. Very few candidates attempted this section.	Candidates were expected to bring out the impact of	About 2% of those who attempted the section answered correctly.	About 98% of those who attempted this section could not		Teachers should teach and relate population increase with the use of

Q No.	Syllabus Area	Skills Tested	Level of Difficulty	Popularity of Questions	Expectation(s) Tasks	Adequacy in Candidates' Work	Inadequacies in the Work of Candidates	Others	Recommendations
	Activities and the Environment				increasing world population on the use of non-renewable resources.		identify problems of increasing population on the use of non-renewable resources. Thus they could not score maximum marks.		resources.
6(a)	Cameroon Geography Locating and naming aspects of the map	Application	**	Popular	Candidates were asked to locate and name physical and human aspects on the outlined map of Cameroon.	About 20% of the candidates who answered the question could correctly locate and name the different aspects and earned full marks.	About 50% of those who attempted the question could not locate and name the aspects correctly.	The application of knowledge on Cameroon is still inadequate, for example, candidates were unable to name the specificities of aspects. Like Mt. Cameroon for an area of active violence.	Teachers should lay more emphasis on locating and naming aspects on maps. This should be done through assignment that must be corrected as part of terminal evaluation.
6(b)	Cameroon Geography (-Agriculture -Transport Development -Urban Problems	Comprehension	*	Very popular	Candidates were expected to describe two causes each of the four problems.	About 25% of the candidates came out with the appropriate causes and earned maximum marks.	A majority of those who attempted the question were unable to describe the causes. They merely listed and were marked to maximum.	-On poorly developed transport network for example, it was only on road transport and the other means neglected. -Candidates mixed up their ideas and did not follow the numbering as on the question.	Teachers should teach and set questions using key words as frequently used in official exams.

Q No.	Syllabus Area	Skills Tested	Level of Difficulty	Popularity of Questions	Expectation(s) Tasks	Adequacy in Candidates' Work	Inadequacies in the Work of Candidates	Others	Recommendations
6(c)	Tourism (Tertiary Sector)	Knowledge	*	Popular	Candidates were expected to state the strategies the government of Cameroon has put in place to increase tourism.	About 55% of candidates were able to state the strategies put in place to increase tourism and earned full marks.	About 20% of the candidates barely stated the general factors that promote tourism in Cameroon. Some also stated the importance of tourism to the Cameroon economy.		Teachers should teach Tourism and distinguish between general factors, importance with more emphasis on government action/strategies aimed at increasing Tourism.
6(d)	Cameroon Geography Industrialisation	Application	**	Popular	Candidates were expected to support measures that the Cameroon government should adopt to become an emergent nation.	Less than 50% of the candidates were able to give correct strategies and earned full marks.	More than 50% focused only on the human elements like reducing the population etc.	Candidates failed to support strategies they rather dwelled on what has been done for Cameroon to emerge.	Teachers should teach and lay emphasis on strategies the government is implementing for Cameroon to emerge.
7(a)	Cameroon Geography	Application	**	About 49.85% attempted the question with about 85% attempting section (a).	Candidates were expected to locate and name on an outlined map of Cameroon the following: i Southern low plateau ii Douala-Yaoundé-Bertoua Highway iii One major Airport iv One Industrial Zone v Lake Chad vi Waza Park	Over 70% who attempted this question could locate and name as expected.	-About 60% were unable to locate the Douala-Yaoundé-Bertoua Highway. -About 50% could not locate the Waza Park, that is; they were instead shading a larger part of the Northern part of Cameroon. -Some did not know the correct location of some aspects, for example, an industrial zone.		Teachers -They should draw maps of the different aspects of Cameroon in class and not give as assignments which the students may not do it. Students -They should practice drawing the map of Cameroon and inserting the different aspects on them. Parents They should buy textbooks for their children.
7(b) i ii iii iv	Cameroon Geography	Knowledge	*	Popular over 90% of the candidates answered this part of the question.	-Candidates were expected to state problems affecting urban centres, forest resources exploitation, tourist industry and	Over 80% were able to state the problems. About 80% of them were able to state the problems.	Some candidates misunderstood it to problems of road transport development.		Teachers should separate problems of road transport development from problems affecting the use of road transport.

Q No.	Syllabus Area	Skills Tested	Level of Difficulty	Popularity of Questions	Expectation(s) Tasks	Adequacy in Candidates' Work	Inadequacies in the Work of Candidates	Others	Recommendations
					problems affecting road transport.				
7(c)	Cameroon Geography	Knowledge	*	Popular	Candidates were expected to outline three economic importance of the Atlantic Ocean.	70% could outline the economic importance of the Atlantic Ocean to earn maximum marks.	About 30% of the candidates had no knowledge about the economic importance of the Atlantic Ocean.		
7(d)	Cameroon Geography	Comprehension	*	Popular	Candidates were expected to briefly explain three difficulties in the development of air transport.	Less than 20% of the candidates could state the difficulties of air transport development.	Over 80% of candidates who attempted this question only stated the problems but could not explain them.		Teachers should emphasise on command or key words used in questions.

0555 – GEOLOGY

A) INTRODUCTION

This examination is composed of two papers (Papers 1 and 2). Paper 1 is composed of 50 MCQs to answer all while Paper 2 is composed of 7 structural questions to answer 5 choosing two from Section A, two from Section B and Question 7 which is school based assessment and compulsory. The content of the examination was within the scope of the students i.e. syllabus coverage for both papers was 100%. The overall presentation of papers 1 & 2 was good i.e. good and clear diagrams and adequate spacing for candidates to fill in their answers.

B) PERFORMANCE EVALUATION

The general performance of Paper 2 as perceived by the examiners was just about average. There is an overall drop in performance for paper 2 as compared to 2022 marking session.

C) QUESTION BY QUESTION ANALYSIS

PAPER 2

100% syllabus coverage. General drop in performance as indicated above.

SECTION A

QUESTION 1

It was the most popular question in this section and was well answered but for question 1 (a) (iii) which required the definition of Hydrogeology. Most candidates defined it as the study of water instead of the **study of groundwater**.

QUESTION 2

This was also a popular question in Section A but was not well answered. Candidates could not bring out the definitions of the various types of unconformities which are:

- Heterolithic unconformity – an erosion surface which separates older igneous or metamorphic rocks from younger sedimentary rocks.
- Angular unconformity – younger horizontal beds lie on older folded or tilted beds.
- Parallel unconformity – both the younger and older beds are horizontal but are separated by a plane of unconformity which is an erosion surface.

QUESTION 3

Very unpopular and poorly answered. Candidates were not able to differentiate between horst and graben which is – a horst is a block pushed up by two parallel faults while a graben is a block that has dropped due to two parallel faults.

Candidates were not able to define the following terms in Economic Geology:

- Gangue mineral which is the unwanted mineral found in an ore.
- Mineral tenor which is the metal content of an ore and

- Ore mineral which is a mineral deposit which contain a metal and can be mined at a profit.

SECTION B

In this section, candidates attempted all three questions averagely.

QUESTION 4

It was a poorly answered question. Candidates were unable to describe graded bedding and ripple marks which are:

- Graded bedding – most candidates described but a transgressive series instead of graded bedding which is - a gradual change in grain size with larger particles at the bottom and gradually fine towards the top of a bed.
- Ripple marks – which are undulations produced by fluids flowing on sediments.

Most candidates could not explain the following weathering processes:

- Hydration – addition of water to minerals or rocks causing them to change in chemical composition.
- Carbonation – reaction of carbon dioxide and water forming weak carbonic acids which reacts with minerals in rocks breaking them down.
- Oxidation – reaction of oxygen with minerals in rocks to form oxides.

QUESTION 5

Most candidates were unable to define the following physical properties of minerals:

- Streak – most candidates gave streak as powder form of mineral instead of colour of the powder form of a mineral.
- Fracture – most candidates gave fracture as ability of a mineral to break instead the nature of freshly broken surface of a mineral.
- Luster – most candidates defined colour instead of luster which is the appearance of a mineral under reflected light.

Candidates were not able to differentiate between plane and axis of symmetry. Most candidates referred to a plane as a line instead of a surface and an axis as a point instead of an imaginary line. A plane of symmetry is a plane along which a crystal can be divided into two halves such that one half is a mirror image of the other while an axis of symmetry is a line about which a crystal can be rotated through 360° and a face appears more than once.

QUESTION 6

Generally, this question was well answered but most of the candidates could not bring out the characteristics of bivalves which are as follows: presence of left and right valves, presence of umbo, bilaterally symmetrical shells along the commissure, equivalved, muscle scars linked by pallial line, and presence of dentition on both valves.

QUESTION 7

Most candidates were unable to answer question 7(a) which is on map interpretation.

Candidates could not give the relationship between the beds on the map which is – the beds on the map are all horizontal beds because all the contour lines are parallel to the geological bed boundaries.

Candidates could not draw a profile along line of section A – B. Most constructed but a cross section assuming horizontal profile instead of a profile along A – B.

Candidates could not convert the graphical scale on the map to numerical scale which is:

Graphical scale – 4.6cm = 10 km

Numerical scale – 1: 217,391

D) SUGGESTIONS AND RECOMMENDATIONS

- Students are encouraged to buy textbooks and use them.
- Student should follow the rubric of paper 2 which is answer two question from Section A and two from Section B. Section C which is Question 7 is compulsory.
- We shall organize Regional and Divisional seminars on the teaching of geological maps, paleontology and crystallography as well as the interpretation of Ordinary Level syllabus differentiating it from Advanced Level syllabus.
- Teachers are advised to own and use copies of the testing syllabus produced by the GCE Board.
- Teachers are advised to take continuous assessment seriously.
- Teachers are advised to drill students on how to answer questions.
- Teachers are advised to follow the harmonized progression syllabus to help them complete their syllabus.
- School administrator should ensure that Geology be taught by Geology teachers not teachers of other discipline.

0560 – HISTORY

1. INTRODUCTION: How the Examination presented itself to the Table of Specification (TOS)-Overall Presentation of the Exam In Synopsis

In paper 1 the TOS was in proportions of 60%, 18%, 18% and 04% respectively for knowledge, comprehension, application and analysis, whereas in Paper 2 it was 42%, 28.5%, 23.8% and 4.76% respectively for knowledge, comprehension, application and analysis. The TOS was therefore largely respected for paper 2 but the examination was tilted to the testing of knowledge in paper 1, making it more candidate friendly.

2. PAPER BY PAPER ANALYSIS INDICATING TOS

Table of Specifications (PAPER 1) (50 QUESTIONS)

TOPICS			AIMS				OBJECTIVE (ABILITY TESTED)								DIFFICULTY LEVEL		
NO	TESTE D	%	A	B	C	D	KN	%	CO	%	APP	%	AN	%	*	**	***
24	24	100	28	07	10	05	30	60	09	18	09	18	01	4	25	22	03

Analysis: The paper was candidate friendly given that much of knowledge (60%) than any other objective was tested and difficulty level three question was just 1.

Table of Specifications PAPER 2 (11 QUESTIONS)

TOPICS			AIMS				OBJECTIVE (ABILITY TESTED)								DIFFICULTY LEVEL		
NO	TEST ED	%	A	B	C	D	KN	%	C O	%	AP	%	AN	%	*	**	***
24	14	58.3	07	10	03	01	09	42	06	28.5	05	23.8	01	4.76	1	8	01

Although the paper had a very negative candidate response, the TOS shows that the paper was friendly to candidates given that out of 10 questions on choice, only 1 was of the third degree difficulty level.

3. QUESTION BY QUESTION ANALYSIS

1A*Stimulus response questions drawn from German colonization of Cameroon, German penetration of the interior of Cameroon and the end of German colonial rule.

The candidates were expected to have a general knowledge of the background history of German annexation history of Cameroon, including the establishment of German firms, how Germany annexed the territory and the outbreak of the First World War in Cameroon and finally the defeat and ousting of the Germans and the effects of this defeat on Cameroonians.

This question was very popular as more than 90%, of the candidates attempted the question. Overall performance was very good as some candidates scored 20 /20 in this question

1B* Stimulus response questions drawn from the Plebiscite in the Southern Cameroons in 1961, constitutional arrangements, the Federal Republic of Cameroon and its eventual abolition and subsequent constitutional changes and effects especially on the people of the former state of west Cameroon.

The candidates demonstrated lack of mastery of these issues which have resulted to the current and the present political situations. Candidates' response and performance was very poor.

2: Describe briefly (a) the causes and (b) the effects of any TWO of the native resistance to German colonial rule cited below:

(a)Bakweri revolt (b) Bayang revolt (c) Bulu revolt (d) Bafut revolt (5/4/5/5 marks)

Question was straight forward and candidates were expected to bring out the causes and effects of any **two** out of the **four** revolts. Question was generally well interpreted by almost all candidates who attempted it. Overall performance was good and best score was 18 and lowest score 00. The difficult index was on the Bafut revolt which is somehow peripheral in the syllabus. A good number of candidates however fell into the temptation of answering all four and none satisfactorily done.

3: Why did a plebiscite take place in British Southern Cameroon in 1961? What role did the UNO play in the plebiscite? Outline the effects of the plebiscite on the political evolution of British Southern Cameroons up to 1965. (8/6/6).

The question is in three parts. The first part is reasons why the plebiscite was conducted in British Southern Cameroon in 1961. The second part is the role played by the UNO in the plebiscite. The third part is positive and negative effects on the political evolution of Southern Cameroon up to 1965 as a result of the plebiscite. Candidates were supposed to give reasons for the plebiscite in Southern Cameroon in 1961 and the role played by the UNO in the plebiscite and to show how the outcome of the plebiscite affected Southern Cameroon in its political evolution up to 1965.

Most candidates who attempted this question focused but on reasons why Southern Cameroons voted to join the Republic of Cameroon. On the role of the UN, it was averagely attempted by most candidates. On the effects, most candidates were instead talking of the effects of the 1972 referendum. The overall performance on this question was poor.

4.Explain why Cameroon adopted a Federal system of government in 1961 and abolished it in 1972. Describe the political changes which took place in Cameroon as a result of the abolition of the Federal system between 1972 and 1990. (6/6/8marks)

The first part of the question required reasons why Cameroon adopted a federal system of government in 1961. The second part needed reasons why the federal system was abolished in 1972. The third part required the candidates to give the political changes that took place in Cameroon after the abolition of the federation from 1972 to 1990.

The candidates advanced the reasons for the adoption of a federal system of government and the abolition of the federal system in 1972. Most of them ignored the political changes from 1972 to 1990 or give very little material. The performance was below average and very few candidates attempted the question.

5.In what ways did (a) the industrial revolution and (b) the rise of new European powers cause the scramble for Africa in the last quarter of the 19th century? What methods did the Europeans use to acquire colonies in Africa? (6/6/8 marks)

The question is divided into three parts. Part 1 the various needs of the growing industrialization in Europe that provoked the scramble. Part 2 demands the identification of the new comers into the colonial race. The activities of these new comers in different parts of Africa in the scramble. Part 3 demands for the different methods employed by various powers in acquiring territories (peaceful and forceful).

Majority of candidates focused on the general motives for the scramble for Africa rather than focusing on the economic motives of the scramble as a response to the industrial revolution. The

rise of new European nations contributing to the scramble for Africa was poorly handled. Instead of showing how these new nations made contributions to the industrial revolution and they themselves needed markets, land, raw materials etc, which resulted in the scramble, candidates simply outlined the economic motives of the scramble and in some cases just the general motives of the scramble for Africa. The last part was well interpreted although poorly answered by a good number of candidates.

6) What internal and external factors led to the rise of nationalism in Ghana after 1945? Describe the role played by Kwame Nkrumah in the struggle for decolonization and independence of Ghana. (6/6/8marks)

Candidates were required to give internal and external factors of nationalism (internal and external factors of decolonization) in Ghana after 1945 in the first and second parts of the questions respectively. The last part of the question demanded candidates to give the role (contributions) of Kwame Nkrumah to the struggle that led to the independence of Ghana by 1960.

A good number of candidates answered the question with some unable to distinguish between internal and external factors, though these parts were fairly answered. The last part requiring a narrative of Nkrumah's contributions was poorly attempted.

7.What were the main causes for and the consequences of the frequent military take overs in Nigeria since the mid-1960s? (10/10marks).

It was a straight forward question void of any ambiguity. Candidates were expected to give the causes and consequences of frequent military coups in Nigeria since the mid- 1960s.The performance was very poor. Candidates who answered this question were deficient and were simply gambling, an indication that this topic was not taught

8. What were the main objectives of Bismarck's foreign policy between 1870 and 1890? What were the successes and failures recorded by Bismarck's foreign policy and how did Bismarckian diplomacy contribute to the outbreak of the First World War? (5/5/5 marks)

Straight forward questions requiring candidates to outline the objectives of Bismarck's foreign policy, the successes and failures of the policy and how his diplomacy-his foreign policy characterized by his alliance system contributed to the outbreak of the First World War.

Fairly popular and fairly attempted question by most candidates. The last part of the question was however not well answered.

9. Why did Britain and France adopt the policy of appeasing the aggressor states in the 1930s? Why and with what consequences was this policy abandoned by 1939? (7/6/7 marks)

This is a 3-part question that required candidates to first and foremost define the policy of Appeasement bringing out its main Apostle before highlighting: the reasons for appeasement during the period under consideration, reasons why Britain and France abandoned the policy and Effects or Consequences of abandonment.

Only a handful of candidates attempted this question. A good majority of them were able to understand and answer parts 1&2 of the question. Only a few of them could understand and therefore give satisfactory answers to the part 3 of this question. Instead of advancing the consequences of the abandonment of Appeasement, they advanced the consequences of Appeasement. The performance in this question was average. Only a handful of candidates attempted this question.

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The performance in this question was average. Only a handful of candidates attempted this question.

A good majority of them were able to understand and answer parts 1&2 of the question.

Only a few of them could understand and therefore give satisfactory answers to the part 3 of this question.

Instead of advancing the consequences of the abandonment of Appeasement, they advanced the consequences of Appeasement. The performance in this question was average.

10. Write short notes bearing on (a) activities and (b) importance of any TWO of the following structures of the League of Nations. a) The ILO b) The Mandate Commission c) The Disarmament Commission d) The Refugee Commission e) The Health Commission f) The Assembly (5/5/5/5 marks)

Straight forward question requesting candidates to outline the activities (actions carried out) and importance (benefits) of any of the structures listed.

Question was very poorly answered by candidates by most candidates, probably pointing to poor syllabus coverage.

PERFORMANCE ACCORDING TO SECTIONS OF THE PAPER

SECTIONS	Average Performance
Cameroon	7/20
Africa	6/20
World	6/20

4. POSSIBLE CAUSES OF POOR PERFORMANCE BY CANDIDATES

1.Hostile political climate unfriendly to GCE course work. Most candidates who presented themselves for the

examination from most parts of the North West and South West Regions have experienced interruption of

classes and multiple ghost town Mondays where schools are shut down.

2.Over speculation and specialization. Most candidates don't read recently tested topics. The social media also deceives students with fake questions distracting them from proper focus and concentration.

3.Very broad syllabus especially in Africa and World.

4.Limited teaching periods, most often two hours.

5.Inadequate teaching staff.

6.Absenteeism and involuntary absences of teachers because of threats.

7. Reluctance of colleges to sponsor History teachers to seminars.
8. Overloading of History teachers with Citizenship, Geography, etc. leading to shallow presentation of facts.
9. Poor teaching methods.
10. Distraction by television and android phones.

5. RECOMMENDATIONS/SUGGESTIONS FOR IMPROVEMENTS

1. Teachers and students are encouraged to buy the official textbooks recommended by the Ministry for Secondary Education and the GCE Board
2. History periods in colleges in the examination classes should be at least the three periods a week World History should start in Form 4
3. Teachers should be assigned in each of the three sections
4. Teachers should not be overloaded with the teaching of all the sections in History and related subjects like Citizenship, Geography and Economics.
5. Teachers should always drill students on Questions and Answers.
6. Workbooks should be used alongside the main text.
7. The use of the telephone by students should not be abused and should be controlled by parents.

0562 – CITIZENSHIP EDUCATION

INTRODUCTION:

The 2023 examinations and its mark guide projected extensive syllabus coverage in both papers estimated at 100%. The paper one (machine scoring paper) questions were slightly more technical and demanding especially as candidates were required to answer all 50 multiple choice questions (MCQ's) covering the entire Syllabus. The paper two (Essay-type) questions were well structured with clear rubrics and were within the reach of Ordinary Level candidates.

A. THE TABLES BELOW SUMMARIZED THUS

PAPER ONE

Classification by test objectives			Classification by level of difficulty		
Objectives	%	Cumulative	Difficulty	Facility Love	%
Knowledge	38	38	x	High	38
Comprehension	30	68	xx	Average	50
Application	20	88	xxx	Low	12
Analysis	12	100			

The above paper analysis presence a 100% syllabus coverage as questions were set on all the 12 topics of the program (syllabus) respecting the quota for each topic. The paper was candidate friendly.

PAPER TWO

Question Number	Topics	Difficulty Level	No. of Topics per question	Covered per-section
1.	6 and 7	xxx	02	(02)
2.	1	xx	01	(03)
3.	2	xx	01	
4.	3	xx	01	
5.	6	x	01	(03)
6.	7	x	01	

7.	8	xx	01	(03)
8.	9	xx	01	
9.	11	x	01	
10.	12	xx	01	
Total	10 out of 12	—	10 out of 12	10 out of 12
%	83.33%	—	16.66, 25%,25%,25%,	83.33%

This paper was within reach to most candidates especially the average, reasons being that the syllabus was well covered.

B.

1) Frequency Table for Questions Attempted by Candidates (General Education) (Samples 1658)

Q N ^o	14-20	12-13	9-11	7-8	5-6	0-4	Total pass 09=20	%	Total 00-08	Fail	%	Total Attempts per.Q	%	Rank	Total attempted number attempted per section
1.	163	202	391	303	252	336	756	45.9	891		54.1	1647	99.3	4th	1647
2.	99	156	410	317	226	144	665	49.2	687		50.8	1352	81.5	2nd	1653
3.	06	11	19	15	10	13	36	48.6	38		51.4	74	04.5	3rd	
4.	72	42	68	24	10	11	182	80.2	45		19.8	227	14.0	1st	
5.	117	70	176	255	331	380	363	27.9	966		72.7	1329	80.2	7th	1624
6.	18	15	52	35	56	60	85	36.0	151		64.0	236	14.2	5th	
7.	01	00	09	06	09	34	10	16.9	49		83.1	59	03.6	9th	
8.	24	33	163	203	242	477	220	19.3	922		80.7	1142	68.8	8th	1626
9.	02	03	08	06	08	14	13	31.7	28		68.3	41	02.5	6th	
10.	04	10	30	69	105	225	44	09.9	399		90.1	443	26.7	10th	
Total	506	542	1326	1233	1249	1694	2374	36.2	4176		63.8	6550	98.7		6550
%	07.7	80.3	20.2	18.8	19.1	25.9	36.2		63.8			100			

- The 2023 question frequency table above indicates that question 4, 2 and 3 recorded the best scores looking at the number of final attempts by candidates. But in a whole the results were mediocre.
- The three sections of the paper had the following popular question i.e. 2,5 and 8 but the scores were not very impressive. Question 9 and 7 were the least attempted in the paper.
- There was a marked improvement in the number of attempted questions in section “c” inspite of the poor performance.

- The poor performance in section “A” from my research emanates from a poor mastery of the subject matter and limited revision of the F3 and F4 work in the final year.

2) Samples 380

Technical and Vocational Education

Q N ^o	14-20	12-13	9-11	7-8	5-6	0-4	Total pass score 09-20	%	Total fail score 00 – 08	%	Total attempt pts per Q	%	Rank	Total attempted number attempted per section
1)	03	16	50	76	92	138	69	18.4	306	81.6	375	98.7	2 nd	375
2)	04	05	21	60	94	155	30	08.8	309	91.2	339	89.2	7 th	380 100%
3)	00	01	03	02	05	11	04	18.2	18	81.8	22	05.8	3 rd	
4)	01	01	03	04	05	05	05	26.3	14	73.7	19	05.0	1 st	
5)	06	03	16	20	45	166	25	09.8	231	90.2	256	67.3	6 th	366 96.3%
6)	00	02	09	12	16	57	11	11.5	85	88.5	96	25.3	5 th	
7)	00	01	00	02	01	10	01	07.1	13	92.9	14	03.7	9 th	
8)	00	02	08	30	65	186	10	03.7	261	96.3	271	71.3	10 th	344 90.5%
9)	00	00	01	00	01	04	01	16.7	05	83.3	06	01.6	4 th	
10)	00	00	05	05	13	44	05	07.5	62	92.5	67	17.6	8 th	
Total	14	31	116	211	317	779	161	11.0	1304	89.0	1465	96.4		1465
%	0.95 %	2.1%	7.9	11.95 %	21.6 %	53.2%	10.98%		89.01 %		100%			

- From the above analysis of the 2023 question frequency table, it is concluded that questions 4,1 and 3 had the best scores, on the other hand the most popular questions were 1,2 and 5. The least attempted question was question 9.
- The success rate for the 380 sampled candidates stands at 10.98% indicating an improvement in the output during the 2023 session of the GCE “O” level examination for technical schools.
- Efforts should be multiplied by the authorities that be in Technical colleges to produce much better results.

CANDIDATES PERFORMANCE

Candidates performance this year witnessed a slight improvement over that of the previous year. Both quantitative and qualitative aspects of the results also saw some improvement. See the tables below:

General Education (0562)

Projected Results.

Remark	Brilliant	Very Good	Good	Average	Below Average	Poor	Very Poor	Total
Mark Range	65+	56-64	45-55	34-44	30-33	25-29	00-24	80
No of Candidates	68	856	3992	9964	7018	8780	18,096	48774
% per Range	0.14	01.75	08.18	20.42	14.4	18.001	37.1	100
Cumulative	→			30.49%	→			69.51% 100

- From the sampling made above show an overall performance in paper two (2). An increase from 27.22% last session (2022) to 30.49% in 2023.
- The best candidate in General Education 0562 scored 73 out of 80. A good number of candidates scored zero which was not encouraging.

Technical and Vocational Education (0562)

Projected results.

Remark	Brilliant	Very Good	Good	Average	Below Average	Poor	Very Poor	Total
Mark Range	65+	56-64	45-55	34-44	30-33	25-29	00-24	
No of Candidates	01	07	35	214	202	366	2443	
% per Range	0.03	0.21	1.07	06.5	06.2	11.2	74.6	
Cumulative	—————→			07.81	—————→			92.19

- From the statistics presented above, there is a slight drop in performance from 08.09% the previous year to 07.8%. (2023).
- The best score was 65 out of 80.

D

SUGGESTIONS/RECOMMENDATIONS

a) **TO THE STUDENTS:** At this level, students are strongly advised to:

- make effort to acquire the prescribed text books.
- attend classes regularly.
- be active participants in the teaching learning process.
- abandon speculative learning.
- be present in all post-mock GCE revision lessons.
- respect all relevant examination rubrics and master examination techniques.
- desist from the futile practice of listing points in question answering a situation that attracts bunch marking.
- carryout a proper selection of questions.

b) **TO THE TEACHERS:** The Citizenship Education 0562 subject panel would like colleagues of this

subject area to:

- give equal weighting to all sections and all topics in the syllabus.
- shun speculative teaching.
- keep abreast with the current trend in pedagogy.
- attend seminars and workshops regularly with the view to update their teaching and evaluation skills.
- by updated textbooks with a view to strengthening their private libraries.

- acquaint themselves with the content of the syllabus.
- acquaint themselves with the aims and assessment objectives of the syllabus.
- ensure effective syllabus coverage.
- organize end of course revision classes for their students (student centered).
- ensure the mastering of the CBH CBA.
- Great more teaching periods to Citizenship Education.

c). TO OTHER STAKEHOLDERS;

- Parents should acquire the necessary school needs for their children.
- As domestic teachers, parents should make sure that their children attend classes regularly.
- The government, members of the school administration, pedagogic inspectors and other educationists should do more to provide the necessary enabling environment for effective teaching – learning to take place.
- Citizenship Education be made a compulsory subject at the GCE organized examinations to improve the moral standards among citizens.

0565 – HUMAN BIOLOGY

I. INTRODUCTION

The examination consisted of two papers namely paper 1 and paper 2. Paper 1 comprises of 50 multiple choice questions (MCQS) and paper 2 comprises of 9 essay-type questions divided into two sections A and B. Section A dealt with anatomy and physiology and section B dealt with man's relations with other organisms, personal hygiene and the environment. Candidates were expected to answer all the 50 multiple choice questions in paper 1 and 5 essay-type questions in paper 2; choosing three from section A and two from section B. The questions in both papers covered the entire syllabus. The rubrics and the questions were clear with no ambiguity.

II. PAPER BY PAPER ANALYSIS

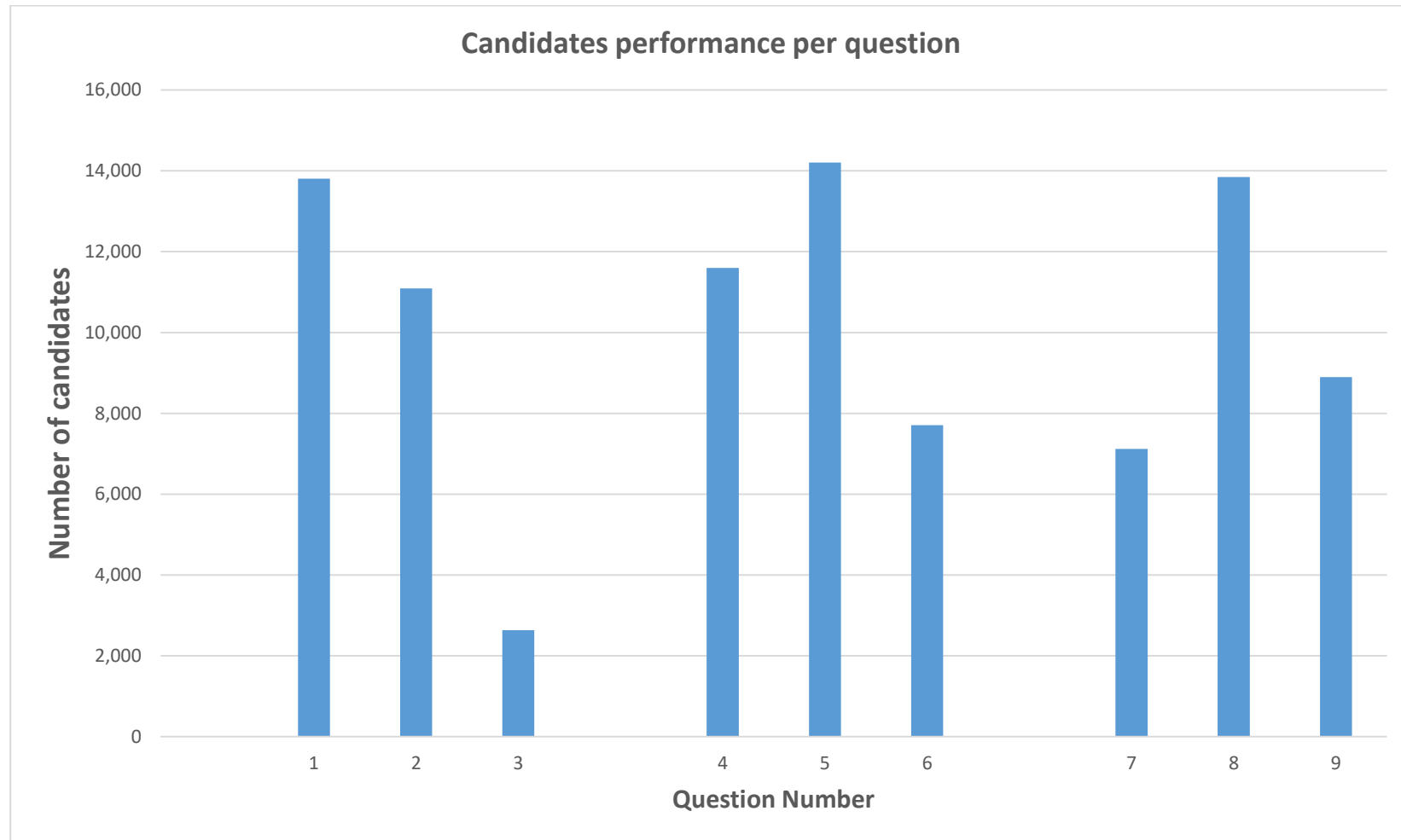
- a) Paper 1: It was scored by the computer or optical map reader. It comprises of 50 MCQs covering the whole syllabus, for a weighting of 40%, and a duration of 1hour 30 minutes. Of the 50 questions tested, according to the Table of Specification following the Bloom's taxonomy, 30 were on knowledge, 18 on comprehension and 2 questions on application. Question number 24 had no correct key so the candidates were scored on 49.

Number of questions	Objectives tested			Difficulty level
	KN	CO	AP	
30	√			*
18	√	√		**
02	√	√	√	***

- b) **Paper 2:** Comprised of 9 essay-type questions; 5 in section A and 4 in section B. Candidates were expected to answer FIVE questions choosing THREE questions from section A and TWO questions from section B for a duration of 2hours 30minutes. This paper had a weighting of 60% of the whole examination.

III. QUESTION BY QUESTION ANALYSIS FOR PAPER TWO.

Question Number	Area of Syllabus Tested	Aims				Objectives Tested			Diff. Level of difficulty	Popularity Rating	Number of candidates	Remarks
		1	2	3	4	KN	COMP	APP				
1	Cells, Tissues and Cell Division	√				√	√		*	3rd	13,805	Direct question. Topic properly taught by most teachers.
2	Skeletal System	√				√			**	5th	11,093	Straight forward question.
3	Co-ordination	√				√	√		**	9th	2,637	The Ear was not properly taught by most teachers since it is not in the biology syllabus.
4	Respiration	√				√	√		*	4th	11,596	The mechanism of gaseous exchange probably misinterpreted for the mechanism of breathing by most candidates and teachers.
5	Reproduction / Genetics	√			√	√			**	1st	14,201	Concepts of reproduction and genetics probably understood by most candidates.
6	Environmental Biology			√		√			*	7th	7,707	Concept not taught or understood by the candidates.
7	Waste, Waste Disposal, Water supply and air pollution			√	√	√	√	√	*	8th	7,122	Concept not properly taught.
8	Health institutions and social organisations			√	√	√	√	√	*	2nd	13,848	Topic understood by most candidates.
9	Food preservation and food borne diseases		√		√	√	√	√	*	6th	8,895	Concept not well taught or understood by most candidates.



Bar Chart of the number of candidates who chose each question

The most popular questions were 5 and 8.

The most unpopular question was 3.

The best answered question was 5.

The worst answered question was 3.

IV CANDIDATES' PERFORMANCE

The best score in paper two this year was 90% as against 86% in 2022.

The worst score was 0% and **40** candidates scored 0% as compared to **86** candidates in 2022.

Grade	Excellent	Very Good	Good	Average	Below Average	Poor	Very Poor	Absent
Mark-range	≥70	60-69	50-59	38-49	35-37	1-34	0	
No. of candidates	155	578	1,668	4,039	1,929	10,801	40	179
%	0.81	3.01	8.68	21.03	10.04	56.23	0.21	0.04

Based on the statistical data above, approximately **33.25%** of the candidates as against **23.5%**, in 2022 could pass in paper 2 if we consider a cumulative total from the average mark range to the excellent mark range. However, good performance in this subject will equally depend on the performance in paper one.

Combining the performance in both paper one and two, the overall percentage pass was **53.30** as against **41.36** in 2022

Analysis of grade boundaries for 2023

GRADE	Number of candidates	Percentage passed	Grade 2022	Number of candidates 2022	Percentage passed 2022
A	551	2.85	A	465	2.32
B	2810	14.53	B	1725	8.63

C	6948	35,92	C	6075	30.39
D	4041	20.89	D	4769	23.86
E	2690	13.91	E	3842	19.22
U	2303	11.91	U	3613	18.08
Total	19343	100		19985	100

. REASONS FOR POOR PERFORMANCE

- Poor mastery of the subject matter.
- Inadequate syllabus coverage.
- Too many distractions for the candidates.
- Poor mastery of English language.
- Very poor drawing abilities.
- Failure by candidates to obey the rubrics.
- Reluctance of many biology teachers to teach Human biology.
- Wrong spelling of terms or words which completely changed their meanings e.g.:
 - Dip for Deep
 - Watch for Wash
 - Vagina for vagina
 - Most for Must
 - West for Waste
 - Fical for Physical
 - Heeps for Hips
 - Bond for Borne
 - Test for Taste
 - Hire for Hair
 - Brest for Breast
 - Born for Bone
 - Public for Pubic

- Lit for Lid
 - Reach for Rich
 - Habitant for Habitat
 - Die for Diet
 - Tin for Thin
 - Bulb for Bulk
 - Smook for Smoke
 - Ambit for Armpit
 - Ventral road for Ventral root
 - Foot for Food
 - State for Start
 - Dacter for Daughter
 - Refuse for Refuge
 - Join for Joint
 - where for Were
 - Tale for Tail
 - Patience for Patient
 - Live for Life
 - Feature for Future
 - Rip for Rib
 - Edge for Urge
 - Insert for Insect
 - Lass for Last etc.
- The e-learning implemented by the Ministry of Secondary Education treated only very few topics in the subject syllabus and these were not explained in detail.
 - Absenteeism of students from Human Biology classes assuming they will use their Biology Knowledge only to write the Human Biology examination.

- The two hours allocated weekly for the teaching of Human biology in most school timetables is inadequate so teachers should improvise extra hours.

SUGGESTIONS AND RECOMMENDATIONS

To the Students:

- They should put in more time to study Human Biology.
- They should put more effort in English Language.
- They should attend classes regularly for good syllabus coverage.
- They should master the spellings of biological terms.
- They should acquire the subject syllabus and use it as a study guide.
- Strictly respect the rubrics on the examination question papers as defaulters are penalized.
- They should practise biological diagrams and respect the rules in drawing them.
- Always read Human biology subject reports.
- They should get past Human biology question papers for revision.
- Biological diagrams should be drawn in and labelled in pencil. Arrowheads should not be used in labelling diagrams. Labels should not be placed inside the diagram and labelling lines should not criss-cross each other. The diagram should not be shaded by blackening or using colour pencils.

To the Teachers:

- They should own copies of the Human Biology syllabus.
- They should drill the students on the spellings of biological terms.
- They should exploit the yearly subject reports.
- They should attend seminar workshops and participate actively in such workshops.
- They should drill the students on the techniques of answering multiple choice and essay-type questions.
- They should help the students to improve on their English.
- Should guide the students on how to draw biological diagrams and correct diagrams in students note books.
- Carry out field work and practical lessons for better comprehension.
- Should effectively teach Human biology.

- The same teacher should teach Human biology and biology in the same class.
- They should help students to improve on their hand writing.
- Teachers should buy resource materials to facilitate their teaching.
- Teachers should make softcopies of their notes each year and make it available to the candidates and for easy update.
- They should try to complete the Human biology syllabus on time so that enough revision can be done.
- Emphasize on the use of lead statements by students when answering questions.
- Should come out with a good text book on Human biology.

To other Stakeholders:

- School principals should sponsor their teachers to attend seminar workshops and discipline irregular teachers.
- The pedagogic inspectors should supervise teachers' lessons, correct their notes and teaching methods.
- School principals should make resource materials readily available to the teachers.
- The Minister of Secondary Education should motivate and promote hard working teachers.
- School principals should buy the subject report for consultation by both teachers and students.
- Distractions on the school calendar should be limited.
- School Administrators and Guidance Counsellors should orientate students on career profiles and the choice of subjects in order to enhance performance.

VI. Conclusion/ Way Forward

In service training and more investment on pedagogy and digitalised lessons should be made by the Minister of Secondary Education in order to improve student's performance at the GCE and other public examinations.

0570 – MATHEMATICS

1. INTRODUCTION

The 2023 Session of the General Certificate of Education (GCE) Examination tested two Papers, Paper One (01) and Paper Two (02). Paper One (01) was comprised of fifty (50) Multiple Choice Questions (MCQs) weighted at 40% and candidates were expected to answer ALL the questions. Paper Two (02), however, was weighted at 60% and was made up of Sections A and B. Section A weighted at 40%, was made up of ten structural Questions of which candidates were expected to answer ALL. Section B weighted at 60% comprised of four (04) essay-typed questions and candidates were expected to answer ALL. Thus, Section A (40%) and Section B (60%) made up to 60% of the entire 0570-Mathematics Paper Two (02), while Paper One (01) covered 40% of the overall Paper as summarized in the following table:

Paper	Section	Type of questions	Duration	Mark	Weighting	Remarks
1	-----	MCQ	1½ hours	50	40%	50 questions to answer all
2	A	Structural	2½ hours	40	60%	10 questions to answer all
	B	Essay		60		04 questions to answer all

This structure placed the candidates at the same platform since all the questions in the Examination were compulsory. In this 2023 Session, the 0570-Mathematics Paper tested all Sections of the Syllabus in both Paper One (01) and Paper Two (02). The structure, aims and objectives as well as weighting were highly respected following the modification of the 2011 Revised Syllabus. Thus, Syllabus coverage was quite adequate and rated at 95% in both Papers One (01) and Two (02). The necessary rubrics were equally respected in both papers as well.

2. PAPER BY PAPER ANALYSIS

I) Paper One

This 2023, 0570-Mathematics Paper One, testing MCQs with the Syllabus coverage of 97%, was 98% error free though there were some minimal typographical errors in questions 4 and 13. Due to the error, question 4 had no correct answer leading to the cancellation of the entire question, while question 13 had no effects on the question. On the other hand, question 35 had two most correct answers also leading to the cancellation of entire question. Consequently, 48 questions had adequate keys (answers).

Comparatively, 0570 - Mathematics Paper One 2023, was of the same strength as that of 2022.

The Expected and Actual weighting of each Assessment objective is as shown on the table below.

ASSESSMENT OBJECTIVE	KNOWLEDGE				UNDERSTANDING					APPLICATION			HIGHER LEVEL ABILITY
QUESTIONS INVOLVED	5	6	8	14	1	3	4	7	10	2	8	17	11
	18	20	21	26	12	13	16	19	22	23	30	32	15
	27	29	37	43	24	28	31	34	36	35	41	42	25
	47	48			38	39	40	44	46	45	50		33
					49								
ACTUAL NUMBER OF QUESTIONS PER OBJECTIVE	14				21					11			04
EXPECTED NUMBER OF QUESTIONS PER OBJECTIVE	15				20					10			05
ASSESSMENT WEIGHTING %	28				42					22			08

II) Paper Two

Paper Two was made up of ten (10) Structural questions in Section A and four (04) Essay-type questions in Section B and candidates were expected to answer all the questions in the spaces provided. However, there were no errors on the paper and the questions were spread over 11 topics and good for the average candidates. This paper was less demanding given that the number of questions in section A were reduced from 15 to 10. Section A was spread over nine (9) topics, while Section B, over eight (8) topics. The Marking Guide was modified. This Paper was assessed such that Syllabus coverage was about 95% and about the same strength as Paper Two of 2022. All the Assessment Objectives: Knowledge, Understanding, Application and High-Level Ability were tested accordingly, in this paper.

The following table indicates the ability levels that were tested:

ASSESSMENT OBJECTIVE	KNOWLEDGE		UNDERSTANDING				APPLICATION					HIGHER LEVEL ABILITY		
SECTION A	3a	3b	1	2	9a	9b	4a	4b	5a	5b	7a			
	3c	6a					7b	7c	8a	8b	8c			
	6b	6c					10a	10b						
SECTION B	ALL		2(ii)a		2(ii)b		2(ii)c		1(i)a	1(i)b	1(i)c	1(i)d	1(i)e	3(ii)
			2(ii)d		2(ii)e		4(i)a		2(i)a	2(i)b	2(i)c	3(i)a	3(i)b	
			4(i)b		4(ii)a		4(ii)b		3(i)c	3(i)d				
WEIGHTING %	20		45				32					3		

3. QUESTION BY QUESTION ANALYSIS

PAPER ONE

This paper had fifty Multiple Choose Questions (MCQ), all compulsory. Each question had one correct answer and three distractors. The candidates were expected to choose one of the four answers in each of the questions.

The following is the question by question analysis:

QUESTION	TOPIC	SUB TOPIC	Assessment Objective	Level of Difficulties
1	Numbers	Place value of digits	U	**
2	Numbers	Highest Common Factors (HCF)	A	***
3	Numbers	Ordering of numbers	U	**
4	Numbers	Representation on a real number line	U	*
5	Numbers	The set of numbers	K	*
6	Numbers	Fractions	K	*
7	Numbers	Standard form	U	***
8	Numbers	Approximations	K	**
9	Numbers	Ratios	A	***
10	Numbers	Simple Interest	U	**
11	Sets	Cardinality of intersecting sets	H A	***
12	Sets	Set Language and notation	U	**
13	Sets	Shaded region in a Venn diagram	U	**
14	Logic	Negation and Compound statements	K	**
15	Functions	Inverse function	H A	***

16	Functions	Substitution in a function	U	**
17	Functions	Composite functions	A	**
18	Euclidean Geometry	Naming parts of a circle	K	*
19	Euclidean Geometry	Angles of a polygon	U	**
20	Euclidean Geometry	The net of a regular solid figure	K	**
21	Euclidean Geometry	Perpendicular bisector of a line	K	*
22	Euclidean Geometry	Opposite interior angles of a transversal	U	**
23	Mensuration	Perimeter of a rectangle	A	***
24	Mensuration	Area of a circle	U	**
25	Mensuration	Volume of a cube	H A	**
26	Rectangular Geometry	Coordinate Cartesian plane	K	*
27	Rectangular Geometry	Coordinate Gradients of lines	K	*
28	Rectangular Geometry	Coordinate Coordinates of the mid-point of two given points	U	***
29	Algebra	Terms in an expression	K	*
30	Algebra	Laws of indices	A	**
31	Algebra	Simplification of algebraic expressions	U	**
32	Algebra	Subject of a formula	A	**

33	Algebra	Terms in a sequence	H A	**
34	Algebra	Solution of linear inequality	U	**
35	Algebra	Inverse variation	A	**
36	Networks	Features in a network diagram	U	*
37	Trigonometry	Sides of a right – angled triangle	K	*
38	Trigonometry	Trig. Ratios of complementary angles	U	**
39	Trigonometry	Angle of elevation	U	*
40	Vectors	Operations on vectors	U	**
41	Vectors	Vector geometry	A	*
42	Vectors	Direction of a vector	A	**
43	Matrices	Properties of square matrices	K	*
44	Matrices	Determinant of a 2x2 matrix	U	**
45	Matrices	Transformations in the Cartesian plane	A	**
46	Matrices	Operations on matrices	U	**
47	Statistics and Probability	Representation of data using bar chart	K	*
48	Statistics and Probability	Mode	K	*
49	Statistics and Probability	Median	U	**
50	Statistics and Probability	Idea of probability	A	**

K = Knowledge, U = Understanding, A = Application, H A = Higher level ability

PAPER TWO

All the questions in Sections A and B were attempted though some of their solutions did not lead to the expected answers. The highly attempted questions in Section A were 1, 3, 5, 6, 7; averagely attempted were 2 and 9; and the poorly attempted questions were 4, 8 and 10. In Section B, the highly attempted was question 1, averagely attempted were 2 and 3 questions and the poorly attempted was question 4.

Many categories of answers were recorded. There were some brilliant and very good answers, some average and poor answers were recorded and many very poor answers. There were many scripts in packs containing copy work. The highest score was one hundred percent (100 %) and the least score was zero percent (00%). It is worth noting that there were few candidates who scored zero (00 %). Many candidates attempted the questions and so, absences were fewer.

The following is the question by question analysis:

QUESTION	TOPIC(S)	COMMENTS
SECTION A		
	TOPIC	SUB TOPIC
1	Numbers	Ordinary Processes of Number manipulation
		A very popular question and many candidates did it so well. A few candidates had problems on the handling of directed numbers. Teachers should teach and stress on simplification of directed numbers.
2	Algebra	Simultaneous Equations
		A popular question that was well handled by some candidates. Some candidates used the elimination and substitution methods but could not simplify well the directed numbers. Teachers are advised to effectively teach directed numbers.
3	Logic	a) Negation
		A very popular question and so many candidates did

		b) Disjunction	it so well. However, some candidates interpreted negation as opposite and interchanged the conjunction and disjunction. Teachers are advised to properly explain the differences between these concepts.
		c) Conjunction	
4	Trigonometry	a) The Right – Angled Triangle	The question was very popular and attempted by many candidates but the performance was below average. Some candidates could not handle the concept of Pythagoras Theorem well. Teachers are advised to do many examples involving the use of this theorem.
		b) Applications of Trigonometry	A popular question but poorly attempted. Many candidates could not use trigonometric ratios to find the angle of elevation. Teachers are advised to do many examples involving Pythagoras Theorem and trigonometric ratios.
5	Probability	The Idea of Probability	A very popular question and the performance was above average. However, some candidates could not solve the question correctly because they didn't know the technical names of the various types of cards in a pack. Teachers are advised to take these cards to class, show to students and name them accordingly.
6	Networks	Network Diagrams	A very very popular question, with good performance, but some candidates could not differentiate between nodes and arcs. Teachers are encouraged to do many exercises involving nodes and arcs so as to bring out the difference between them.
7	Mensuration	a) Area of rectangle	A very popular question but with excellent performance.
		b) Area of a circle	Popularly attempted and many candidates had the correct fractional answer.
		c) Area of a shaded region	Many candidates could not correctly find the difference between the two areas because of the fractional area of the circle. Teachers are advised to effectively teach simplifications involving fractions.
8	Euclidean Geometry	a) Angle formed by the diameter	A very unpopular question. Some candidates attempted it wrongly. Teachers are advised to take time and teach all the various theorems on circle

		b) Cycled quad theorem	geometry, and do many exercises on this topic.
		c) Angle in a triangle	
9	Vectors	a) Magnitude of a vector	A popular question but the performance was below average. The concept of magnitude of a vector was not well handled by candidates. Teachers are still advised to teach this concept well, and solve many of such problems as examples.
		b) Direction of a vector	Very popular but poorly attempted by many candidates as some of them were using their calculators in the radian mode. Teachers are advised to do many of such examples showing the students how to use their calculators in the degrees mode when looking for angles.
10	Algebra	a) A term of an AP	A very popular question, where the performance was above average. However, some candidates who used the method of common difference could not solve correctly for x because of lack of knowledge of directed numbers. Some candidates took the A.P for a G.P. Teachers are advised to solve many of such problems on A.Ps and G.Ps so as to avoid such mix up from the students
		b) Common difference of an AP	
SECTION B			
1	i) Numbers	Number arithmetic involving (payments, totals and balances)	A very popular question that was well handled by most candidates, but some of the candidates could not find the correct number of toll gates, as many of them approximated 2.67 to 3 toll gates. In finding the balance in part (e), many of them did not consider the expenditure at the toll gates. Teachers are advised to use the CBA in teaching and solving problems on this topic.
	ii) Matrices	a) Equality of matrices	A very popular question, but with average performance. Some of the candidates did not understand the concept of equality of matrices, and some, after solving for a and b just substituted the value of a for a – 1 and b for b+1 in part (b). In part (b), some candidates took addition for multiplication. Teachers should teach effectively how to handle
		b) Addition of matrices	

			operations on matrices.
2	i) Functions	Image of a value	A very popular question with excellent performance.
		Composite functions	Very popular, but some candidates could not compose well, as some of them instead multiplied the two functions. Teachers are advised to teach composition of functions very well.
		Inverse of a function	A popular but poorly attempted question. Some candidates interpreted inverse as reciprocal, and some after equating to y could not correctly make x the subject. Teachers are advised to teach subject transposition well before teaching the students on how to find the inverse of a function.
	ii) Sets	Cardinality, set notation and finding an unknown.	A very popular question with good performance. However, some candidates had no mastery or knowledge of set notation. In part (b) some candidates just wrote an algebraic expression in x , without equating the expression to 30. Some took $E = P \cup C$, which was not correct. Teachers are advised to take time and treat sets detailly.
3	i) Statistics and probability	Cumulative frequency graph, median and probability	An unpopular question, with poor performance. Many candidates could not correctly use the given scale and the given cumulative frequency to draw the ogive, and some even interchanged the axes. Teachers are advised to solve many of such examples involving the drawing of the ogive and finding probability.
	ii) Constructions	Constructing a triangle, perpendicular bisector and measuring a length.	Popular, but poorly attempted. It was observed that many candidates did not have the construction instruments as they used the ruler to construct the triangle. Some took the perpendicular bisector of a line for the perpendicular bisector from a given point. Some did not even have any knowledge of construction. Teachers are advised to effectively teach construction as it is an important topic, recurrent in paper two.

4	i) Quadratic equations	Drawing a quadratic graph and a line, using them to find the point of intersection, and shading a region.	Very popular question, but poorly attempted. Some candidates ignored the negative sign in front of the x^2 term. Some drew the line with a free hand and others drew the curve and the line on separate graph papers. Many had difficulties in determining the scale. Teachers should effectively do as many examples as possible on drawing of quadratic graphs since it is very recurrent.
	ii) Vectors	Vector geometry	Very popular question and the performance was above average. However, some candidates did not respect the direction of the arrows on the vector lines, and some had difficulties in handling the ratios. Teachers are advised to effectively teach this aspect of vectors.

Much emphasis has to be laid by all pedagogues on topics that present difficulties to candidates with no rudimentary details taken for granted.

From the scripts, the performance this year is better than that of last year. This notwithstanding, we are looking forward to a better performance if the following limitations are taken care of:

- a) Shortage of teachers in quality and quantity in the schools.
- b) Poor distribution of teachers in State schools.
- c) Lack of adequately trained teachers in most private schools.
- d) Overcrowded classrooms in most State schools.
- e) Some teachers who are trained to teach other subjects now teach Mathematics due to the shortage of Mathematics teachers.
- f) Lack of didactic materials for teachers and students.
- g) Ineffective coverage of the syllabus.
- h) Poor Revision Strategies.
- i) The lack of the knowledge of English Language which is a basic tool for teaching.
- j) Lack of the use of appropriate Mathematical language in class.
- k) Poor motivation due to unsatisfactory working conditions.

- l) The fact that the 2011 Revised Syllabus for 0570-Mathematics has still not been mastered by some teachers.
- m) Some of the Mathematics teachers in Government schools are typical Francophones who find it difficult to deliver the goods in English.

5. SUGGESTIONS/RECOMMENDATIONS

i) To Students:

- a) Make efforts to attend Mathematics classes.
- b) Take their mathematics lessons very seriously
- c) Make efforts to relate the acquired knowledge of 570-Mathematics to Practical Life situations.
- d) Develop good revision strategies and avoid speculation.
- e) Acquire all necessary materials (exercise books, textbooks and mathematical instruments) required to prepare for this examination and be familiar with their use.
- g) Put in the minimum number of years required to be adequately prepared to write the 0570-Mathematics subject.
- h) Make effective use of the calculator and mathematical instruments.
- i) Keep abreast with the disadvantages and consequences of collusion and cheating during any examination.

ii) To the Teachers.

Teachers should:

- a) be computer literate and be part of the on-going e-learning and teaching prescribed by the Minister of Secondary Education.
- b) make good use of the Subject Reports which are available in schools.
- c) buy and own relevant textbooks.
- d) keep abreast with current trends and changes affecting the 0570-Mathematics subject.
- e) each own a copy of the 2011 Revised Syllabus, master and use it.
- f) master the recent modification on the structure of paper two.
- g) revise and modify their teaching methods.

- h) master and apply the Competence Based Approach (CBA).
- i) make sure that all students entrusted to them cover the relevant syllabuses.
- j) apply concrete revision strategies to include notions learnt in Pre-Secondary schools and the early classes of Secondary School.
- k) be assiduous, even in very difficult circumstances.
- l) be active in all the Mathematics Teachers Associations in their various Divisions and/or Regions.
- m) attend all Pedagogic Seminars related to Mathematics.
- n) endeavor to be knowledgeable in all topics in the Syllabus and Schemes of work.
- o) work untiringly to demystify Mathematics in the classroom and society.
- p) should avoid stigmatizing students, especially in relation to Mathematics.
- q) avoid unnecessary last-minute revision classes and all forms of speculation.
- r) look for ways to motivate the students while in class.
- s) familiarize their students with the structure of the paper during lessons.

iii) To Other Stakeholders:

- a) the intake for training of teachers of Mathematics into Teacher Training Institutions should be increased
- b) emphasis should be laid on the intake of Anglophones into Teacher Training Colleges
- c) teacher Training Colleges should endeavor to admit students who have a pass in 0570-Mathematics for the sake of subject continuity.
- d) the law on classroom size and the number of hours allocated to the teacher should be revisited by all the parties concerned.
- e) judicious deployment of teaching staff so as to minimize the shortage of mathematics teachers in most schools.
- f) staff motivation and follow up should be instituted, aimed at improving on the working conditions of teachers.
- g) students should be sensitized on the disadvantages and dangers of any form of collusion and scamming.
- h) encourage In-Service Training of Teachers through Subject Teachers Associations and the Mathematics Inspectorates in the Regions.
- i) avoid using untrained Mathematics teachers as seen in the glaring use of teachers from other subjects who teach mathematics but do not master the real intrigues in the teaching of, 0570-Mathematics.

- j) heads of institutions should equip the Mathematics department with basic Mathematical Tools.
- k) pedagogic Inspectors should be able to organize Pedagogic Seminars for the effective teaching of 0570-Mathematics.
- l) teachers from ENS be sent to teach Mathematics in primary schools.
- m) parents should follow up the progress of their children and constantly provide their needs.

7. CONCLUSION: WAY FORWARD

In the 2023, 0570-Mathematics Examinations, the 2011 Revised syllabus was adequately covered and the aims and objectives attained. We are waiting for the unique time when Mathematics will be truly compulsory and highly reflected, as a cherished subject, in the results. We wish that all the stakeholders apply the above proposals to ensure an increase in the performance in this subject at the GCE and other related examinations.

0575 – ADDITIONAL MATHEMATICS

INTRODUCTION

The subject 575 Additional Mathematics is actually a pre requisite for Advanced Level Mathematics.

Experience has shown that candidates who do not offer 575 Additional Mathematics find it quite difficult to proceed with studies of A Level Mathematics.

In June 2023 General Certificate of Education Examinations, the Ordinary Level Additional Mathematics with code number 0575 tested two papers.

- Paper 1 comprising of 50 multiple choice questions of Pure Mathematics to answer all.
- Paper 2 comprising of three sections A, B and C. Candidates are expected to answer Section A (**Pure Mathematics**) which is compulsory with eight questions of which the candidates are to answer all, Section B (**Mechanics**) and C (**Statistics and Probability**) are optional each comprising of three questions and the candidates are expected to answer two. i.e. Candidates are expected to answer both Section A and B OR Section A and C.
- The weighting for paper 1 is 40% and paper 2 is 60%.

These two papers were within the syllabus content with all rubrics respected and adequate attention given to all areas of the syllabus.

The marking guide was properly harmonized by all examiners and hence a general consensus was arrived at by the examiners after trial marking.

2023 SESSION

Marks recorded and the statistics are as follows;

Range	0 – 9	10-19	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80 - 89	90 - 100	
f	133	544	1048	1407	1491	1448	1321	1045	718	197	$\sum f$ = 9349
x	4.5	14.5	24.5	34.5	44.5	54.5	64.5	74.5	84.5	95	

d	-4	-3	-2	-1	0	1	2	3	4	5	
fd	-532	-1632	-2096	-1407	0	1448	2642	3135	2872	985	$\sum fd$ = 5415
fd^2	2128	4896	4192	1407	0	1448	5284	9405	11488	4925	$\sum fd^2$ = 50457

mean mark, $\bar{x} = 50.36$ and standard deviation, $\delta = 22.51$

Based on this statistics one can conclude that the difficulty index for this year for paper 2 is approximately (0.504) as compared to (0.508) of last year.

The paper one this year was corrected by the scanners and therefore the difficulty index to be produced by the scanner.

The table below shows a comparison analysis in the performance of paper 2 for the last twelve years.

YEAR	Registered	% Increase	No of candidates with marks ≥ 70	Overall % of high ability candidates	Observation
2011	4390	6.761	161	3.667	
2012	5077	15.649	346	6.815	Quite a good increase in registration with slight improvement of the high ability candidates as compared to the previous year.
2013	4311	-15.088	404	9.371	Decrease in registration with slight improvement of the high ability candidates as compared to the previous year.

2014	4378	1.554	767	17.519	Slight increase in registration with significant increase of high ability candidates as compared to the previous year.
2015	5081	16.058	309	6.081	Quite a good increase in registration with a very sharp drop of the high ability candidates as compared to the previous year.
2016	5766	13.482	896	15.539	Quite a good increase in registration with significant increase of high ability candidates as compared to the previous year.
2017	4197	-27.21	483	11.508	Decrease in registration with a great decrease of the high ability candidates as compared to the previous year.
2018	7000	66.79	1009	14.414	Quite a good increase in registration with significant increase of high ability candidates as compared to the previous year.
2019	6032	-13.86	763	-24.32	Decrease in registration with a great decrease of the high ability candidates as compared to the previous year.
2020	7347	21.8	≈827	8.388	Increase in registration and slight increase in high ability students.
2021	8612	17.22	≈952	≈11.05	Increase in registration and slight increase in high ability students.
2022	8928	3.67	≈1592	≈17.83	Slight increase in registration and a significant increase in high ability students.
2023	9527	6.71	≈1960	≈20.57	Increase in registration and a significant increase in high ability students.

TOS FOR PAPER 1

SN	Correct Key	Section of the syllabus	Sub topics	Topic	Knowledge	Difficulty Level	Comprehension	Difficulty Level	Application	Difficulty Level	Higher Abilities	Difficulty Level	Overall Weighting	% Allocated
1	C	10.1	Indices	Indices, logarithms and surds	1	*							1	2
2	C	10.2	Logarithms	Indices, logarithms and surds	1	*							1	2
3	A	10.6	Arithmetic operation of surds	Indices, logarithms and surds	1	**							1	2
4	D	12.3	Symmetric roots of a quadratic equation	Quadratic functions and simple equations	1	*							1	2
5	A	12.3	Symmetric roots of a quadratic equation	Quadratic functions and simple equations			1	**					1	2
6	B	12.3	Symmetric roots of a quadratic equation	Quadratic functions and simple equations			1	*					1	2
7	C	9.2	Factor theorem	Polynomials					1	*			1	2
8	B	9.1	Remainder's theorem	Polynomials					1	*			1	2
9	A	3.1	Sequences and functions	Sequences			1	**					1	2
10	D	3.8	Geometric mean	Sequences					1	**			1	2
11	A	3.2	Arithmetic sequences.	Sequences			1	**					1	2
12	B	3.9	Sum to infinity of a geometric	Sequences							1	*	1	2

			sequence											
13	C	2.2	Binomial theorem for expansion of $(a + b)^n$, for positive integral indices n.	Permutations, Combinations and Binomial theorem					1	**			1	2
14	A	2.2	Binomial theorem for expansion of $(a + b)^n$, for positive integral indices n.	Permutations, Combinations and Binomial theorem			1	**					1	2
15	A	2.1	Permutations	Permutations, Combinations and Binomial theorem			1	*					1	2
SN	Correct Key	Section of the syllabus	Sub topics	Topic	Knowledge	Difficulty Level	Comprehension	Difficulty Level	Application	Difficulty Level	Higher Abilities	Difficulty Level	Overall Weighting	% Allocated
16	D	2.1	Combinations	Permutations, Combinations and Binomial theorem			1	*					1	2
17	A	1.2	The three basic trigonometric ratios of angles up to 360° (2π).	Circular measure and trigonometry	1	*							1	2
18	D	1.7	Relationship between trigonometric ratios	Circular measure and trigonometry	1	*							1	2

19	C	1.3	Trigonometric ratios for the angles 0° , 30° , 45° , 60° , 90° and their associates.	Circular measure and trigonometry	1	*							1	2
20	D	1.1	Radian measure: Arc length, area of sector and area of segment	Circular measure and trigonometry			1	**					1	2
21	A	1.5	Periodicity of trigonometric functions.	Circular measure and trigonometry			1	**					1	2
22	B	1.8	Applications of trigonometric ratios to simple problems in two dimensions	Circular measure and trigonometry			1	*					1	2
23	A	4.3	The coordinates of the mid-point joining two points	Cartesian coordinate geometry			1	**					1	2
24	C	4.6	Angle between two lines.	Cartesian coordinate geometry	1	*							1	2
25	B	4.2	The straight line and its equation	Cartesian coordinate geometry					1	*			1	2
26	A	4.4	Condition for two lines to be parallel or to be perpendicular	Cartesian coordinate geometry					1	*			1	2
27	B	Maths	Linear inequalities	Quadratic functions and inequalities			1	**					1	2
28	B	Maths	Quadratic inequalities	Quadratic functions and inequalities			1	**					1	2

SN	Correct Key	Section of the syllabus	Sub topics	Topic	Knowledge	Difficulty Level	Comprehension	Difficulty Level	Application	Difficulty Level	Higher Abilities	Difficulty Level	Overall Weighting	% Allocated
29	A	11	Inequality involving absolute value.	Absolute value function			1	*					1	2
30	B	6.1	Objective functions.	linear programming							1	**	1	2
31	A	6.1	Objective functions.	linear programming							1	**	1	2
32	A	Maths	Composite Functions	Functions			1	**					1	2
33	D	Maths	Compound Functions	Functions			1	*					1	2
34	C	Maths	Inverse Functions	Functions			1	**					1	2
35	B	7.3	Transformations in a plane associated with 2 x 2 matrices	Application and transformation of the 2-Demisional plane	1	*							1	2
36	A	7.1	Application and interpretation of 2 x 2 matrices	Application and transformation of the 2-Demisional plane	1	**							1	2
37	C	7.6	The invariant point or invariant line.	Application and transformation of the 2-Demisional plane							1	*	1	2

38	D	8.1b	Binary operations	Elementary group theory			1	**			1	**	1	2
39	D	8.1b	Identity element	Elementary group theory	1	*							1	2
40	D	8.2	Order of a group	Elementary group theory					1	*			1	2
41	C	5.9	Equation of a line segment	Vectors	1	*							1	2
42	C	5.9	Direction of the vector equation of the line	Vectors	1	*							1	2
43	D	5.4	Angle between two vectors.	Vectors			1	*					1	2
44	C	5.8	Unit Vector	Vectors					1	*			1	2
SN	Correct Key	Section of the syllabus	Sub topics	Topic	Knowledge	Difficulty Level	Comprehension	Difficulty Level	Application	Difficulty Level	Higher Abilities	Difficulty Level	Overall Weighting	% Allocated
45	B	13.1 b	Differentiation of standard functions of x^n	Differentiation			1	*					1	2
46	B	13.1 b	Differentiation of standard trigonometry functions	Differentiation	1	*							1	2
47	B	13.1 d	Application to gradients, stationary points, tangents and normal.	Differentiation					1	*			1	2
48	C	14.1a	Integrate simple functions of x^n	Integration			1	*					1	2

49	B	14.1 b	Integration of <i>sinax</i> and <i>cosax</i>	Integration	1	*							1	2
50	B	14.2 c	Application of integration	Integration					1	*			1	2
				TOTAL	15	0	21	0	10	0	4	0	50	100
				%	30	0	42	0	20	0	8	0	100	
				Difficulty Level	*	**	***							
				TOTAL	33	17	0							
				% Allocated	66	34	0							

TOS FOR PAPER 2

SN	Section of the syllabus	Topic	Marks Allocated	Knowledge	Difficulty Level	Comprehension	Difficulty Level	Application	Difficulty Level	Higher Abilities	Difficulty Level	Overall Weighting		
												% Allocated for the question	Difficulty Level	% Allocated
SECTION A														
1i	9.2, 9.3	Polynomials	4	1	*	2	**	1	*			6.060606	20*	54.054
1ii	12.3	Quadratics functions and simple equations	4	2	*	2	**					6.060606		
2i	2.1	Permutations, Combinations and Binomial theorem	3	1	*	2	**					6.060606		
2ii	2.2	Binomial theorem for expansion of (a + b) ⁿ , for positive integral indices n.	4			3	**	1	*			6.060606		
3	3.5	Sequences	8	2	*	4	**	2	*			12.12121	17**	45.946
4i	8.1a&b	Elementary Group theorem	5	1	*	2	*	1	*	1	*	6.060606		
4ii	7.1 & 7.2	Application and transformation of the 2-d plane	5	1	*	2	**	1	**	1	*	7.575758		
5	6	Linear programming	8	1	*	3	**	2	**	2	**	12.12121		
6i	1.7	Circular measure and Trigonometry	3	1	*	2	*					4.545455		
6ii	1.6	Circular measure and Trigonometry	6	2	*	3	**	1	**			9.090909		
7	5.9& 5.4	Vectors	8	2	*	5	**	1	**			12.12121		
8i	13.1c	Differentiation	3			2	**	1	*			6.060606		
8ii	14.2 (c)	Integration	5	1	*	3	**	1	*			6.060606		
		TOTAL	66	19	0	30	0	10	0	7	0	100		100
		OVERALL % WEIGHTING FOR SECTION A		21.212		53.03		15.152		10.606		100		

SN	Section of the syllabus	Topic	Marks Allocated	Knowledge Difficulty Level	Comprehension	Difficulty Level	Application	Difficulty Level	Higher Abilities	Difficulty Level	Overall Weighting			
											% Allocated for the question	Difficulty Level	% Allocated	
	SECTION B													
9i	16.1	Dynamics	6	2	*	2	**	2	**			11.76471	14*	53.846
9ii	16.5	Dynamics	5	1	*	3	**	1	**			9.803922		
9iii	16.7	Dynamics	6	2	*	2	**	2	*			11.76471		
10i	15.1	Application of Calculus	6			4	**	2	**			11.76471		
10ii	15.2	Application of Calculus	5	1	*	3	**	1	*			9.803922		
10iii	15.3	Application of Calculus	6	2	*	2	**	2	*			11.76471	12**	46.154
11i	17.3	Statics	5	1	*	3	**	1	*			9.803922		
11ii	17.3	Statics	6	2	*	3	**	1	*			11.76471		
11iii	18.1, 18.2	Work done and Power	6	2	*	3	**	1	*			11.76471		
		TOTAL	51	13	0	25	0	13	0	0	0	100		100
		OVERALL % WEIGHTING FOR SECTION B		25.49		49.02		25.49				100		
SN	Section of the syllabus	Topic	Marks Allocated	Knowledge	Difficulty Level	Comprehension	Difficulty Level	Application	Difficulty Level	Higher Abilities	Difficulty Level	Overall Weighting		
												% Allocated for the question	Difficulty Level	% Allocated

SECTION C														
12a, b	19.3,20.1	Descriptive Statistics, Measures of central tendency and measures of desperation	8	3	*	3	**	2	*			15.68627	10*	55.555
12c ,d	20.1, 21.5	Measures of Central Tendency and Dispersion	9	3	*	4	**	2	*			17.64706		
13i	23.2	Elementary distributions	9	3	*	4	**	2	*			17.64706		
13ii	23.1	Elementary distributions	8	3	*	3	**	2	*			15.68627	8**	44.555
14i	22.2 b	Probability	8	2	*	4	**	2	**			15.68627		
14ii	22.2 (c) ,(d)	Probability	9	2	*	3	**	3	**			17.64706		
		TOTAL	51	16	0	20	0	15	0	0	0	100		100
		OVERALL % WEIGHTING FOR SECTION C		31.37255		39.21569		29.41176			100			
		OVERALL TOTAL(A + B)	117	34	0	51	0	25	0	7	0	117		
		OVERALL % WEIGHTING SECTIONS A and B		29.05983	0	43.58974	0	21.36752	0	5.982906		100		
		OVERALL TOTAL(A + C)	117	35	0	50	0	25	0	7	0	117		
		OVERALL % WEIGHTING SECTIONS A and C		29.91453	0	42.73504	0	21.36752	0	5.982906	0	100		

QUESTION BY QUESTION ANALYSIS

A: POPULARITY AND GENERAL PERFORMANCE IN PAPER 2

Approximately 1420 sample scripts were sampled

QUESTION NUMBER	0 to 2	3 to 5	6 to 8	09 to 11	12 to 14	15 to 17	Maximum Mark for the question	Number of Scripts sampled for the question	2023 % of popularity	2022 % of popularity	2023 Mean mark	2022 Mean mark	2023 variance	2023 (δ)	2022 (δ)	2023 NO PASSED	2023 OVERALL % PASSED	2022 NO PASSED	2022 OVERALL % PASSED	2023 NO >=70	2023 % with NO >=70	OBSERVATION
1	131	503	766				8	1400	98.59	98.8	5.36	5.46 ₂	3.91	1.98	2.06	101 ₈	72.7 ₁	108 ₈	75.43	766	54.71	Slight decrease in popularity and performance.
2	336	425	491				7	1252	88.17	99.5	4.37	5.19	5.81	2.41	2.07	775	61.9	102 ₁	70.03	576	46.01	Slight decrease in popularity with slight decrease in performance.
3	199	386	676				8	1261	88.8	91.8	5.13	5.63 ₄	4.96	2.23	2.27	869	68.9 ₁	114 ₇	85.63	676	53.61	Decrease in popularity with decrease in performance.
4	43	307	615	370			10	1335	94.01	97.3	6.95	5.46 ₄	5.72	2.39	2.39	103 ₆	77.6	853	60.08	103 ₆	77.6	Slight decrease in popularity with significant increase in performance.
5	397	523	202				8	1122	79.01	78.5	3.48	2.85 ₆	4.53	2.13	2.35	464	41.3 ₅	504	43.98	202	18	About the same popularity and performance.
6	159	368	573	59			9	1159	81.62	89.4	5.38	4.59	5.62	2.37	2.8	755	65.1 ₄	775	59.36	479	41.33	Slight decrease in popularity with a slight increase in performance.
7	301	195	375				8	871	61.34	66.8	4.25	2.43 ₇	6.92	2.63	2.6	472	54.1 ₉	430	44.15	375	43.05	Decrease in popularity with significant increase in performance.

QUESTION NUMBER	0 to 2	3 to 5	6 to 8	09 to 11	12 to 14	15 to 17	Maximum Mark for the question	Number of Scripts sampled for the question	2023 % of popularity	2022 % of popularity	2023 Mean mark	2022 Mean mark	2023 variance	2023 (δ)	2022 (δ)	2023 NO PASSED	2023 OVERALL % PASSED	2022 NO PASSED	2022 OVERALL % PASSED	2023 NO >=70	2023 % with NO >=70	OBSERVATION
8	282	351	318				8	951	66.97	65.9	4.11	2.188	5.67	2.38	2.58	494	51.95	372	38.67	318	33.44	Slight increase in popularity with a significant increase in performance.
9	15	25	23	27	39	20	17	149	10.49	7.95	9.21	8.492	22.2	4.71	4.81	84	56.38	64	55.172	59	39.6	Slight increase in popularity with a slight decrease in performance.
10	9	12	22	32	11	14	17	100	7.042	5.14	8.98	6.575	18.6	4.31	6.38	57	57	55	73.333	25	25	Slight increase in popularity with a significant decrease in performance.
11	5	22	26	22	14	12	17	101	7.113	4.45	8.6	3.367	17.7	4.21	4.65	48	47.52	20	30.769	26	25.74	Slight increase in popularity with a significant increase in performance.

12	113	154	154	185	241	200	17	847	59.65	76.1	11.8	10.0 1	3.22	1.79	4.41	626	73. 91	6 9 9	62.92	441	52. 07	Significant decrease in popularity with a significant increase in performance.
13	61	99	113	112	111	98	17	709	49.93	43.6	7.59	5.38	30.2	5.5	5.85	321	45. 28	3 6 0	56.52	209	29. 48	Slight increase in popularity with a slight increase in performance.
14	44	106	219	231	216	150	17	966	68.03	57	9.85	5.93	17.3	4.15	5.14	597	61. 8	3 5 8	43.03	366	37. 89	Significant increase in popularity with a significant increase in performance.

B: SHORTCOMINGS OF CANDIDATES

			SHORTCOMINGS OF CANDIDATES
Question	SUB PART	TOPIC	Current year 2023
		SECTION A	
1	I	Polynomials	Some candidates do not master that if $(x - \alpha)$ is a factor of $f(x)$ then $f(\alpha) = 0$ Some too don't master the long division method very well.
	ii	Quadratics functions and simple equations	Knowing $\alpha + \beta$ and $\alpha\beta$ Some candidates were not able to find $\alpha^2 + \beta^2$.
2	i	Permutations, Combinations	Most of the candidates are confused when to use permutation and combination.
	ii	Binomial theorem	Some candidates do not master how to use the general formulae to expand a binomial with negative index.
3		Sequences	Some candidates could not appreciate that the question is an arithmetic progression.

4	i	Group theory	Some candidates do not have mastery of modular arithmetic.
	ii	Transformation	Some were not able to find the inverse of a 2 by 2 matrix and the point whose image has been given.
5		Linear programming	Poor mastery of the topic.
6	i	Circular measure and trigonometry	Some candidates were unable to use the appropriate trigonometric identity.
	ii	Circular measure and trigonometry	Some candidates were un able to fill the table and draw their graph properly. Some used straight lines to connect the points. Some were unable to identify the maximum turning point.
7		Vectors	Poor mastering of topic by most candidates. Some could not find the position vector of the point of intersection of two lines and the cosine of the angle between the lines.
8	i	Differentiation	Poor mastery of differentiation of rational functions.
	ii	Integration	Poor mastery of the integration of polynomial and trigonometric functions, by some candidates.

		SECTION B	
9	i	Dynamics (kinematics)	Poor mastery of applications of differentiation i.e. $v = \frac{dr}{dt}$ and $a = \frac{dv}{dt}$, and relative velocity.
	ii	Dynamics (Conservation of linear momentum)	Poor mastery of the topic. The few who attempted were unable to identify the opposite direction of movement of the particles. Some too were unable to quote the formula for kinetic energy.
	iii	Dynamics(Motion of connected particles)	The few who attempted it could not apply Newton's second law of motion properly and hence could not come with the equations of motions or even come out with the correct values of acceleration and tension.
10	i	Application of Calculus (connected rate of change)	Poor mastery of topic and to apply the chain rule. i.e. $\frac{dV}{dt} = \frac{dV}{dr} \cdot \frac{dr}{dt}$ $\frac{dA}{dt} = \frac{dA}{dr} \cdot \frac{dr}{dt}$
	ii	Application of Calculus(volume of revolution)	Poor mastery of the topic. The few who attempted used $\pi \int y \, dx$ instead of $\pi \int y^2 dx$. Some even omitted the π completely.

	iii	Application of Calculus (centre of gravity)	Poor mastery of the topic. The few who attempted it never realized that the position vector of the centre of gravity is $\frac{\sum m_i x_i}{\sum m} i + \frac{\sum m_j y_j}{\sum m} j$
11	i	Statics(forces)	Very poor mastery of the topic. Much still have to be done on equilibrium of forces.
	ii	Work done	Most candidates could not calculate the work done, given the force and the position vectors.
	iii	Power	Most candidates could not find the work done against gravity and the power.

		SECTION C	
12		Descriptive Statistics, Measures of central tendency and measures of dispersion (mean and variance of grouped data)	Many candidates used class limits and mid interval values, instead of class boundaries to draw a cumulative frequency curve. Some rather drew histograms, bar charts and frequency polygons. Many could not estimate the median from the graph or calculate. Many too were unable to use mid interval values to get $\sum fx$ or $\sum fx^2$ to evaluate their mean and variance.
13	i	Elementary notions of discrete probability distributions	Most candidates couldn't identify that for a probability mass function $\sum p(x) = 1$. Some could not evaluate the mean and the variance.
	ii	Binomial distribution	Poor mastery of topic. It seems many teachers don't teach it .
14	i	Probability	Poor mastery of topic. Some could not quote the formulas $P(A \cap B) = P(A) \times P(B)$ for independent events and $p(A \cup B) = p(A) + p(B) - p(A \cap B)$ correctly.
	ii	Probability	Poor mastery of topic. Some who attempted it misinterpreted the question especially on the tree diagram.

SUGGESTIONS AND RECOMMENDATIONS

A: TO STUDENTS:

- Are advised to acquire at least one basic text book for the subject
- Are to study Additional Mathematics as other subjects
- Follow up lectures closely and do assignments.
- Should acquire formulae booklets, calculators and master to use them
- Always consult past questions after every treated topic

B: TO TEACHERS:

- To acquire text books for the subject
- To cover the relevant syllabus before the examination
- To attend seminars and workshops
- To acquire and use the prescribed syllabus and scheme of work
- To improve on their research ability towards the subject
- To encourage the students to take the subject rather than discouraging them by teaching materials above their scopes
- To teach all the areas of the syllabus in order not to allow the students wanting during examinations
- To perfect themselves by teaching across the first and second cycle if possible
- To keep abreast with the current trends affecting the subject i.e. change of some areas of the syllabus and question setting.
- **Read the subject reports for each year.**

C: TO OTHER STAKEHOLDERS

- The pedagogic offices should organize workshops and seminars to redress the teaching of the topics that are poorly attempted by candidates.
- The pedagogic offices should make frequent checks and inspections in schools to redress the teaching of these topics.
- School authorities should make sure that the program for additional mathematics begins in form four with at least two periods a week.
- School authorities should make subject reports available to the teachers to read them departmentally.
- School authorities should endeavor to sponsor their teachers for seminars and workshops.
- The parents should acquire basic text books for their children and past questions.

CONCLUSION:

The necessity of 575 Additional Mathematics cannot be over emphasized as it is the foundation of mathematicians, statisticians and engineers.

0580 – PHYSICS

Introduction

The 2023 subject report will cover mainly Paper 2 which was marked by the examiners. The marking guides were discussed and appropriate modifications made on them to come out with the marking schemes that were used. All the 09 topics on the syllabus were covered.

Candidates' performance analysis

Section I: Compulsory questions

- Well answered questions were: 2, 4 and 5
- Poorly answered questions were: 1, 3 and 6
- Most candidates attempted all the questions in this section.

Section 2: Alternative questions where candidates had to choose

- Well answered questions were: 7 Or, 8 Either and 9 Or.
- Poorly answered questions were: 7 Either, 8 Or and 9 Either.
- Popular questions were: 7 Or, 8 Either and 9 Or
- Unpopular questions were: 7 Either, 8 Or and 9 Either.

Generally, candidates performed better in the following areas: Temperature, Energy and Current Electricity; and performed poorly in Mechanics, Optics and Static Electricity.

The mean score was 29.0 %, an increase of 0.8 % from the 28.2 % registered last year. The lowest score was 00 %, while the highest score was 99 %, compared with 00 % and 97 %, respectively, of last year.

The abilities tested:

Year	Knowledge	Comprehension	Higher ability
2022	33 %	37 %	30 %
2023	29 %	39 %	32 %

From the table above, it is observed that the abilities tested this year were a little in favour of higher ability than the ideal (30%, 40%, 30%).

Observations of Examiners

1. The examiners remarked that:
 - the examination was easier than that of last year.
 - most of the questions were direct, obvious and void of ambiguities.
 - the parallel questions were well marched.
 - the language used was simple, clear and concise.
 - almost all the questions involving calculations needed the use of calculators.
 - Candidates performed better in questions involving explanations and daily occurrences than in those involving calculations.
2. Most candidates' performance indicated that the syllabus was about 90% covered in schools. However, mechanics was poorly answered giving the impression that, being the last topic in the teaching syllabus, it was not fully covered.

3. Candidates performed better in the plotting and interpretation of graphs as compared to last year.
4. A good number of candidates still failed to quote the correct units of calculated quantities. **Unit penalty for various physical quantities was as high as 24 marks.**
5. Many candidates still had poor phrasing of definitions and laws.
6. There was however an improvement in describing experiments.
7. Physically challenged candidates were not considered in the setting of the questions.
8. Very few cases of absences were recorded as compared to the past years.

Question by question analysis

This section deals only with questions that were poorly answered in Paper 2.

Question		Comments
1 a)		Most candidates failed to distinguish conductors from semiconductors as: Conduction in conductors is due to movement of electrons while in semiconductors it is due to movement of electrons and holes. Or The conductivity of conductors decreases with increase in temperature while that of semiconductors increases with temperature.
2	i)	Some candidates did not know that during diffraction, wavelength remains unchanged.
3	iii)	Many candidates failed to explain that the transformer will not function with a d.c because it cannot produce a changing magnetic field, hence will not induce an emf in the secondary coil.
4 a)		Some candidates failed to appreciate that the sum of the p.ds across components in series is equal to the p.d across the battery.
6	iii)	Most candidates could not explain that water in the wet cloth will conduct charges away as not to charge the rod.
	iv)	Most candidates failed to mention that the earthing is disconnected with the rod still in place.
7 c)	iii)	Most of the few candidates who attempted this question failed to: – indicate the forces on the diagram using arrows. – recognise that the weight of a uniform object acts at its centre. – indicate the normal reaction force vertically upwards from the pivot.
	iv)	Most of the few candidates who attempted this question also could not apply the principle of moments in calculating the load, X.
7 d) e)	i)	Most candidates failed to define specific heat capacity as the amount of energy required to change the temperature of a unit mass of a substance by one unit.
	iii)	Most candidates could state that water is used as a cooling liquid in car radiators because it has a high specific heat capacity, but could not go further to explain that it will absorb much heat for a small change in temperature.
8 b)	i)	Most candidates could not define emf as the work done per unit charge in converting other forms of energy to electrical energy in a power source.
8 e) f)	i)	Most candidates failed to define total internal reflection as the entire reflection of light at the boundary between two media when moving from a dense to a less dense medium.
		Most candidates could name a member of the electromagnetic spectrum, state its use,

		but could not state the wavelength range and the correct property related to the use.
9	b)	Most candidates still failed to define half-life as the time taken for the activity (or count rate or number of radioactive nuclides) in a sample to drop to half its original value.
9	d)	Most candidates failed to state that a microphone converts sound energy to electrical energy.
	e)	ii) Some candidates could not calculate the energy supplied to the motor as: $E = IVt$
	f)	iii) Some candidates could not calculate the work done in lifting the load as: $W = Fs$
		iii) Most candidates could state that the mass (or volume) of water decreases in the dry season but failed to conclude that such a decrease leads to a drop in the potential energy needed to turn the turbines.

Suggestions, recommendations and conclusion

Students should do a lot of practice on:

1. plotting and interpreting graphs.
2. physical quantities and their units.
3. drawing of ray diagrams.
4. describing experiments.
5. working with numbers written in standard form and decimals.
6. use of calculators.
7. past GCE question papers.

Students should participate actively in the on-going Distance Learning program organised by MINESEC whenever possible.

Teachers should:

1. Share the experience got from marking with their colleagues by having workshops during departmental meetings, Divisional and Regional seminars.
2. Use the current GCE syllabus alongside the teaching syllabus when preparing candidates for this examination.
3. Do practical demonstrations whenever possible, even using local material.
4. Drill the students on question answering techniques, laying emphases on the importance of units of physical quantities.
5. Generate questions especially MCQs after each lesson, using the students' wrong answers as distractors, to build up a question bank.
6. Acquire updated Physics text books and other resource materials especially this Subject Report
7. Endeavour to teach all the classes as they acquaint themselves with the entire syllabus.
8. Revisit topics taught in lower forms before the students write the GCE (E.g. Optics).
9. Write on the board all technical words, definitions and laws for students to copy.

10. Use the Competency Base Approach (CBA) – relating concepts and principles to practical real life situations in their teaching to make the teaching and learning of the physical principles and concepts relevant.
11. Contribute and participate actively in the on-going Distance Learning program organised by MINESEC and digital lessons.

To other stakeholders

1. The government should consult the GCE Board when selecting official textbooks for the subject.
2. The government should ensure an equitable distribution of Physics teachers in the schools.
3. School authorities should update the equipment pools of their laboratories and procure pedagogic resources to ease the teaching/learning process.

0590 – LOGIC

INTRODUCTION:

0590 Logic for June 2023 session of the G.C.E examinations was of required structure and format. The whole syllabus was covered, TOS was well respected, and all the rubrics were clear in both papers. The printing of the questions was quite acceptable in both papers. The questions were within the reach of the average candidate in both papers. About ten thousand four hundred and forty-eight (10.448) candidates registered for 590-Logic for the 2023 session. Ten thousand, two hundred and thirty-one (10.231) worked scripts were marked. Some candidates scored very low marks while some had excellent marks. The examination is composed of two papers:

I. PAPER ONE:

This paper was made up of 50 compulsory Multiple-Choice Questions (MCQs), covering the whole subject syllabus. The weighting of this paper was (forty) 40% of the total marks for the subject. About 75% of the questions were within the reach of the average candidate though there were some three (3) three-star questions to distinguish the very smart candidates. No key was reviewed. The duration for this paper was one hour thirty minutes (1 hour 30mins). About 40% of the questions tested candidates' basic knowledge of Logic; 30% tested their understanding of logical concepts; 20% tested the application of logical principles while 10% tested higher abilities. The level of difficulties was as follows: 'One-star (*) questions-65%; Two-star (**) questions-30%; Three-star (***) questions-5%. The scanner scored this paper. From an overview by the subject panel and examiners at the end of the marking process, it can be estimated that there will be an overall performance of about 75%.

II. PAPER TWO:

This paper is made up of two sections namely: (a) Structural and (b) Problem- solving. Each section is made up of three questions, making a total of six (6) questions in this paper. The candidates are required to answer (05) five questions taking all the three (03) questions in section A and any two from section B. The total score is supposed to be 100 marks. The weighting of the paper was 60% of the total marks for the subject. The duration for this paper was two hours, thirty minutes (2 hours 30 mins). Some candidates answered more than five questions, but all the six answers were marked and considered with the least mark in section B rejected. **Four candidates** wrote nothing in this paper except the information pertaining to their identification. The overall performance in this paper was estimated to be about 50%. Section A was compulsory while the most popular questions in section B were Q4, \$ Q5 while Q6 was the most unpopular. The mark range in this paper was within 00%-99%. **Thirty-five candidates scored 90 % and above with**

two (02) candidates scoring exceptionally 99%, two (02) candidates scoring 98%, two (02) scoring 97%, two (02) candidates scoring 96% and 01 candidate scoring 95%. Fifty-five (55) candidates scored 3% and below. Thirteen (13) candidates scored a zero (00%), Eleven (11) candidate scored 01%, thirteen (13) candidates scored 2 %, and sixteen (16) candidates scored 3%. This paper was quite within the level of the candidates. It was the sixth time that this new structure of paper two was tested.

The following table gives the test blueprint of paper 2

Content: Topics on the syllabus	Process dimension (Assessment objectives)				Question Difficulty level
	Knowledge (A)	Comprehension (B) (understanding)	Application (C)	Higher Ability (D)	
1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.8, 1.9,	Q1c(i)(ii)* Q1b (i)(ii)* Q1a(i)(ii)*	Q1d(i) (ii)* Q1e(i)(ii)*			*
Idem	Q2c(i)*, Q2d(i)(ii)* Q2e(i)(ii)*	Q2b(i) (ii)* Q2c(ii)*	Q2a*		*
Idem	Q3a(ii)* Q3b(i) (ii)* Q3c(i) (ii)* Q3e(i)(ii)*	Q3a(i)* Q3d(i)(ii)**			*
Idem	Q4d(ii)*	Q4b(ii)	Q4a,c,d,e* Q4b(i)		*
Idem			Q5a,b, c, d	Q5a(ii)* Q5c(ii)* Q5d(ii)	*
Idem			Q6a(i),(ii)* Q6b** Q6d	Q6e** Q6c**	**

IV QUESTION BY QUESTION ANALYSIS:

QUESTION ONE:

It was a compulsory question with about 99% of candidates attempting it. Mark range was from 00-20. Actual performance was about 85% due to candidates' poor mastery of the rule of contrariety, and the figure of the syllogism.

RECOMMENDATIONS:

- Teachers should lay emphasis on rules of the different forms of opposition and the figure of the syllogism.

QUESTION TWO:

It was a compulsory question. About 98% of candidates attempted it. Mark range was from 00-20. Actual performance was about 65% due to candidates' inability to master the classification of terms and rules.

RECOMMENDATIONS:

- Teachers should make clear distinction between the various types of terms and teach it with examples.

QUESTION THREE:

It was a compulsory question with about 90% of the candidates attempting it. Mark range was between 00-20. Actual performance was about 40% probably due to poor knowledge of conjunction, general rules of the syllogism and hypothetical syllogism.

RECOMMENDATIONS:

- Teachers should always teach and break down these concepts for learners to better assimilate. Examples should be used.

QUESTION FOUR:

It was the most popular question in section B (Problem-Solving) attempted by about 97% of the candidates. Mark range was 00-20. Actual performance was about 60% due to candidates' poor mastery of symbolization in symbolic Logic as well as Fallacies.

RECOMMENDATIONS:

- They should do a lot of practical exercises with the learners on problem-solving techniques.
- Emphasis on the different types of Fallacies.

QUESTION FIVE:

It was a popular question with about 80% of the candidates attempting. Mark range was between 02-20. Actual performance was 50% due to the lack of proper knowledge of the rules of definition, translating propositions into logical forms and testing validity by General rules of the categorical syllogism.

RECOMMENDATIONS:

- Teachers should teach definitions with practical examples showing learners how to criticize using the rules.
- Teachers should teach rules of the categorical syllogism with examples and exhaustively teach every aspect of the syllabus.

QUESTION SIX:

It was an unpopular question with about 25% of candidates attempting. Mark range was between 0-20. Actual performance was 30% due to candidates' inability to determine truth-values of compound statements and expressing statement forms into ordinary language.

RECOMMENDATIONS:

- Teachers should lay emphasis on the General Rules of the Categorical Syllogism and show learners how to test validity using them.
- Teachers should do many exercises on determining truth- values in Symbolic Logic

GENERAL RECOMMENDATIONS

TO CANDIDATES IN RELATION TO THE EXAMS:

- Candidates should not speculate because the questions cover the entire syllabus.
- Candidates should buy Logic textbooks and do as many exercises as possible to better master the concepts and rules.
- Candidates should be very regular and consistent in school and attend classes because the topics are interrelated in Logic.
- Candidates should attribute equal importance to Logic like other subjects.

TO TEACHERS:

- Teachers should attend and actively participate in both Regional and National Pedagogic Seminars.
- Teachers should acquire the most appropriate text- books and didactic materials for effective teaching in Logic.
- Teachers should identify problem areas and network with pedagogic inspectors, subject panel members and senior colleagues.
- Teachers should teach Logic with concrete examples and give more exercises and less notes.
- Teachers should acquaint themselves and their students with the structure of Logic in the G.C.E. more especially paper two.
- Teachers should acquire skills and techniques in question setting to set up- to- date questions in preparation for the GCE.
- Teachers should exhaust the syllabuses both in their teaching and evaluation.
- Teachers should teach per CBA.
- Teachers should make the subject admirable and sellable.
- Teachers should always revise form three and four work while in form five.

TO THE SCHOOL ADMINISTRATION:

- School proprietors\ Principals should incorporate Logic as one of their teaching subjects in their different schools from Forms 3-5, since Logic helps in the understanding of other subjects like Mathematics, Computer Science, English Language etc.
- The official time for the teaching of Logic should be respected. Form 3 should have two periods, Form 4 two periods and Form 5 three periods per week. These periods should also be slated at independent hours during which both Arts and Science students are free to offer Logic.
- School Administrators should encourage both Arts and Science students to do Logic and write it in the G.C.E.
- School authorities are strongly advised to send and sponsor their Philosophy/Logic teachers

- to attend Regional and National seminars for capacity building.
- School authorities should encourage the students to buy the required textbooks in Logic to facilitate the teaching and learning process given that it deals with exercises.
- School authorities should sensitize parents on the need and the importance of Logic to their children.
- School authorities should sensitize students and parents to know that Logic is recognized and used in state exams.
- School administrators should give equal value to all subjects on the timetable. Logic should not be treated as a subsidiary subject.

TO PARENTS:

- Parents should encourage and follow up their children to offer Logic because it plays a vital role in the Arts and Sciences.
- Parents should buy the required textbooks for their children.

DUCTION**Overview of the Papers with respect to prescription by the syllabus**

Computer Science Ordinary level is divided into three papers:

- Paper 1–Multiple Choice: This paper had 50 questions and candidates were expected to answer all questions for 30% of the total mark.
- Paper 2–Essay-type questions: Candidates were expected to answer 5 questions out of 7, for 40% of the total mark.
- Paper 3–Practical: Candidates were given three tasks to implement all. This paper constituted 30% of the total mark.

Paper 1, MCQ, was graded using the Optical Mark Reader (OMR).

Paper 2: This Paper tested all major sections of the examination syllabus, giving more than 95% coverage of the examination syllabus.

Paper 3: This paper tested three sections of the syllabus alongside the School Based Assessment (SBA) which is dedicated to practical work giving a 100% coverage of the sections outlined in the Examination Syllabus. The abilities tested in the paper were as required by the syllabus: knowledge: 55%, comprehension: 30%; and application: 15%.

Examination Questions

- One typographic error was observed; The indentation at line 10 of the algorithm in Questions two, caused the result to have two outputs.
- There were no particular questions completely avoided by candidates although some questions were attempted by fewer candidates.

Harmonising marking guide and carrying out trial marking

After a rigorous question by question discussion of the marking guide, proposed inputs were added to marking guide to allow for flexibility and to tolerate other correct scientific interpretations of the questions. Trial marking began in the afternoon the 30th of June 2023 after examiners and assistant examiners had submitted personal documents and the marking guide for paper two harmonised.

Given that all the examiners that corrected the scripts took part in the trial marking, and other possible scientific and logical interpretations were taken into consideration for each question to come out with a flexible and inclusive mark guide, the trial marking exercise was successful.

The examination consisted of three papers; Paper1, Paper2 and Paper3.

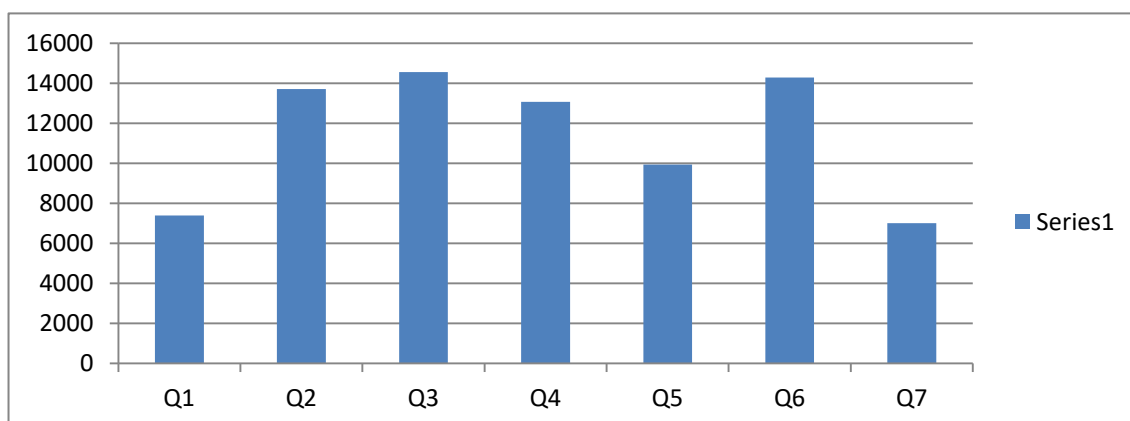
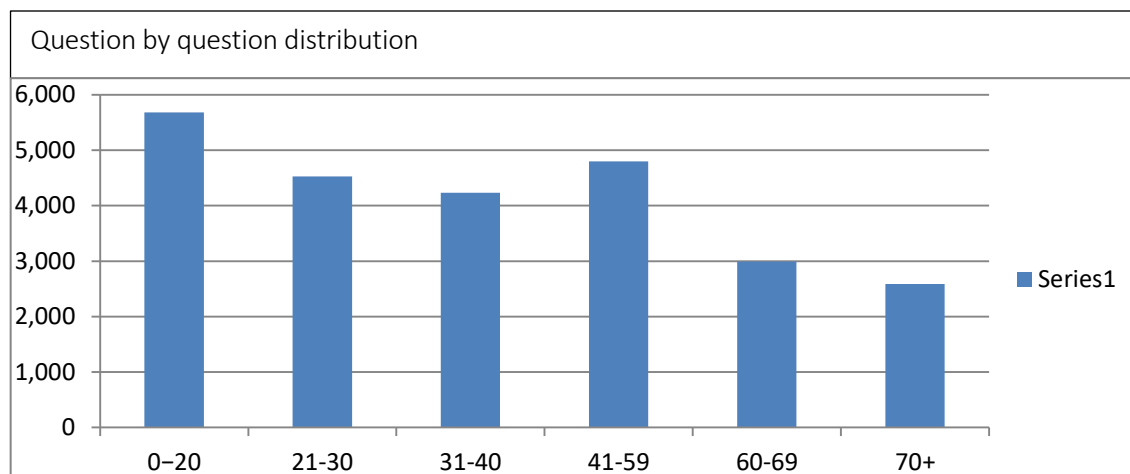
- Paper1 contained 50 compulsory MCQs drawn from the whole syllabus.
- Paper 2 contained 7 questions from which candidates were expected to answer 5. All questions were of equal total marks and drawn such as to cover the whole syllabus.

Paper 3 was a practical examination comprising 3 tasks: Word Processing, Spread Sheets, typing, running and interpreting results of a C or Pascal programming language, executing basic tasks with HTML tags and Designing and Populating Basic Database.

Paper 2

As evidenced from the bar charts below, many candidates attempted questions Q3 and Q6 and clearly more than 24,000 candidates out of the nearly 27,000 candidates attempted each question. An indication that the questions were balanced and covered more than 90% of the syllabus.

	0	1-5	6-9	10-15	16+		No of cand. Attempting Each Question	Total >= 10
Q1	701	1950	2062	1843	838		7394	2681
Q2	484	3048	3358	4455	2364		13709	6819
Q3	725	4281	3940	4273	1328		14547	5601
Q4	819	4427	3152	3340	1321		13059	4661
Q5	856	3256	2430	2389	1007		9938	3396
Q6	1137	3847	4983	3101	1207		14275	4308
Q7	1149	2679	1459	1294	421		7002	1715
Total	5,871	23,488	21,384	20,695	8,486	0	79,924	29,181
Counts of Total Marks per Candidate								
Mark	0-20	21-30	31-40	41-59	60-69	70+		
Count	5,681	4,526	4,234	4,797	2,993	2,588		24,819



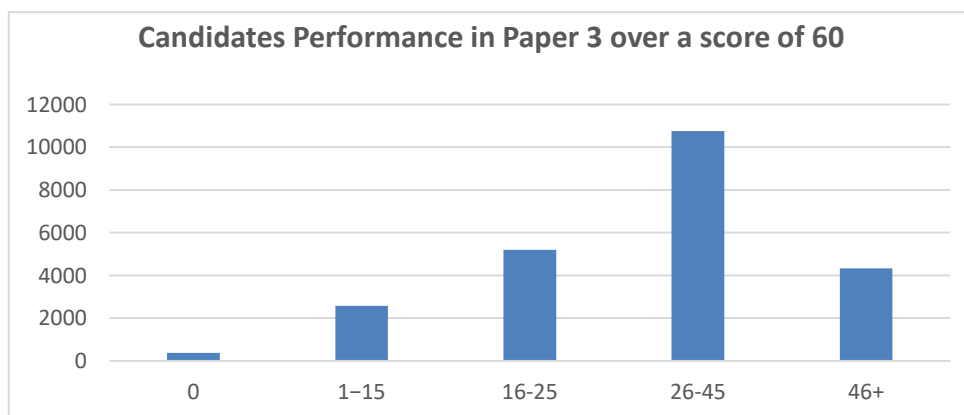
candidates Perfo

Paper 3

As evidenced from the bar charts below:

(a) All the candidates attempted all the three tasks. Task 3 saw many candidates scoring zero.

Statistics Grid For Paper 3 0595 2023						
	0	1 to 9	10 to 15	16 to 20		Total Attempting Each Task
T1	495	3665	8515	5854		18529
T2	1873	7102	5627	4169		18771
T3	4523	10232	3673	174		18602
SBA	2457	12934	9169	1564		26124
Total	9348	33933	26984	11761	0	82026
Counts of Total Marks per Candidate						
Range	0	1–15	16-25	26-45	46+	Total Scripts
Count	382	2583	5202	10751	4328	23246



Recommendations to improve candidate performance:

1. Schools should provide adequate hardware (such as Computer system and printers) for the students to start programming lessons early.
2. The GCE board through the regional inspectorates should always write to schools informing them of the minimum specifications (hardware and software) needed for the examination and on time.
3. There should be sufficient practical classes for candidates before the examination.

Technical Reports: Paper 2

Question by Question Analysis

Q1	(a)(i)	Candidates were expected to state the data types for Product ID, Category, Price Acceptance, Order Quantity and Sales ID. Many candidates answered this question correctly.
	(ii)	They were expected to define a Primary Key and give an example from the given table. Many candidates answered this question correctly.
	(b)(i)	They were expected to describe term for the new online service UMBRELO plans to introduce. Many candidates answered this question correctly.
	(ii)	Candidates were also expected to explain terms update and database in the context of the question. Most candidates did not answer this question correctly. Many decided to define these terms from a generally perspective not in to relation the passage.
	(c)(i)	Candidates were expected to state the condition for the system to validate an Order Quantity. Many candidates answered this question correctly.
	(ii)	They were expected to identify the two types of change over methods described in the passage. Many candidates answered this question correctly.
	(iii)	They were also required to state one disadvantage and one advantage of each change over method in c(ii). About 60% of the candidates answered this question correctly.
Q2	(a)(i)	Candidates were expected to define an algorithm. Most candidates that attempted this question did so correctly. However, this was the least attempted question.
	(ii)	Candidates were expected to explain the problem that the algorithm solves. About 55% of the candidates that attempted this question got it right.
	(iii)	They were expected to state the values of P, N, T, D and A that they algorithm generates. About 40% of the candidates that attempted this question got it right. This topic is still a major problem in most schools.
	(iv)	Candidates were asked to represent the algorithm on a flow chart. About 90% of the candidates who attempted this question got it right.
	(b)(i)	Candidates were asked to one heath problem related to the Long-Term use of the keyboard. This was one of the most answered sub questions for those who attempted this question. Most of the candidates answered correctly.
	(ii)	Candidates were asked to one heath problem related to the Long-Term use of the screen. This was one of the most answered sub questions for those who attempted this question. Most of the candidates answered correctly.
	(iii)	They were expected to state the problem that ergonomics addresses. This sub-question was poorly answered. Most of the candidates rather gave the definition of ergonomic.
Q3	(iv)	The candidates were asked to explain how ergonomics can be used to solve the problems stated in b(i), and (ii). About 45% of the candidate who attempted this sub-question gave the correct explanation.
	(a)(i)	Candidates were expected to draw the logic circuit represented by: $Q = (A.B) + (\bar{A} + \bar{B})$. Most of them answered it correctly. Although a good number of them forgot to label the inputs and outputs of the circuit.
	(ii)	Candidates were asked to copy a given table that represents the Boolean expression in a(i) above and complete. About 30% of the candidates that attempted this question had it correct.
	(iii)	They were to explain what a truth table represents. Most of the candidates got this question wrong.
	(b)(i)	Candidates were expected to explain the term computer network. About 80% of the candidates that attempted this question had it right.
	(ii)	Candidates were expected to explain the term computer ethics. About 80% of the

		candidates that attempted this question had it right.
	(iii)	Candidates were expected to explain the term Network protocol. About 70% of the candidates that attempted this question had it right.
		A majority of the candidates rather gave the definitions of the terms required in b(i), (ii) & (iii).
	(c)	Candidates were to distinguish between tracks and sectors on a magnetic disk with the aid of a sketch. Most candidates perform poorly in this question.
Q4	(a)(i)	Candidates were expected to convert 45 and 69 to binary. Most candidates that attempted this question answered it poorly.
	(ii)	Candidates were expected to convert the binary equivalences in base 16. Most of the candidates rather passed through 10 before getting to base 16. In doing this, most of them made errors and hence failed the question.
	(iii)	They were asked to add 11000111 and 111101. Most of them got this question wrong. Only about 42% of those who attempted this question got it correct.
	(b)	Candidates were expected to explain the term computer interface. Most candidates answer this question correctly.
	(c)(i)	Candidates were expected to define the term Information System. Most candidates answer this question correctly.
	(ii)	Candidates were expected to name four components of an information system and give their functions. Most answered this correctly but could not give the correct functions of each component. Most of them rather defined these terms.
Q5	(a)(i)	Candidates were expected to give a simple definition of a project. This was one of the most answered questions. About 90% of the candidates who attempted this question gave the correct answer.
	(ii)	Candidates were expected to state the role of Gantt Chart in project management. Most of the candidates were rather defining a Gantt Chart.
	(b)(i)	Candidates were required to draw a Gantt Char from the table of activities given. Only about 55% of the candidates who attempted this question got it correct.
	(ii)	Candidates were to calculate the critical path and the duration of the project. Most candidates were able to calculate the critical path and the duration of the project. However, these were only those who drew the correct Gantt Char.
	(c)(i)	The candidates were expected to define Green Computing and state one way to promote it in managing electronic waste from old computers. Many candidates answered this question correctly.
	(ii)	The candidates were expected to describe how green computing can be promoted in managing electronic waste from old computers. This was a very popular question attempted by the candidates. About 90% candidates had the correct answer.
Q6	(a)(i)	Candidates were expected to define an Operating System. This was one of the least attempted questions. Those who attempted only very few gave the correct answer.
	(ii)	Candidates were expected to state two functions of an operating system. Most candidates did not answer this question. This is probably because they were not taught these concepts.
	(iii)	Candidates were expected to define mobile operating system. Few of the candidates that attempted this question had it correctly.
	(iv)	Candidates were expected to give two examples of mobile operating system. Most of the candidates that attempted this question had it correctly.
	(b)(i)	Candidates were expected to define social media. This was one of the most popular question attempted by the candidates. About 95% of this number had the correct definition.

	(ii)	Candidates were expected to give two examples of social networking sites and/ or software. This was one of the most popular questions attempted by the candidates. About 98% of this number had the correct examples.
	(iii)	Candidates were expected to state one advantage and one disadvantage of social networking. This was also another popular question attempted by the candidates. Above 95% of them give the correct advantage but some of them failed the disadvantages.
	(c)	Candidates were expected to list and explain the three 03 stages of the machine cycle. Most candidates had it correct but some used storage as a phase which is not correct.
Q7	(a)(i)	Candidates were expected to write in full the term CAD. This was the least attempted question. Only few of them answered correctly. Even with that, some had some spelling errors.
	(ii)	Candidates were expected to state two examples of CAD software. Very few candidates were able to give the correct examples.
	(b)(i)	Candidates were expected to differentiate between impact and non-impact printers. Amongst the few candidates who attempted this question, they were unable to correctly differentiate between these printers.
	(ii)	Candidates were expected to differentiate between optical storage devices and magnetic storage. Amongst the few candidates who attempted this question, they were unable to correctly differentiate between these devices.
	(iii)	Candidates were expected to differentiate between Coaxial cables and optic fibre cables. Amongst the few candidates who attempted this question, they were unable to correctly differentiate between these cables.
	(iv)	Candidates were expected to differentiate between wireless and physical communication channels. Amongst the few candidates who attempted this question, they were unable to correctly state the characteristics of wireless communication channel. Most of them said wireless communication channels uses air for their transmission which is wrong.

PAPER 3 2023

Task1	Candidates were required to use a Word Processor to carry out this task. Group 1: Candidates who did the task in this group had the lowest performance compared to those in groups 2, 3 and 4. This is due to the challenges they had in answering items f and g, requiring them to insert footnotes and generate automatic table of contents respectively. Group 2: The candidates of this group had problems inserting text as a footer. Most of them inserted the text at the bottom of the page. Also, candidates did not correctly appreciate the different units used when setting margins. Group 3: Candidates did not correctly appreciate the different units used when setting margins. Group 4: The candidates of this group had problems inserting text as a footer. In addition, candidates had some challenges splitting specific portion of text into columns. Recommendation Teachers are advised to reinforce the teaching of the following concepts of Word processors: 1. Inserting references such as footnotes, endnotes and table of contents. 2. Setting page margins, paying attention on the units such as inches, centimeters, millimeters, points... 3. Inserting and modifying headers and footers. 4. Laying out text into columns, with some attention to specific portion of text.
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Task2	Candidates were required to use a Spread Sheet to carry out this task. Group 1: Candidates of this group had serious difficulties in inserting a column chart with the correct data. Some candidates struggled with cell referencing in writing formulae. Group 2: Some candidates struggled with cell referencing in writing formulae. Many candidates were not able to use the IF function correctly. Group 3: Some candidates struggled with cell referencing in writing formulae. Many candidates were not able to use the IF function correctly. Group 4: Some candidates struggled with cell referencing in writing formulae. Many candidates were not able to use the IF and the COUNTIF function correctly. Recommendation: Teachers are advised to reinforce the teaching of the following concepts of Spread sheets. 1. Inserting Charts in spreadsheets and selecting appropriate Chart data. 2. Cell referencing in spreadsheets: Absolute and Relative referencing 3. Using inbuilt spreadsheet functions such as (a) IF b) SUMIF c) COUNTIF d) MAX e) AVERAGE
Task3	Candidates were required to use a C or Pascal compiler to accomplish the tasks in groups one, and four, a text editor and an appropriate web browser in group two and a DBMS in group three. Group 1: Many candidates of this group used the correct compiler. They also entered the provided code correctly. However, many could not explain the purpose of the program. Only few could report the output produce correctly. Group 2: Many candidates had difficulties identifying the role of HTML tags. Group 3: Test Items were attempted correctly by most candidates. However, some candidates did not attempt this question. Group 4: Many candidates of this group used the correct compiler. They also entered the provided code correctly. However, many could not explain the purpose of the program. Only few could report the output produce correctly. Recommendation: Teachers are advised to do the following: 1. Enable candidates to explain what a program does by appreciating the input-processing-output process where applicable. 2. Effectively teach web authoring. 3. Effectively guide candidates to carry out projects on implementing a database using a DBMS.
SBA	Teachers are called upon to be objective when evaluating these projects by following the prescription of the Sample Evaluation Form.