

# **GENERAL RÉSUMÉ**

## **1. STANDARD OF THE PAPERS**

All the Chief Examiners reported that the standard of the papers was comparable to that of the previous years. They reported that the questions were unambiguous and covered all the topics in the syllabuses.

## **2. BUSINESS SUBJECTS**

### **(1) PERFORMANCE OF CANDIDATES**

The Chief Examiners for Business Management, Principles of Cost Accounting and Typewriting reported an improvement in the performance of candidates while Chief Examiners for Clerical Office Duties and Financial Accounting reported that there was a decline in performance.

### **(2) SUMMARY OF CANDIDATES' STRENGTHS**

The Chief Examiners noted that candidates were able to:

#### **(a) FINANCIAL ACCOUNTING**

- correctly explain the term “accounting concepts”.
- correctly explain the business entity and going concern concepts.
- successfully apportion the common expenses in the Departmental Trading, and Profit and Loss Account.
- rightly deduce sales and purchases figures from a data of incomplete records.
- correctly explain entrance fees and subscriptions as sources of funds of not-for-profit making organizations.
- explain the following banking terms:
  - i. Bank charges;
  - ii. Standing order;
  - iii. Dishonoured cheques;
  - iv. Unpresented cheques;
  - v. Uncredited cheques.
- rightly prepare with the appropriate workings ledger accounts on the issue of shares.

#### **(b) PRINCIPLES OF COST ACCOUNTING**

- explain cost.
- distinguish between the following costing terminologies:
  - i. Controllable and uncontrollable cost;
  - ii. Product and period cost;
  - iii. Cost unit and unit cost.
- explain the following methods of remuneration:
  - i. Piece rate;
  - ii. Time rate.
- explain the following terms:
  - i. Normal loss;

- ii. Waste;
- iii. Scrap;
- iv. Abnormal loss.
- define budget.
- outline the benefits of a budget to an organization.
- prepare stock ledgers using Last in First Out and Weighted Average methods of costing issues.

(c) **BUSINESS MANAGEMENT**

- identify the requirements of the questions they answered very well.
- express themselves clearly in the English Language and wrote legibly.
- answer the required number of questions including the case study.
- answer very well the questions on:
  - i. Motivation and Maslow's Hierarchy of Needs;
  - ii. Functions of Central Bank and Commercial Bank;
  - iii. Conditions that must be met to make a contract legally binding.

(d) **TYPEWRITING**

- use correct date for the letter that is, 24<sup>th</sup> September, 2021.
- choose correct paper sizes. Some also used the pre-printed letterhead and was accepted.
- understood the rubrics and followed through appropriately, i.e. use of line spacing.
- follow marginal instructions to a greater extent.
- do the tabulation so well and therefore secured high marks.

(e) **CLERICAL OFFICE DUTIES**

- explain the components of the computer.
- demonstrate enough knowledge about how to use a Petty Cash Book.

(3). **SUMMARY OF CANDIDATES' WEAKNESSES**

The Chief Examiners observed the weaknesses of some of the candidates which include their inability to:

(a) **FINANCIAL ACCOUNTING**

- appropriately describe balances carried down and balances brought down.
- correctly describe the items in ledger accounts.
- prepare the Revaluation Account upon the admission of a new partner into the firm.
- properly explain the following accounting concepts:
  - i. periodicity concept;
  - ii. historical cost concept;
  - iii. consistency concept.
- adequately explain the operation of petty cash book using the imprest system.
- compute the profit element on goods invoiced by Head office to Branch at cost plus a predetermined percentage.
- explain accrual concept as matching concept.

(b) **PRINCIPLES OF COST ACCOUNTING**

- explain premium bonus.
- state the factors to consider before instituting incentive schemes in a firm.
- give examples of cost units for breweries, pharmaceuticals and soliciting firms.
- prepare journal entries to record cost transactions.
- compute suitable overhead absorption rates for different operations departments.
- prepare profit statements for two separate months using marginal costing approach.

(c) **BUSINESS MANAGEMENT**

- explain a point beyond stating and listing the points.
- spell and explain some business concepts and terminologies. For example, some candidates wrote that: The Central Bank is the lender of last resort/ resource instead of the last resort.
- explain performance appraisal and its importance to an organization.
- organize their answers very well.

(d) **TYPEWRITING**

- complete Speed Test passage.
- type in the Speed and Accuracy Test with minimal errors and therefore lost marks for Accuracy.
- be consistent in the display of production tasks.
- ensure that there is correct alignment of figures, dashes and materials.
- fully understand the rubrics e.g. typing of carbon copy.
- fully understand and interpret manuscript correction signs.
- be consistent with the style of punctuation, as some mixed the open and punctuated styles.
- check overtyping of letters.
- comply with the right use of capital letters.
- ensure there is right underscoring of headings.

(e) **CLERICAL OFFICE DUTIES**

- identify stock handling issues in the case study. Most candidates rather defined stock taking, stock control and stock keeping.
- relate concepts learnt in the classroom to the case study questions. They were therefore unable to transfer knowledge gained in classroom to solve issues identified in the case study questions.
- demonstrate command of the English Language which did not allow some candidates to express themselves well to earn maximum marks.

(4). **SUGGESTED REMEDIES**

Besides advising tutors and candidates to endeavour to be conversant with the syllabuses, the recommended textbooks and the Chief Examiners' reports, the Chief Examiners suggested the following remedies:

(a) **FINANCIAL ACCOUNTING**

- candidates should learn the significance of accounting concepts and assumptions by reading beyond their definitions.
- candidates should learn the advantages and disadvantages as well as the significance of the payment voucher in the operation of the petty cash system.
- candidates should be engaged more on the calculation of the various bases of transferring goods from the head office to the branches.
- teachers should lay more emphasis on the correct descriptions of corresponding accounts in the preparation of the ledger accounts.
- candidates should read on the various methods of payment especially credit transfer and how they relate to the preparation of bank reconciliation statements.

(b) **PRINCIPLES OF COST ACCOUNTING**

- the differences between the various incentive schemes like premium bonus, overtime etc. should be well explained.
- emphasis should be placed on the explanation of the factors to consider before instituting incentive schemes
- the meaning of cost unit and examples of cost units in typical manufacturing and service industries should be well explained.
- candidates should be taught how to determine the most suitable overhead absorption rate for a firm when there are several alternatives of absorption rates.
- \* candidates should also be advised to read the question carefully and understand the exact requirements of the question before attempting to answer.

(c) **BUSINESS MANAGEMENT**

- candidates should study the syllabus and read extensively the recommended textbooks.
- candidates should learn and understand the Business Management terminologies and concepts very well.
- candidates should improve upon their spellings and expressions in order to explain their points clearly and organize their work properly.

(d) **TYPEWRITING**

- candidates should be encouraged to read wide and build a rich vocabulary base. This will enable them use context appropriate/suitable words in sentences.
- mixing of sentences as observed in the Manuscript in Task 4 should be reduced.
- candidates need more time for practice in order to be conversant with the Typewriter.
- qualified and experienced teachers should be recruited to teach the subject.
- more attention should be spent in the typing of the Production Tasks which carry 90% of the total marks.
- candidates should avoid typographical errors, align properly, avoid inconsistencies, use correct capitalization and do correct reading and interpretation of the manuscript correction signs.

(e) **CLERICAL OFFICE DUTIES**

- candidates are advised to prepare adequately for the examination. Inadequate preparation results in candidates providing poor answers to questions even if they understand the question.
- candidates are advised not to rush through questions but carefully read and understand the demands of each question before answering them.
- candidates should read more on the various topics in the syllabus.

### 3. HUMANITIES

#### (1) CANDIDATES' PERFORMANCE

The Chief Examiners for Social Studies 2, Geography 2, Geography 3 and Economics 2 observed that the performances of candidates were higher than that of the previous year.

The Chief Examiners for Government 2, History 2, Music 2, Music 3A, Music 3B, Christian Religious Studies 2 and Islamic Studies 2 reported that the performances of the candidates were lower as compared with that of the previous year.

#### (2) SUMMARY OF CANDIDATES' STRENGTHS

All the Chief Examiners reported that some candidates presented their answers in orderly and coherent manner with good explanations, expressions, punctuations and spellings. They organized their answers decently, labelled their sketches well and numbered the various sub questions attempted. The Chief Examiners reported as outlined below that candidates answered questions on the following topics very well:

##### (a) **Christian Religious Studies 2**

- (i) Candidates were able to read the required textbook which is the Bible and were familiar with the narratives as a result.
- (ii) There has been significant improvement in answers to Section C of the paper which had always been the bane to most candidates.

##### (b) **Economics**

- (i) Candidates quoted correct formulae in the data-response questions.
- (ii) Candidates were able to explain maximum and minimum price legislation.
- (iii) Candidates labelled their diagrams correctly.

##### (c) **Geography 2**

- (i) Most candidates' presentations demonstrated their command over the use of the English Language.
- (ii) Some candidates presented good map outlines and correctly located the landmarks asked in the questions.
- (iii) Most of the candidates presented good responses to the question answered. This is an indication that they have read and were

prepared for the examination.

##### (d) **Geography 3**

- (i) A majority of the candidates were concise and straight to the point in the presentation and explanation of their responses to the questions.
- (ii) Some candidates brought out answers from sourcing the internet.
- (iii) There was improvement in the usage of the English Language.
- (iv) Majority of the candidates obeyed the rubrics of the paper.

##### (e) **Government**

The Chief examiner commended the candidates for being able to;

- (i) apply the subject register well in almost all the questions.
- (ii) exhibit high knowledge of part A of the paper, Elements of Government which form the foundation of the subject of the paper.
- (iii) give precise and straight to the point answers to the questions.

##### (f) **History 2**

- (i) A good number of candidates were able to answer questions on Egypt and the Berbers well enough.
- (ii) Many candidates answered questions in Section C of the paper by exhibiting in-depth knowledge of the subject matter.

**(g) Islamic Studies 2**

- (i) Candidates were able to identify some terminologies in the field of Hadith and provided definitions for the terminologies, eg *Sahih, Da'if, Gharib* etc.
- (ii) Many candidates did very well to outline the differences between Hadith and Sunnah.
- (iii) Candidates showed mastery and understanding in writing about the Five Pillars of Islam.

**Music 2**

- (i) Set-Piece (*Serenata*) by *Enrico Toselli's*.
- (ii) Identification of Romantic composers.
- (iii) Identification of musical instruments used in reggae and jazz.
- (iv) Modulation to the dominant.

**(h) Music 3A**

- (i) Rhythmic dictation and melody writing.
- (ii) Two-part writing (Upper part).
- (iii) Identification of chords progressions and the appropriate inversions.

**(i) Music 3B**

- (i) Candidates rehearsed the technical exercise in the major key very well and presented it accordingly.
- (ii) Most candidates were confident and presented their pieces with seriousness.
- (iii) Fingering skills of candidates who used musical instruments were good.

**(j) Social Studies 2**

- (i) Explanation of the concept capabilities of individuals.
- (ii) Socio-cultural practices that have outlived their usefulness and ways by which traditional music and dance promote national development.
- (iii) Reasons for which people marry and measures couples can take to resolve their challenges.
- (iv) Explanation of the term peace building and reasons for which ethnic conflicts should be discouraged.

**(3) SUMMARY OF CANDIDATES' WEAKNESSES**

All the Chief Examiners observed that:

- some of the candidates had difficulty with the spelling of words and terms that relate to the various papers.
- a few candidates did not obey the rubrics of the paper and answered more than the required number of questions.
- some candidates did not state the relevant examples to support their presentations.

The Chief Examiners noted weaknesses of the candidates in the various papers as follows:

**(a) Christian Religious Studies**

- (i) A sizeable number of candidates had little knowledge of the subject matter hence were not able to narrate the biblical stories as required.
- (ii) Candidates were not well versed in topics relating to the latter part of the Old Testament syllabus.
- (iii) Some candidates presented their answers with irrelevant introduction to some of the questions.
- (b) Economics**
- (i) Some candidates did not adhere to the rubrics and so answered all the eight questions.
- (ii) Some candidates explained their points in just a sentence.
- (iii) Some candidates confused balance of trade with balance of payments.
- (c) Geography 2**
- (i) A few candidates lacked in-depth knowledge of the subject thus, presented irrelevant responses.
- (ii) A few candidates did not plan their work. Presentation of their responses to the questions were not organised.
- (iii) Although good map outlines were drawn by candidates, a number of them did not provide the key for the maps which made it difficult to interpret and score.
- (d) Geography 3**
- (i) For questions that demanded sketches and diagrams, candidates could not properly draw them.
- (ii) Many candidates provided cogent responses but could not explain them to attract additional marks.
- (iv) There were too many cancellations in the works of some candidates.
- (e) Government 2**
- (i) Some candidates could not tackle questions on application of knowledge well enough.
- (ii) Candidates could not state the objectives of the United Nations Organization which anchor the establishment.
- (iii) Most candidates could not highlight the problems which continue to plague the United Nations Organization.
- (iv) Some candidates could not identify aspects of Ghana's foreign policy which undermined her sovereignty.
- (v) Some candidates were unable to explain ways in which colonial rule led to the decline of the power/influence of traditional rulers in Ghana.
- (f) History 2**
- (i) Most candidates had little mastery of vocabulary of the paper.
- (ii) Some candidates did not number their answers.
- (iii) Candidates could not answer the questions in Section A because they lacked the knowledge of the topics.
- (g) Islamic Studies 2**
- (i) Candidates were unable to highlight the moral lessons contained in **Qur'an chapter 17:23**.

- (ii) Many Candidates deviated and could not write on **Al- Hadanah**(rules regarding the custody of children upon divorce or death of husband or wife).
- (iii) Many candidates deviated in highlighting the terms of the **Treaty of Al-Hudaybiyyah**.

**(h) Music 2**

- (i) Music theory and rudiments.
- (ii) Kpanlogo ensemble.
- (iii) Writing of cadences at phrase ends.
- (iv) Western Musical forms and terms.

**(i) Music 3A**

Candidates' weaknesses include:

- (i) Inability to spell simple terms associated with music cadences, musical types and modulations.
- (ii) difficulty in arranging key signatures and time signatures appropriately in the staff.

**(j) Music 3B**

- (i) Candidates were unable to do the sight-reading pieces.
- (ii) Candidates were unable to perform the technical exercise in the minor key well.
- (iii) Some candidates misinterpreted some of the note values and rhythms in the pieces.
- (iv) Some candidates were generally ill-prepared and displayed fear in taking the paper.

**(k) Social Studies 2**

Some candidates could not:

- (i) list the elements of social environment.
- (ii) describe ways by which the physical environment influences the activities of man.
- (iii) discuss ways in which human resource can be effectively utilized in Ghana.
- (iv) discuss ways of preventing autocratic rule in Ghana.

**(5) SUGGESTED REMEDIES**

(a) Teachers should strongly urge their candidates to read and understand the rubrics of the paper before they attempt to select the questions to answer.

(b) Candidates should also take their time to read and understand the demands of the questions they select before they answer them. They should provide appropriate examples to support their explanations.

(c) Candidates should also prepare themselves adequately and master the spelling of words and terms that relate to the various papers before taking the examination.

(d) Teachers should introduce topics which students find difficult early enough so as to make them master the concepts to ensure they prepare adequately before sitting for the papers.

(e) Candidates should be made to understand the moral lessons in **Qur'an** chapter 17: 23.

(f) Tutors should devote time to teach candidates **Al-Hadanah**(rules regarding the custody of children upon divorce or death of husband or wife).



- (g) Teachers should teach their candidates to be able to highlight the terms of the treaty of Al-Hudaybiyyah.

#### **4. LANGUAGES**

##### **(1) PERFORMANCE OF CANDIDATES**

The Chief Examiners observed that candidates' performance in the various subjects varied. The Chief Examiners for Literature-in-English 3, English Language 2, French 2, Dangme 1 and 2, Eve 1 and 2, Gonja 1 and 2, Literature-in-English 2, Dagbani 2, Fante 1 and 2, Dagaare 1, indicated that, there was an improvement in the performance of candidates. However, for Dagaare 2, Dagbani 1, Kasem 1 and 2, Ga 1 and 2, Akuapem Twi 1 and 2, Nzema 1 and 2, Asante Twi 1 and 2. The Chief Examiners reported that there was a decline in candidates' performance this year.

##### **(2) SUMMARY OF CANDIDATES' STRENGTHS**

The Chief Examiners noted that candidates performed well in the following areas:

(a) Adherence to Rubrics

The Chief Examiners for English Language 2, Akwapim Twi 2, Asante Twi 2, Dagbani 1, Gonja 2, Nzema 1, French 2 and 3, Dagaare 1, Fante 2, Kasem 1, reported that a good number of candidates adhered to the rubrics of the papers.

Candidates demonstrated mastery over the features of the various forms of essays.

(b) Good Organisation of Essays

The Chief Examiners noted that a good number of candidates for English Language 2, Literature-in-English 2 and 3, Dangme 2, Asante Twi 1 and 2, Eve 1, Fante 1 and 2, Akuapem Twi 2, Kasem 1, Dagaare 1 and 2, Dagbani 1 and 2, presented well-organised essays.

(c) Appropriate Use of Language and Clarity of Expression

The Chief Examiners noted that the candidates for Dagaare 1 and 2, Dagbani 1 and 2, Ga 1 and 2, French 2 and Literature-in-English 2 and 3, English Language 2 had improvement in expression. They reported that candidates used appropriate vocabulary to write acceptable sentences in their work.

(d) Presentation of Comprehension Answers

The Chief Examiners for Gonja 1, Dangme 1, Kasem 1, Ga 1, Akuapem Twi 1, Asante Twi 1, Fante 1, Dagbani 1 and English Language 2, commended candidates for their remarkable handling of questions on comprehension passages. They especially lauded candidates for the precise way in which they presented their answers.

##### **(3) SUMMARY OF CANDIDATES' WEAKNESSES**

The following weaknesses of candidates were identified by the Chief Examiners of the various languages.

(a) Poor use of language

The Chief Examiners for Nzema 1 and 2, Kasem 1 and 2 and Literature-in-English 3, Dangme 1 and 2, Fante 1 and 2, Eve 1 and 2 lamented that some candidates' responses were replete with poor grammar, spelling errors and faulty constructions. In the same way, the Chief Examiners for Akuapem Twi 1, Dangme 2, Dagbani 1 and Ga 1 and 2 expressed worry about the use of the spoken form of the language instead of the standard one by some candidates. They lamented that other candidates also misused certain personal pronouns in the Language.

(b) Poor Stock of Vocabulary

The Chief Examiners for French 2, Kasem 1, Dagaare 1, Gonja 1, Nzema 2, Dangme 2, Dagbani 2, Eve 1 and 2, Fante 1 and 2 and Asante Twi 1 observed that candidates' stock of vocabulary was severely limited. This made it very difficult to understand some of the sentences they constructed. In the same way, the Chief Examiner for French 2 noted that some candidates misused masculine markers for feminine concepts in their essays.

(c) Poor skills in answering comprehension passages

It was a worry to the Chief Examiners for English Language 2, Dagbani 1 and 2, Ga 1 and 2, Dangme 1 and 2, Nzema 1 and 2, Kasem 1 and Literature-in-English 2 that some candidates lifted portions of the comprehension passages, which were irrelevant, as answers to some questions. In a similar way, the Chief Examiner for French 3 lamented that words that were similar in form to words in English were most of the time wrongly pronounced by candidates .

(4) **SUGGESTED REMEDIES**

The following remedies were recommended to address the weaknesses identified:

- (a) Students should be encouraged to read books and other literature in the various languages they are studying so that they can enrich their stock of vocabulary. Teachers should also discourage students from mixing languages when writing a particular language.
- (b) Students should be encouraged to embrace the practice of solving past questions and reading the Chief Examiners' Reports so as to acquaint themselves with the trends of questions and how to tackle them effectively.
- (c) Teachers should try and teach all aspects of the syllabus, conduct frequent word drills and other exercises to equip candidates with the necessary skills to enable them answer all aspects of the questions with ease.
- (d) Regular In-service training sessions should be organized for language teachers to update their knowledge in content and methodology especially on comprehension, essay and grammar.
- (e) Teachers should teach the rules of the language and also advise candidates to desist from copying whole comprehension passages or lifting part of same as answers to questions. Candidates should be made to know that copying out a question before proceeding to answer it will not give any additional mark.

5. **MATHEMATICS SUBJECTS**

(1) **PERFORMANCE OF CANDIDATES**

The Chief Examiners for Mathematics (Core) and Mathematics (Elective) stated that there was a slight decline in performance over that of last year.

(2) **SUMMARY OF CANDIDATES' STRENGTHS**

The Chief Examiners of the two subjects identified the following areas as strengths of candidates this year:

(a) **MATHEMATICS (CORE)**

Candidates were able to:

- (i) find the distance between two points when given the coordinates.

- (ii) solve probability problems involving throwing of two dice.
- (iv) draw a venn diagram from a given information.
- (v) solve problems involving pie chart.
- (vi) apply Pythagoras theorem to solve problems.
- (vi) complete tables for multiplication in modulo arithmetic

(b) MATHEMATICS (ELECTIVE) 2

Candidates exhibited an improvement in:

- (i) finding the equation of a line passing through three points.
- (ii) finding the Spearman's rank correlation coefficient.
- (iii) constructing cumulative frequency tables and drawing frequency curves.
- (iv) solving problems in series and sequence.

(3) SUMMARY OF CANDIDATES' WEAKNESSES

(a) MATHEMATICS (CORE)

Candidates showed weaknesses in the following area:.

- (i) translating word problems into mathematical equations.
- (ii) solving problems on Mensuration and Geometry.
- (iii) drawing conclusions from logical statements.

(b) MATHEMATICS (ELECTIVE) 2

Candidates showed weaknesses in their inability to:

- (i) find the volume of a solid generated using integration;
- (ii) read correctly the median and the quartiles from the cumulative frequency curve;
- (iii) solve problems in permutation/combination;
- (iv) draw a relevant diagram to answer problems on equilibrium

(4) SUGGESTED REMEDIES

(a) MATHEMATICS (CORE) 2

- (i) Candidates should be advised to read carefully and understand the demands of questions before attempting them.
- (ii) Teachers should give candidates more exercises and encourage them to work on their own.
- (iii) Teachers should be encouraged to have time for weak students and teach them the basic principles and skills in the topics that they fall short in.

(b) MATHEMATICS (ELECTIVE) 2

The following were recommended to help candidates overcome their weaknesses;

- (i) Teachers should give equal attention to the all aspects of the syllabus.
- (ii) Candidates should be exposed to a lot of questions as exercises.

(iii) Candidates should be encouraged to show all steps when solving problems.

## 6. SCIENCE SUBJECTS

### (1) CANDIDATES' PERFORMANCE

The Chief Examiners expressed varied views on the performance of candidates for the various science subjects.

Performance in Chemistry, Forestry, Animal Husbandry, Crop Husbandry and Horticulture and Integrated Science was slightly better than that of the previous year.

The performance in General Agriculture, Biology, Physics and Fisheries were reported to be below that of the previous year.

### (2) CANDIDATES' STRENGTHS

The Chief Examiners noted that candidates performed well in the following topics of the respective subjects.

#### (a) **Animal Husbandry**

- Ways of controlling ecto-parasites in farm animals;
- Causes of mortality on sheep farm;
- Ways in which piglets are prone to chilling;
- Ways of preserving pork;
- Advantages of feeding livestock with balanced diet;
- Factors to be considered when formulating animal feed.

#### (b) **Biology**

- Basic ecological concepts;
- Dentition and care of the teeth in animals;
- Composition of human blood.

#### (c) **Chemistry**

- Distinction between atomic mass and atomic number;
- Calculation of volume of a gas at s.t.p;
- Distinction between structural formula and empirical formula;
- Fractional distillation of petroleum;
- Electron configuration;
- Use of Faraday's first law of electrolysis to calculate time for deposition;
- Building blocks of matter;
- Factors that affect stability of radioactive nuclides and calculation of half life;
- Differences between nuclear fission and nuclear fusion;
- Purification of bauxite to obtain aluminium.

#### (d) **Crop Husbandry and Horticulture**

- Identification of specimen;
- Advantages and disadvantages of timely harvesting of some stated crop plants;
- Effects of climatic conditions on crop production;

- Explanation of cultural practices;
  - Importance of vegetables in the diets of humans.
- (e) **Forestry**
- Effects of deforestation on soil fertility, habitats of animals, national economy and the environment;
  - Explanation of ecological terms such as saprophytes, decomposers, xerophytes and population;
  - Forest based industries in Ghana;
  - Non-insect arthropods found on the forest floor;
  - Economic importance of grasscutter.
- (f) **Fisheries**
- Maintenance of fishing gear;
  - Ways of maintaining fishing canoe;
  - Distinction between active and passive gear;
  - Nutrients found in fresh fish;
  - Materials used for constructing fishing gear;
  - Traditional and modern methods of fish preservation.
- (g) **General Agriculture**
- Wild life conservation;
  - Agricultural development;
  - Seed viability;
  - Seed dormancy;
  - Agricultural finance, credit and collateral;
  - Biological and cultural methods of controlling crop pest;
  - Explanation of husbandry and cultural practices.
- (h) **Integrated Science**
- Distinction between a pest and a parasite;
  - Explanation of pure water;
  - Definitions of weaning, brooding and mulching;
  - Explanation of mechanical energy, metalloids and secondary colours;
  - Scientific principle involved in the preparation of soap from cocoa pod.
- (i) **Physics**
- Examples of donor impurities;
  - Principles of dimensions and analysis;
  - Characteristics of laser light;
  - Definition of work and potential energy;
  - Distinction between mechanical waves and electromagnetic waves with examples.

### (3) SUMMARY OF CANDIDATES' WEAKNESSES

Candidates were reported to have performed woefully in the following areas of the respective subjects.

- (a) **Animal Husbandry**
- Reasons for keeping records of animal feed;

- Routine management practices carried out on poultry farms;
- Types of cattle reared in West Africa;
- Ways in which pests could cause damage to animal farm;
- Ways in which pre-weaning mortality could be reduced on animal farm.

(b) **Biology**

- Wrong spellings of technical terms;
- Poor knowledge in conservation of natural resources;
- Poor knowledge in distinction between test cross and back cross.

(c) **Chemistry**

- Using bond dissociation energy to compare the acidity of HCl and HF;
- Organic compounds that could be cracked or undergo substitution reaction from among list of compounds;
- Why LiI does not conduct electricity;
- Using experimental data to explain rate of chemical reaction;
- Calculation of enthalpy for a reaction from thermo-chemical data;
- Identification of colours of precipitates, residues and solutions;
- Attaching correct state to species in chemical equations.

(d) **Crop Husbandry and Horticulture**

- Explanation of cropping systems;
- Disadvantages of planting poor quality seeds;
- Correct spellings of horticultural terms, scientific and family names;
- Identification of N P K fertilizer and precautions to be taken when applying it.

(e) **Forestry**

- Vegetation types in which Guinea grass could be commonly found;
- Economic importance of Guinea grass;
- Properties of rattan that make it suitable for its uses;
- Explanation of forestry terminologies;
- Description of the organizational structure of the Forestry Commission;
- Advantages of leasehold land tenure system;
- Distinction between reforestation and reforestation.

(f) **Fisheries**

- Classification of tilapia;
- Ecological processes in a natural fish habitat;
- Explanation of the concept of inheritance of external characteristics of fish;
- Description of the process of gaseous exchange in bony fish;
- Advantages for using poultry manure in fish farming;
- Identification of fish diseases and their symptoms, and the causal agents of the diseases;

(g) **General Agriculture**

- Functions of oxytocin and oestrogen;
- Causal agents of livestock diseases such as Anthrax and Coccidiosis;

- Distinction between *quantity of produce supplied* and *change in supply*;
- Explanation of 'quarantine';
- Economic uses of cashew;
- Equipment used in place of burdizzo;
- Classification based on mode of feeding of cotton stainer and grass hopper;
- Life cycle of grasshopper;
- Other fertilizers that can serve the same purpose as urea fertilizer;
- Methods of applying urea fertilizer.

(h) **Integrated Science**

- Plotting of graphs;
- Adaptative features of bird which enable it to destroy crops;
- Basic scientific principles;
- Wrong spellings of technical and scientific names.

(i) **Physics**

- Name of forces that act on a bead falling through a fluid;
- Sketching velocity-time graph to depict the motion of object;
- X-ray tube;
- Evaluation of derived quantities such as  $T$ ,  $T^2$ ,  $T^{-2}$  and  $I^{-1}$  to the required number of decimal places;
- Plotting the points on the graph sheet;
- Definition of focal length of a converging lens.

Furthermore, the Chief Examiners lamented that the responses of some candidates for Physics, Animal Husbandry, General Agriculture, Fisheries and Chemistry show that they were not adequately prepared for the examination.

The Chief Examiners were disappointed that candidates for Integrated Science, Forestry, Animal Husbandry, Crop Husbandry and Horticulture, Chemistry and General Agriculture could not spell technical terms correctly and also had poor understanding of technical terms and concepts.

**(4) SUGGESTED REMEDIES**

The Chief Examiners for the science subjects generally recommended that candidates should be taken through enough practical lessons to improve their performance. Candidates should adequately prepare for the examination and also read good books to improve their usage of the English Language.

The Chief Examiners also made the following suggestions.  
Candidates should:

- thoroughly read and understand questions before attempting them;
- be taught the convention of writing scientific names;
- adhere to rubrics;
- be taken through calculation drills to improve upon their speed and accuracy;
- be taught how to draw graphs with correct values;
- endeavour to understand scientific concepts and learn to spell scientific terms correctly;
- be taught how to draw a simple microscope and other ray diagrams;

- (h) be made to develop interest in the subject areas through organized field trips.

## 7. **TECHNICAL SUBJECTS**

### (1) **PERFORMANCE OF CANDIDATES**

The Chief Examiners for Building Construction 2 and 3, Technical Drawing 2 and 3, and ICT 2 and 3 reported that the candidates' performance improved. The performance of candidates in Auto Mechanics 2 and 3, Electronics 2 and 3, Metalwork 2 and 3, and Woodwork 2 and 3 declined. Candidates' performance in Applied Electricity 2 and 3 was the same.

### (2) **SUMMARY OF CANDIDATES' STRENGTHS**

#### (a) Orderly Presentation of Answers

The Chief Examiners for Building Construction 2, Woodwork 2 and Technical Drawing 3 reported that, some candidates had their work well numbered and properly spaced out for easy reading.

#### (b) Demonstration of In-depth Knowledge of Subject Matter

It was reported that a few candidates showed excellent knowledge in the subject matter. Most candidates presented good quality line work in Technical Drawing 2 and demonstrated good knowledge in Orthographic projection in Technical Drawing 3. Candidates for Technical Drawing 3 were said to have demonstrated commendable draughtsmanship skills. Interpreting the working drawing covering the exercise to be produced were well done by many candidates as reported in Metalwork 3 and Woodwork 3. In Auto Mechanics 3, most candidates demonstrated good skills in removing and dismantling the brake master cylinder.

#### (c) Demonstration of Practical Skills

The Chief Examiners for Woodwork 3 and Metalwork 3 reported that; candidates demonstrated appreciable skills in marking-out, chiselling and cutting to specified dimensions. Most candidates offering Auto Mechanics 3 were reported to have observed basic workshop and personal safety rules.

#### (d) Adherence to Rubrics

The Chief Examiners for Building Construction 3, Woodwork 2, Technical Drawing 3 and ICT 2 commended candidates for adhering to the rubrics of the papers. The Chief Examiner for Metalwork 2 applauded candidates for answering the required number of questions.

#### (e) Exhibition of Skills in Drawing

The Chief Examiners for Woodwork 2 and Building Construction 3 praised the candidates for producing neat freehand pictorial sketches. It was also reported in Technical Drawing 2 that most of the candidates used the correct grade of pencils and clearly distinguished outlines from construction lines.

#### (f) Legibility of Handwriting

The Chief Examiners for Auto Mechanics 2 and Building Construction 3 praised the candidates for showing remarkable improvement in handwriting which made their work neat and readable.

### (3) **SUMMARY OF CANDIDATES' WEAKNESSES**

#### (a) Lack of Adequate Preparation



The Chief Examiners reported of candidates' responses and activities that demonstrated inadequacy in their preparation. Candidates failed to sharpen cutting tools in woodwork 3.

In Metalwork 3, failure to provide reasonable size of cotton bag to enclose the finished workpiece.

(b) Lack of In-depth Knowledge of the Subject Matter.

Some candidates showed weaknesses in different areas of their subject. In Technical Drawing 3, most candidates could not section, cut portions of components. In Technical Drawing 2, pencil work of some candidates was very poor and most candidates could not trace the locus of a point. Most candidates of Metalwork 3 lacked the ability to deburr and remove sharp edges of filed faces. Most candidates in Building Construction 3 had poor application of sectioning symbols to the walls, concrete floor slab, cement-sand screed, etc.

(c) Non-Adherence to the Rubrics of the Examination

Some candidates failed to observe the simple instructions as demonstrated by candidates' failure to draw border lines and show the cutting plane on the front elevation in Woodwork 2.

(d) Lack of Practical Exposure

In Auto Mechanics 2, candidates' weaknesses were reported in their poor concept of the operation of the four-stroke compression ignition engine. Some candidates of the subject could not select the correct tools for the correct job while some had problems fixing parts they had removed. Most candidates of Metalwork 3 lacked the competence in machining and manipulation and use of Centre lathe machine. A few candidates of Woodwork 3 were unable to mark out accurately and work to the given dimensions. Most candidates offering Auto Mechanic 3 could not identify the check valve in the master cylinder.

(e) Poor Sketches

Most candidates produced poor sketches as demonstrated in unproportioned drawings produced in Technical Drawing 3. In Auto Mechanics 2, most candidates produced poor sketches of the poppet valve and the parallel circuits, and most candidates of Metalwork 2 could not produce neat sketches.

(f) Poor Handwritings

The Chief Examiners for ICT 2, Auto Mechanics 2 and Building Construction 3 bemoaned the illegible handwriting of most candidates.

(4) **SUGGESTED REMEDIES FOR THE WEAKNESSES**

The following were suggested as remedies for the weaknesses:

- (a) Teachers and instructors should regularly visit workshops with students to familiarize themselves with what goes on in the world of work.
- (b) Candidates should be encouraged to prepare very well for the examination by securing the required equipment and materials for Auto Mechanics, Metalwork and Woodwork Practicals.
- (c) Candidates should be impressed upon to always read and observe the dictates of the rubrics of the examination.

- (d) Teachers should endeavour to complete all sections of the syllabus before the examination.
- (e) Teachers should have all the necessary tools and equipment and instruments including textbooks for the training of students.
- (f) Candidates should read over their solutions to enable them correct errors such as omissions, poor spellings and poor handwriting.
- (g) Candidates should be encouraged / taught to answer questions systematically.

## 8. VOCATIONAL SUBJECTS

### (1) PERFORMANCE OF CANDIDATES

The Chief Examiners for Basketry 2, Ceramics 2, General Knowledge in Art 3A, General Knowledge in Art 3B, Graphic Design 2, Jewellery 2, Management-in-Living 3, Sculpture 2, Textiles 2, and Visual Art 3 reported that candidates' performance showed a visible improvement over that of the previous years.

However, the Chief Examiners for Ceramics 2 and 3, Graphic Design 2 and 3, Clothing and Textiles 2, Basketry 3 and Picture Making 2. reported that there was a decline in the performance of candidates as compared to the previous year.

### (2) SUMMARY OF CANDIDATES' STRENGTHS

The Chief Examiners highlighted the following strengths in candidates' work:

- (a) Significant improvement in handwriting and sentence construction were reported for candidates in Basketry 2, Ceramics 2, Clothing and Textiles 2, Foods and Nutrition 2, Jewellery 2, Management in Living 2, General Knowledge in Art 2, Picture Making 2, Sculpture 2 and Textiles 2.
- (c) The Chief Examiners reported that there was an improvement in the use of English Grammar. Clarity of grammatical expression was displayed by candidates in Basketry 2, General Knowledge in Art 2 and Management-in-Living 2. Also, clear, concise, orderly and systematic presentation of answers was observed in Foods and Nutrition 2, Picture Making 2 and Textiles 2.
- (d) Appropriate understanding as well as accurate spelling and use of terminologies were evident in Basketry 2, Ceramics 2, Graphic Design 2 and Management-in-Living 2.
- (e) Improved and accurate spelling of words were exhibited by candidates in Basketry 2, Foods and Nutrition 2, and Management-in-Living 2.
- (f) Candidates exhibited improved skills and craftsmanship in Basketry 3, Clothing and Textiles 3, General Knowledge in Art 3A and 3B, and Visual Arts 3.
- (g) Skilful use of tools/equipment and materials was exhibited in Clothing and Textiles 3, General Knowledge in Art 3A, General Knowledge in Art 3B, Jewellery 3, Leatherwork 3 and Textiles 3. For instance, in Clothing and Textiles 3, candidates demonstrated improvement in handling sewing machine. Candidates also used lettering pens skilfully in General Knowledge in Art 3B.
- (h) A sizable number of candidates adhered to the rubrics. This was observed in Textiles 2, Jewellery 2, Foods and Nutrition 2, Management-in-Living 3 and General Knowledge in Art 2.

(3) **SUMMARY OF CANDIDATES' WEAKNESSES**

The Chief Examiners found the following weaknesses in the candidates' performance:

- (a) Wrong spelling of basic terminologies and words were evident in Basketry 2, Ceramics 2, Foods and Nutrition 2, General Knowledge in Art 2, Jewellery 2, Management-in-Living 2, Management-in-Living 3 and Sculpture 2. Even words in the question paper, candidates picked were written wrongly.
- (b) A number of candidates seemed ill-prepared for the examination and demonstrated gross ignorance of the subject matter of the questions. This was noticed in Ceramics 2, General Knowledge in Art 2, General Knowledge in Art 3A, General Knowledge in Art 3B and Visual Arts 3,
- (c) Poor grammatical expression and construction in English Language were common weaknesses in the work of candidates who wrote Ceramics 2, Management-in-Living 3 and Picture Making.
- (d) Poor handwriting was reported to be a weakness in Picture Making 2 and Sculpture 2.
- (e) Poor drawing and illustration skills were reported in Basketry 2, Graphic Design 2 and Visual Arts 3. Poor depiction of illusion of depth and cast shadows was also reported in General Knowledge in Art 3A and Visual Arts 3.
- (f) Poor application of colour was reported in Visual Arts 3.

(4) **SUGGESTED REMEDIES:**

- (a) Schools should organise spelling competitions to improve on candidates' spelling abilities. Periodic dictation exercises and word drills should be encouraged. Students should be encouraged to use the library or read widely to improve their spelling.
- (b) Candidates should ensure that they prepare amply well for examinations. Adopting topic mastering would not prepare them fully for the examination.
- (c) There should be constant reading of books and writing activities to help candidates improve upon their hand writing, vocabulary and expressions in the English Language.
- (d) Teachers should write new terms and important words on the chalkboard. Teachers should use technical terms while teaching so that students will be familiar with the terminologies. Students should read their textbooks as well as other books related to their subject.
- (e) The number of questions to be answered should be strictly adhered to so that candidates could have time to read over their work.
- (f) Visual Art candidates should take illustration lessons seriously and consider it as an integral part of their practical knowledge and practices. Conscious effort, on the part of the candidates should be made to improve upon their drawing skills. This can be done if they practice daily on how to draw basic shapes and tools.
- (g) Candidates should be tutored well on how to answer questions. Teachers should frequently give out tests, mark and discuss candidates' strengths and weaknesses with them.

- (h) Teachers should adopt the use of audio-visuals especially when they are unable to carry out practical work due to inadequate resources. This will enable candidates grasp the concepts better.

