

**NATIONAL BUSINESS AND TECHNICAL
EXAMINATIONS BOARD (NABTEB)**

P.M.B. 1747, IKPOBA HILL, BENIN CITY EDO STATE

**CHIEF EXAMINERS'
REPORT**

ON THE

2012 MAY/JUNE NBC/NTC
EXAMINATIONS

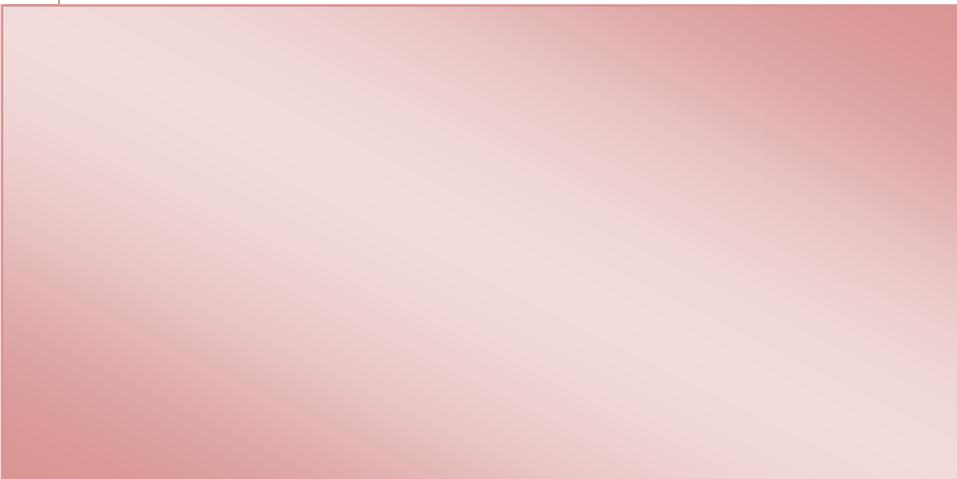
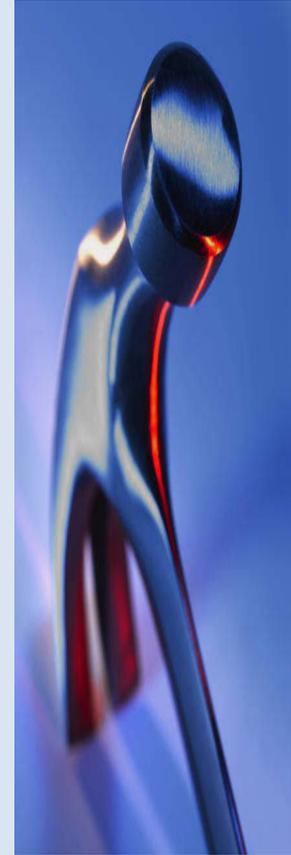


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P R E F A C E

The Chief Examiners' Report is the post examination analysis on the marking exercise, which is an integral part of the certification process of NABTEB examinations. It also provides a feedback on the performance of the candidates and their teachers. Two volumes are produced each year, one for May/June NBC/NTC and the other for November/December NBC/NTC and ANBC/ANTC Examinations.

This report for 2012 May/June is divided into three sections, namely:

Section 1: General Education Subjects;

Section II: Business Trades and

Section III: Technical Trades.

Each section discusses in details the general performance of the candidates, their strengths and weaknesses as well as suggestions for improvement.

This document is therefore recommended for use by schools and students taking NABTEB examinations as it provides feedback to guide the schools and help correct the lapses identified by the examiners during the marking exercise. It will also be of immense value to individuals wishing to sit for NABTEB examinations.

EXECUTIVE SUMMARY

GENERAL EDUCATION SUBJECTS

Candidates' general performance was good in English Language (001), Mathematics (002), Economics (003), Physical (004-1), Biology (006-1), Information and Communication Technology (ICT) (008-1). Their performance was better when compared to the previous year in Chemistry (005-1&2) and Biology (006-2), while they performed averagely in physics (004-2) and Literature in English (007-1&2).

Candidates' Strengths

- ✓ Good knowledge of the subject literature-in-English (007-1).
- ✓ Candidates had general knowledge of some basic concepts in Chemistry.
- ✓ Candidates are knowledgeable on graphic scales.
- ✓ Ability to state acceptable safety precautions in the laboratory.

Candidates' Weaknesses

- Inexperienced in the use of computer.
- Poor presentation of work.
- Poor grammatical expressions.
- Illegible handwriting.
- Inadequate preparation for the examination.
- Inability to study all the recommended novels in Literature-in-English.
- Poor drawing and labeling skills.
- Limited Knowledge in ecology and genetics.
- Poor Computational Skills.

Suggestions for Improvement

- ❖ Schools should employ teachers that are experienced in Information and Communication Technology (ICT).
- ❖ Candidates should cultivate the habit of reading novels, journals, magazine etc.
- ❖ Candidates should endeavour to write legibly.
- ❖ Teachers should endeavour to cover the entire syllabus.
- ❖ Drawing, labeling and spelling of Technical terms should be stressed by teachers while teaching.
- ❖ Government and school owners should build well-equipped and functional laboratories for schools.

BUSINESS TRADES

Candidates' performance was good in Office Practice (413), Financial Accounting (423) and Salesmanship (421) while poor performance was recorded in Commerce (421).

Candidates' Strengths

- ✓ Good knowledge of computations.
- ✓ The candidates had general knowledge of the concepts of the Business Trades.
- ✓ Ability to define Accounting terms.
- ✓ Good knowledge of Office terms.

Candidates' Weaknesses

- Poor grammatical expressions.
- Poor organizational Skills.
- The use of American system of solving Accounts.
- Poor drawings.

Suggestions for Improvement

- ❖ Competent English teachers should be employed in the school system.
- ❖ Students should cultivate the habit of reading novels, textbooks, newspaper, magazines etc.
- ❖ Nigerian system of accounting should be taught to accounting students.
- ❖ More academic programmes should be sponsored by NABTEB on Radio and Television stations aimed at publicizing the activities of the Examination body.

TECHNICAL TRADES

Candidates generally performed well and better this year in Refrigeration and Air-conditioning works (081), Carpentry and Joinery (221) and Ceramics and Design (391), than the previous year. Their performance was good in Introduction to Agriculture (011), Vehicle Body Building (091) Computer Craft Studies (171), General metal Works (191), General Wood Works (192) and Plumbing and Pipe Fitting (261).

They performed averagely in Tractor System (012-1), Automobile Electrical Works (031-1), Electrical Installation & Mechanical Works (041), Electronic Works (071) and Building/Engineering Drawing (193-1), four performance was recorded in Bricklaying/Blocklaying and concreting (212) and Footwear manufacture (353-1), while poor performance was recorded in Motor Vehicle Mechanic Works (021-1), Introduction to Building Construction (211), Furniture Making (231)_ and Painting and Decorating (251).

Candidates' Strengths

- ✓ Good performance in questions that required listing of points and short structured answers.
- ✓ Ability to differentiate between plunger type of flushing cistern and automatic flushing cistern.
- ✓ Good knowledge of safety precaution in the workshop.
- ✓ Knowledgeable in the basic principles of Agriculture.

Candidates' Weaknesses

- Poor grammatical expressions leading to inability to strike good points.
- Lack of calculative skills.
- Inability to spell technical terms.
- Lack of understanding of the questions.
- Spelling errors.

Suggestions for Improvement

- ❖ Emphasis should be laid on the teaching of English language as it will give the candidates good understanding of the questions.
- ❖ Tutorial classes should be organized to 'drill' candidates on spelling.
- ❖ Candidates should sit up and adopt the correct methods of reading.
- ❖ Candidates should try to cover the syllabus so as to cover the whole content areas and revise past questions.
- ❖ Candidates should cultivate the habit of reading novels, journals, etc.
- ❖ Industrial attachments should be encouraged in schools.

2012 MAY/JUNE CHIEF EXAMINERS' REPORT

SECTION ONE

GENERAL EDUCATION

ENGLISH LANGUAGE (001)

General Comments

The questions covered the syllabus. Candidates' performance was good.

Detailed Comments on Each Question

Question 1

Write a letter to the Editor of a National Newspaper discussing the high rate of road accidents and suggesting ways in which it can be minimized.

Intended Task

The question is an essay writing that required candidates' knowledge of formal letter writing. Candidates were expected to write a letter to the editor of any National Newspaper discussing the high rate of road accidents and suggesting ways in which it could be minimized.

Candidates were expected to begin their essay with a general discussion on the high rate of road accidents and then move to a detailed narration of two or more cases of accidents. Towards the end of the essay, candidates should be able to suggest some possible ways in which road accidents could be reduced.

About 70% of those who attempted the question could not write down the features of a formal letter like two addresses, salutation, the title, the body of the letter, etc. hence their performance was poor.

Question 2

Your father wants to take a traditional title which you object to. Write a letter to your brother working abroad about the development and implore him to convince your father not to take the title.

Intended Task

The question is an in-formal letter that required candidates to write a letter to their brother abroad complaining about their father's intention to take up a traditional title and telling him to discourage their father from taking such title.

Many of the candidates who attempted this question performed well.

Question 3

The literary and debating society of your school has asked you to take part in a debate on the topic “Corporal punishment should be used in schools” Write your speech for or against the motion.

Intended Task

Candidates were required to write a debate on the topic “Corporal Punishment should be used in schools”. They were expected to write either in support or against the topic.

Many candidates could not make use of vocatives which is very important aspect in a debate. However, a few of them performed averagely.

Question 4

Some thieves vandalized the equipment in your department. Write a report to the Principal stating the equipment vandalized their usefulness and what could be done to prevent such an occurrence.

Intended Task

The question is on report writing, stating a theft incident that occurred in a school. Candidates were expected to state the equipment vandalized the usefulness of such equipment and to equally state what should be done to prevent such occurrence.

Many candidates who attempted the question performed well.

Question 5 and 6

Comprehension Passages

Intended Task

The questions were on comprehension passages that tested candidates’ ability to read and answer the questions that followed. Majority of the candidates recopied from the passage for their answers which was wrong, instead of proffering answers that best fit in the passage. Some of the candidates did not know the grammatical structure and their functions. Their performance was poor.

Question 7

The question was a summary passage and candidates were expected to carefully read and provide concise answers to specific questions based on the passage.

Candidates’ performance was good.

Candidates' Weaknesses

- Poor grammatical expressions.
- Spelling errors.

Suggestions for Improvements

- ❖ Teachers should improve on the teaching of English Language by being more diligent.
- ❖ Candidates should cultivate the habit of reading novels, magazines, journals, etc.

MATHEMATICS (002)

General Comments

The questions covered the syllabus and candidates' performance was good.

Detailed Comments on Each question

Question 1

(a) Factorize $9x^2-1$

(b) $\frac{(a+b)^2}{a^2-b^2} + \frac{a^2+ab}{a^2-ab}$

Intended Task

The question required candidates' knowledge of factorization and their ability to apply the formula of difference of two squares.

Many of the candidates attempted the questions and they performed well.

Question 2

(a) If $\xi = \{x \mid 3 \leq x \leq 7\}$

$$A = \{3, 4, 5, 6\}$$

$$B = \{2, 3, 5\}, \text{ and}$$

$$C = \{1, 3, 5, 7\}$$

Draw a Venn diagram to represent the sets and, hence, find $A' \cap B' \cap C'$

Intended Task

The question required the candidates' knowledge of sets, their complements and intersection. Those who attempted the question performed well.

Question 3

(a) If $(Q_{\text{two}})^2 = 2211_{\text{three}} - 220_{\text{four}}$, find the value of Q.

(b) Simplify $7^{1.5} \times 49^{1.75}$ leaving your answer in index form.

Intended Task

The question required candidates' knowledge of Binary equation and standard form. Many candidates attempted these questions and they performed well.

Question 4

- (a) Without using Mathematical tables, find y , given that $4 \log(y+4) = \text{Log } 16$.
- (b) Evaluate $\frac{0.016 \square 0.084}{0.48}$ leaving your answer in standard form.

Intended Task

The question required candidates' ability to evaluate without using mathematical tables. They were to find y , given that $4 \log(y+4) = \log 16$ and also to evaluate $\frac{0.016 \square 0.084}{0.48}$ leaving their answer in standard form.

Many of the candidates attempted the questions and they performed above average.

Question 5

The quantity a is partly constant and partly varies inversely as the square of b .

- (i) Write down the relationship between a and b .
- (ii) When $a = 1$, $b = 10$ and when $a = 2$, $b = 5$. Find the value of b when $a = 4$.

Intended Task

The questions required candidates' knowledge of indirect variation. Many of the candidates attempted the questions and they performed well.

Question 6

If $(y+2)$, $(y+6)$ and $(Y+4)$ are the first three consecutive terms of a geometric progression, (G.P), find the:

- (i) value of y and hence the G.P.
- (ii) 42^{nd} term of the G.P, leaving your answer in index form.

Intended Task

The questions required candidates' knowledge of Geometric Progression (GP). They were expected to use the formular for finding T_n and S_n which they did correctly. They performed well.

Question 7

- (a) A drum of radius 50cm and height 1.2m is to be filled with water using a bucket of radius 15cm and 10cm for top and bottom, respectively, and height of 50cm. How many buckets, filled with water, will the drum contain, to the nearest whole number (Take $\pi = \frac{22}{7}$).
- (b) The chances of three independent events A, B, C, occurring are $\frac{1}{3}$, $\frac{3}{5}$ and $\frac{2}{5}$ respectively. What are the chances of B and C, only, occurring?

Intended Task

The questions required candidates' knowledge of mensuration and probability. They were expected to take $\pi = \frac{22}{7}$ in question 7a. Those who attempted the question failed to relate Drum to Cylinder and bucket to frustrum. They also failed to find the probability of 'A' not occurring hence, they performed poorly.

Question 8

Copy and complete the table for $y = 2x^2 - 4x - 5$, $-2 \leq x \leq 4$,

x	-2	-1	0	1	2	3	4
y				-7		1	

- (a) Use the table to draw the graph of $y = 2x^2 - 4x - 5$, using a scale of 2cm to 1 unit and 5 units on the x and y axis, respectively.
- (b) On the same axes, draw the graph of $y = 2x + 1$.
- (c) Use your graphs to solve:
i. $2x^2 - 4x - 5 = 0$
ii. $2x^2 - 6x - 5 = 1$
- (d) What is the minimum value of y and the corresponding value of x?

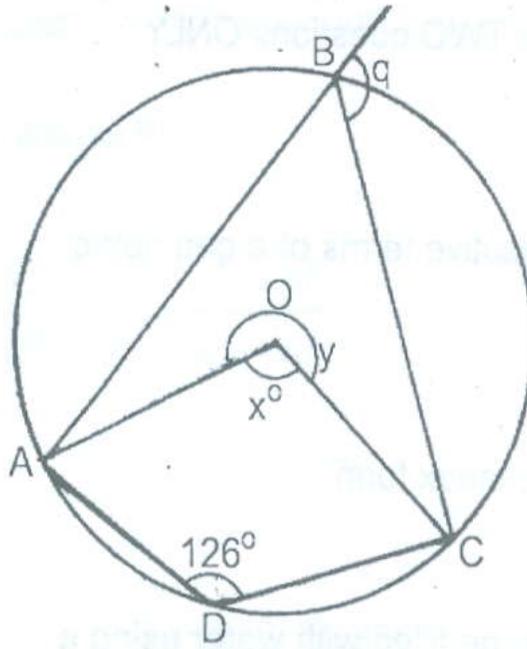
Intended Task

The question required candidates' drawing skill. They were expected to draw the graph of $y = 2x^2 - 4x - 5$, using a scale of 2cm to 1 unit and 5 units on the x and y axis respectively. They were to draw the graph of $y = 2x + 1$ on the same axes.

Those who attempted the questions failed to use the required scale, hence they performed poorly.

Question 9

- (a) In the figure below, O is the center of the circle $ABCD$. Find x , y and q stating the reason(s)



- (b) Half of A's money plus one-fifth B's money makes N100.00. Two third of A's money plus two fifth of B's makes N150.00. How much money has each?

Intended Task

The questions required candidates' knowledge of Trigonometric. They were expected to find x , y and q in the given figure. Also, they were to recall some facts on simultaneous equations.

Many of the candidates attempted the questions and they performed poorly.

Question 10

A triangular plot of land, ABC , is such that $\angle C = 105^\circ$, $\angle A = 45^\circ$ and $\angle B = 75^\circ$

- (a) with the aid of a ruler and a pair of compasses only, construct the:
- triangular plot using a scale of 10m to 1cm.,
 - locus L_1 of points equidistant from B and C ,
 - locus L_2 of points equidistant from AB and BC and
 - locus L_3 of points 40m equidistant from A .
- (b) (i) Locate T_1 and T_2 which are the points of intersection of L_1 and L_2 ;
(ii) Measure $\angle T_1 T_2$

Intended Task

The questions required candidates' ability to bisect supplementary angle of $\angle ABC$, two intersecting points T_1 and T_2 with L_1 .

The few candidates who attempted these questions were not able to give complete locus (of points equidistant from AB and BC) which would have made the L_1 and L_2 to intersect in question a(iii), though they performed well.

Question 11

- (a) Illustrate, graphically, and shade the region which the following inequalities represent $-2x \leq 3$, $2x - 6y < 6$, and $2x + 5y \leq 10$.
- (b) In the diagram, $\angle ABC = \angle BCD = 90^\circ$, $AC = 6\text{cm}$, $CD = 8\text{cm}$ and $BC = X\text{cm}$. Find the value of x , correct to two decimal places.

Intended Task

The questions required candidates' knowledge of inequalities and application of Pythagoras theorem. Many of the candidates attempted the questions and they were able to illustrate graphically the inequalities (K), hence they performed well.

Question 12

- (a) A man bought 1,000 ₦1.00 shares at 125k. The dividend declared was 8%
- (i) How much will he receive?
- (ii) What rate is this on the sum invested?
- (b) Find the commission due to a car salesman if he sells a car for N8,850.00 and his commission is 3%.

Intended Task

The questions required candidates' knowledge of dividend, rates and commission. They were expected to find the nominal value in calculating dividend instead of the market value. Those who attempted the questions performed well.

Question 13

- (a) A married man's annual salary is N968,000.00. He has four children under 18 years with child allowance of N4,000.00, each, and dependent relative allowance of N3,800.00. He also claims N1,120.00 for life insurance premiums. Calculate his monthly:
- total allowance;
 - taxable income and
 - tax, at rate of 10%.
- (b) A family borrows N1.2 million to buy a piece of land in 13% per annum compound interest. They repay N290,000.00 at the end of each year. How much do they still owe at the end of 3 years?

Intended Task

The question required candidates' knowledge of compound interest, dividend and simple interest. They were expected to calculate the monthly tax at the rate of 10% monthly total allowance and monthly taxable income but they calculated yearly, hence they performed poorly.

Question 14

- (a) Each angle of a regular polygon is 150° . Find the number of sides.
- (b) Out of 136 students in a school, 60 take French, 100 take Chemistry and 48 take Physics. If 28 take French and Chemistry, 44 take Physics and Chemistry and 20 take French and Physics.
- How many take all three subjects?
 - How many take French alone?
 - How many take two subjects only?

Intended Task

The questions required candidates' knowledge of regular polygon and sets. Many of the candidates attempted the question but they could not sum up the given figures in question 'b' which could not be represented well on the Venn diagram. Hence, their performance was on the average.

Question 15

- (a) A salesman receives a basic salary of N750,000.00 a year, together with a commission of 6% of the value of goods sold and a travelling allowance of N45.00 per km.
- Find the total amount he receives in a year in which he sells goods worth N9,375,000.00 and travels 10,000km.
 - The next year he travels 12,000km and receives a total of N2,010,000.00. Calculate the percentage increase the value of the goods sold.
- (b) Find the compound interest on N1,600.00 for 3 years at 7% per annum.

Intended Task

The questions required candidates' knowledge of weighted average and compound interest. Those who attempted the questions were able to calculate yearly compound interest but they could not add to get the total interest which would have been the compound interest hence, they performed poorly.

Candidates' Weaknesses

- Poor computation skills.
- Poor grammatical expressions.
- Mis-interpretation of questions.
- Inappropriate approximations to the required degree of accuracy e.g. naira, the nearest degree.
- Poor graphical drawing skills.

Suggestions for Improvement

- ❖ Students should try to read and understand the questions before answering them.
- ❖ The importance of approximation should be emphasized.
- ❖ Teachers should emphasize the use of unit of measurement during teaching.
- ❖ Orientation on how to answer questions should be emphasized to students.
- ❖ Assignments involving graphical work, drawing and sketching should always be given to students.

ECONOMICS (003)

General Comments

The questions covered the syllabus and candidates' performance was good.

Detailed Comments on Each Question

Question 1

The table below shows the demand for food items by three households in the market.

ITEMS	HOUSE HOLDS		
	A ₦	B ₦	C ₦
Rice	180.00	110.00	110.00
Beans	320.00	280.00	300.00
Garri	400.00	500.00	300.00
Plantain	250.00	240.00	210.00
Vegetables	100.00	120.00	80.00
Meat	125.00	225.00	150.00

- What is the market demand for each item?
- Present the information in a pie chart.

Intended Task

The questions required candidates' knowledge of market demand and presentation of information in a pie chart. Many candidates failed to make use of mathematical set in constructing a pie chart. The performance of the candidates was fair.

Question 2

The following table shows the prices and quantities demanded for two commodities X and Y in 2007 and 2008.

COMMODITY	PRICE	PRICE	QUANTITY	QUANTITY
	(₦)	(₦)	(KG)	(KG)
	2007	2008	2007	2008
X	40.00	42.00	80	30
Y	50.00	45.00	100	108

- Compute the price elasticity of demand for the two commodities.
- Is the demand for X and Y elastic or inelastic?
- Give reasons for the answers.

Intended Task

The questions required candidates' computation knowledge of price elasticity of demand. Many candidates could not interpret the questions hence, their performance was poor.

Question 3

With the aid of well labeled diagrams, explain the behaviour of the following cost concepts:

- (i) Total Fixed Cost;
- (ii) Average Fixed Cost;
- (iii) Average Variable Cost and
- (iv) Marginal Cost.

Intended Task

Candidates were required to recall their knowledge of cost concepts. Many of the candidates could not explain the behaviour of the cost concepts listed. However, the performance of a few candidates was on the average.

Question 4

Explain how the Central Bank assists the government to achieve its economic objectives.

Intended Task

The question required candidates' ability to explain how the Central Bank assists the government to achieve its economic objectives. Most of the candidates misunderstood the question while some were writing on the functions of the Central Bank. Some wrote on Central Bank instruments. The candidates failed to explain how the Central Bank assists the government to achieve its economic objectives. Hence, the performance of the candidates was poor.

Question 5

- (a) Who is a wholesaler?
- (b) Suggest four ways by which distributive trade can be improved in Nigeria.

Intended Task

The questions tested candidates' knowledge on channels of distribution. They were required to state who a wholesaler is and ways by which distributive trade can be improved in Nigeria. Many candidates did not recognize question 5b as an applied question, hence they failed to suggest four ways by which distributive trade can be improved in Nigeria. They only gave the definition of a wholesaler. However, their performance was fair.

Question 6

- (a) What is 'market' in Economics?
- (b) Explain five features of a perfectly competitive market.

Intended Task

The questions tested candidates' knowledge of market. The candidates were expected to state what 'market' in Economics is all about and to explain five features of a perfect competitive market. Many candidates defined market and explained five features of a perfectly competitive market correctly. However, they performed well.

Question 7

Discuss five measures the Nigerian government can take to increase the level of foreign investment in the country.

Intended Task

The question expected candidates to discuss five measures the Nigerian government could take to increase the level of foreign investment in the country. Many candidates avoided this question. The few who attempted the question could mention the current happenings in the country. The performance of candidates was poor.

Question 8

- (a) What is a Trade Union?
- (b) Explain four roles of Trade Unions in an economy.

Intended Task

The questions required candidates' knowledge of Trade Unions. Only a few candidates defined Trade Union correctly. Many candidates performed poorly in these questions.

Question 9

- (a) What is government budget?
- (b) Distinguish between a surplus and deficit budget.
- (c) Discuss two objectives of a government budget.

Intended Task

The question required candidates' knowledge of budgeting. Many candidates who attempted these questions performed well.

Question 10

- (a) With the aid of relevant illustrations, distinguish between change in quantity supplied and change in supply.
- (b) Explain three possible causes of a change in the supply of cassava.

Intended Task

The questions required candidates' knowledge of supply. Many of them who attempted these questions, presented poor diagrams hence, their performance was poor.

Question 11

Explain four factors that determine the level of a country's national income.

Intended Task

The question tested candidates' knowledge on National Income. Candidates were expected to explain factors that determine the level of a country's national income. Many candidates who attempted this question could not explain the factors hence, their performance was poor.

Question 12

Discuss five problems facing the industrial sector in Nigeria

Intended Task

The question required candidates to discuss five problems facing the Industrial sector in Nigeria. Many of the candidates were able to discuss the five problems facing the industrial sector, but could not relate it to Nigerian situation. The performance of candidates was on the average.

Candidates' Strength

- ✓ Correct definition of terms.

Candidates' Weaknesses

- Poor computations.
- Poor grammatical expressions.
- Poor presentation of diagrams

Suggestions for Improvement

- ❖ Emphasis should be laid on the teaching of mathematical aspect of Economics.
- ❖ Emphasis should be laid on drawing and sketching skills.
- ❖ Emphasis should also be laid on the grammatical illustration of cost concepts with examples.

PHYSICS (004-1)

General Comments

The questions covered the syllabus and candidates' performance was good.

Detailed Comments on Each Question

Question 1

- (a) Explain the following terms:
- (i) velocity,
 - (ii) acceleration of free fall due to gravity and
 - (iii) impulse.
- (b) (i) State two reasons why g varies on the surface of the earth.
(ii) What is meant by $g = 10\text{ms}^{-2}$?
- (c) A stone is projected upwards at an angle of 30° to the horizontal from the top of a tower of height 100m and it hits the ground at a point Q. If the initial velocity of projection is 100ms^{-1} , calculate:
- (i) maximum height of the stone above the ground,
 - (ii) time it takes to reach this height,
 - (iii) time of flight and
 - (iv) horizontal distance from the foot of the tower to the point Q.
(Neglect air resistance and take g as 10ms^{-2})

Intended Task

The candidates were required to solve some calculations involving velocity. Many candidates who attempted this question used the wrong formulae for their calculations. However, they performed averagely.

Question 2

- (a) Define the boiling point of a liquid.
- (b) Describe with the aid of a labeled diagram, an experiment to determine the boiling point of a small quantity of a liquid.
- (c) State two factors that may affect the boiling point of a liquid.
- (d) Using the kinetic theory of matter, explain why pure water changes to steam at s.t.p. without any change in temperature, although heat is being supplied to the water.

Intended Task

The candidates were required to define the boiling point of a liquid and determine the boiling point of a small quantity of a liquid with the aid of a diagram. They were equally required to state two factors that may affect the boiling point of a liquid and explain why water changes to steam at s.t.p. without any change in temperature using the kinetic theory of matter.

Many of the candidates could not accurately explain the concept, hence they performed poorly.

Question 3

- (a) Explain with the aid of a diagram how a converging lens could be used to:
- (i) ignite a piece of carbon paper.
 - (ii) produce an enlarged picture on a screen.
 - (iii) correct an eye defect.
- (b)
- (i) What is a mechanical wave?
 - (ii) Describe with the aid of a diagram, an experiment to show that sound needs a material medium for transmission.
 - (iii) State three characteristics of sound.
 - (iv) Mention the factor on which each characteristic depends.

Intended Task

The candidates were required to explain with the aid of a diagram how a converging lens could be used to ignite a piece of carbon paper, produce an enlarged picture on a screen and correct an eye defect.

This question was not popular among candidates. Although candidates were able to state the three characteristics of sound, they were unable to mention the factor on which each depends hence, their performance was poor.

Question 4

- (a) What is meant by the terms?
- (i) Reactance and
 - (ii) Impedance in an a.c. circuit?
- (b) A source of e.m.f. 240V and frequency 50Hz is connected to a resistor, an inductor and a capacitor in series. When the current in the capacitor is 10A, the potential difference across the resistor is 140V and that across the inductor is 50V.
- (i) Draw the vector diagram of the potential difference across the inductor, the capacitor and the resistor.
Calculate the:

- (ii) Potential difference across the capacitor,
- (iii) Capacitance of the capacitor and
- (iv) Inductance of the inductor.

Intended Task

The candidates' knowledge of reactance and impedance in an a.c. circuit were required. They were also required to draw the vector diagram of the potential difference across the inductor, the capacitor and the resistor. They were also to calculate potential difference across the capacitor and inductance of the inductor.

Many candidates had a fair knowledge of the meaning of reactance and impedance but could not arrange the words in the definition properly. Their computation skills were very poor and many of them could not recall the formulae accurately. Therefore, they performed poorly.

Question 5

- (a) Define photoelectric emission
- (b) Draw a labeled diagram showing the structure of a simple type of a photo cell and explain its mode of operation.
- (c) State four applications of photoelectric emission.
- (d) In a photocell, no electrons are emitted until the threshold frequency of light is reached.
 - (i) Explain what happens to the energy of the light before emission of electrons begins.
 - (ii) State one factor that may affect the number of emitted electrons.

Intended Task

Candidates were required to define photo electric emission and state four applications. They were also to draw and label a simple photo cell and explain its mode of operation.

Many candidates lacked knowledge of the basic components and could not give clear explanations. Hence, their performance was poor.

Candidates' Strengths

- ✓ Ability to define Physics terms correctly.
- ✓ Ability to recall formulae and substitute correctly.

Candidates' Weaknesses

- Poor explanations of physical terms like acceleration of free fall due to gravity, reactance impedance, photo-electric emissions.
- Poor graphical skills.
- Poor grammatical expressions.

Suggestions for Improvement

- ❖ Only qualified graduates of physics should be allowed to teach the subject.
- ❖ Physics teachers should try as much as possible to relate the teaching of physics to candidates' environment to enhance their interest in the subject.
- ❖ Candidates should be given more class work and assignments.
- ❖ Basic numerical processes should be taught by physics teachers irrespective of whether they were taught in mathematics or not.
- ❖ Government should equally employ more teachers to reduce student-teacher ratio for proper supervision and impartation of knowledge.

PHYSICS (004-2)

General Comments

The questions covered the syllabus and the performance of the candidates was on the average and better than that of last year

Detailed Comments on Each Question

Question 1

(a)

Use the knife edge provided to determine and record the centre of gravity G of the meter rule. Push the steel needle firmly into the cork and then clamp the cork on the retort stand so that the needle is horizontal.

Measure and record the distance d , between G and the small hole at 5cm mark on meter rule. Through this hole, suspend the meter rule freely on the needle as shown in the diagram above. Slightly displace the free end of the meter rule sideways and release to set it into oscillation in the vertical plane.

Determine the time, t for 20 oscillations of the rule. Calculate the period T of oscillation. Evaluate, d^2 , T^2d . Repeat the experiment for the holes at the 10, 15, 20 and 25cm mark on the meter rule respectively. In each case determine the values of t , T , d^2 , T^2 and T^2d . Tabulate your readings.

Plot a graph of T^2d on the vertical axis against d^2 on the horizontal axis, starting both axes from origin (0,0). Determine the slope, s , of the graph and the intercept I on the vertical axis.

Evaluate

(i) $C_1 = \frac{4\pi^2}{5}$

(ii) $C_2 = \sqrt{\frac{1}{5}}$

State two precautions taken to ensure accurate result.

- (b)
- (i) Define the centre of gravity of an object and state how it is related to the stability of the object.
- (ii) In the experiment above, draw a labeled force diagram showing the forces acting on the meter rule to keep it in stable equilibrium when its free end is displaced with horizontal force.
- (iii) State two reasons why the acceleration of free fall due to gravity varies from place to place on the earth's surface.

Intended Task

The candidates were expected to recall some facts and carry out calculations with the observed figures. The candidates were also expected to be knowledgeable on gravity and its sub-concepts of oscillation, movement, equilibrium, etc.

From the experiment set-up, most candidates failed to state correctly the value of G and those that gave the correct value of G failed to write the unit of the value. Many of the candidates could not answer the (b)ii of the question and could not define simple concepts relating to the experiment. The candidates' performance on these questions was poor.

Question 2

(a)

- (i) Measure and record the thickness, b , of the rectangular glass block provided.
- (ii) Trace the outline ABCD of the rectangular glass block on the sheet of paper as shown above.
- (iii) Remove the rectangular block and draw a normal at N, draw an incident ray such that the angle $i = 25^\circ$
- (iv) Fix two pins at point P and Q on the incident ray.
- (v) Replace the rectangular glass block on the outline and locate the images of P and Q through CD and fix the two pins at R and Y such that the pins appear to be in straight line with pins at P and Q.
- (vi) Remove the block; join the points R and Y to meet CD at X.
- (vii) Join NX and measure its length L , evaluate L^{-2} and Sin^2i . Repeat the experiment for $i = 35^\circ, 45^\circ, 55^\circ$ and 65° . In each case determine the corresponding values of L , L^{-2} and Sin^2i .
- (viii) Tabulate your readings.

- (ix) Plot a graph of L^{-2} on the vertical axis and $\text{Sin}^2 i$ on the horizontal axis, starting both axes from the origin (0,0).
 - (x) Determine the slope, S, of the graph and the intercept I on the vertical axis.
 - (xi) Evaluate the expression $K = \left(\frac{S}{I}\right)^{1/2}$.
 - (xii) State two precautions taken to ensure accurate result.
 - (xiii) Attach your traces to your answer script.
- (b)
- (i) Using your graph, deduce the value of L when $i = 0^\circ$.
 - (ii) State snell's law of refraction and explain why refraction occurs at the boundary between two media
 - (iii) A microscope is focused on a mark on a table. When the mark is covered by a plate of glass 3.00cm thick, the microscope has to be raised 1.18cm for the mark to be in focus once more. Calculate the refractive index of the glass.

Intended Task

The questions required the candidates to perform an experiment on the concept of refraction, graphically represent the results and calculate refractive index.

Most of the candidates could not properly trace the glass block and connect the lines. Instead they used rulers to draw the glass block. They could not plot graphs and they found it difficult to measure the slope and the intercept of their graphs, hence, they performed poorly.

Question 3

(a)

- (i) Set up the circuit as shown in the diagram above.
- (ii) Close the key, K.
- (iii) Use the jockey to make contact with the potentiometer wire at B such that $PB = L = 10\text{cm}$.
- (iv) Record the ammeter reading I .
- (v) Evaluate l^{-1} .
- (vi) Repeat the experiment for $L = 20\text{cm}, 30\text{cm}, 40\text{cm}, 50\text{cm}$ and 60cm respectively. In each case, determine and record the corresponding values of l and l^{-1} .
- (vii) Tabulate your readings. Plot a graph of L on the vertical axis against l^{-1} on the horizontal axis starting both axes from the origin $(0,0)$.
- (viii) Determine the slope, S of the graph and the intercept, K on the vertical axis. Read and record the value of l^{-1} when $I = 0$.
- (ix) State two precautions taken to ensure accurate results.

- (b)
- (i) Deduce from your graph the value of the current, I in the circuit when the jockey makes contact with the potentiometer wire at C, such that $PC = 100\text{cm}$.
 - (ii) State two reasons why the key in the circuit should be opened when readings are not taken.
 - (iii) State two sources of e.m.f. other than chemical cell.

Intended Task

The candidates were expected to experiment on a circuit and take readings, record and graphically represent the readings from the experiment. They were also to make some deductions based on the graphical representation.

Some candidates drew their line-of-best-fit but did not show the intercept. Also, some who attempted it could not state reasons why the key in the circuit should be opened when readings are not taken, though they performed well.

Candidates' Strengths

- ✓ The candidates are knowledgeable on graphic scales.
- ✓ Ability to state acceptable safety precautions in the laboratory.

Candidates' Weaknesses

- Poor expressions of practical physics terms.
- Poor computation skills;

- Poor drawing/sketching skills.
- Inability to understand questions.
- Inadequate exposure to practicals.

Suggestions for Improvement

- ❖ The candidates should be exposed to physics practical and should be given the opportunity to practise individually.
- ❖ Drawing/sketching of laboratory equipment should be encouraged.
- ❖ Computation skills should be enhanced by solving adequate mathematical problems.
- ❖ Candidates should ensure completion of syllabus before examination.

CHEMISTRY (005-1)

General Comments.

The questions covered the syllabus and the performance of the candidates was better than that of last year.

Detailed Comments on Each Question

Question 1

- (a) (i) Give the names of any three Group II elements.
(ii) Write the electronic configurations of any two of the elements named in a(i) above.
(iii) State three important requirements for polymerization to take place.
- (b) (i) Give three chemical properties of an acid.
(ii) Name three methods of preparing salts
(iii) Give the laboratory test of carbon (IV) oxide.
- (c) (i) Give the name of a suitable indicator for a titration between hydrochloric acid and sodium trioxocarbonate (IV) solution.
(ii) What mass of HCL is used up when the acid reacts with enough Na_2CO_3 to produce 3.36dm^3 of carbon (IV) oxide at stp?
(H=1.00, C = 12.00, O = 16.00, Na = 23.00, Cl = 35.50, molar volume of all gasses = 22.4dm^3 at stp).

Intended Task

The candidates were expected to name any three Group II elements and have knowledge about concepts of polymerization, acid, preparation of salts and calculations involving acid reactions.

All the candidates attempted these questions. They failed to give the chemical properties of acid. Few candidates did not know the important requirements for polymerization to take place; hence, they performed below average

Question 2

- (a) (i) Give two physical properties of each of the following: Diamond, Graphite, Coal.
(ii) Name four products of the destructive distillation of coal.
(iii) Describe the laboratory preparation of carbon (IV) oxide with the aid of a well labeled diagram.

- (b) Briefly describe each of the following:
- (i) Amphoteric oxide
 - (ii) Acid salt.
 - (iii) Indicator.

Intended Task

The questions required candidates' knowledge on carbon, forms of carbon and preparation of carbon (IV) oxide as well as Amphoteric Oxide and Acid salt.

Most candidates attempted this question. They did not have sufficient knowledge on the chemistry of carbon and its compound. Some could not label their diagrams while others could not draw. All the candidates who attempted this question could not give a satisfactory description of an indicator hence, they performed poorly.

Question 3

- (a)
- (i) Briefly describe the two crystalline allotropes of sulphur.
 - (ii) Write a balanced equation of what happens when a piece of sulphur is burnt in air.
 - (iii) Write a balanced equation to describe the reaction of the product in a(ii) above with: pure water, dilute sodium hydroxide solution.
- (b)
- (i) Describe the laboratory preparation of Hydrogen Sulphide (No diagram required).
 - (ii) Give a chemical test for H_2S .
- (c) With the aid of balanced equations describe three chemical properties of dilute H_2SO_4 .

Intended Task

The questions required the candidates' knowledge on sulphur, its allotropes and products of its reactions with other compounds.

Candidates who attempted these questions performed well.

Question 4

- (a)
- (i) What is cracking? Write a balanced equation to illustrate cracking.
 - (ii) Name four fractions of petroleum and mention one use of each of them.
- (b)
- (i) Briefly describe the extraction of calcium metal.
 - (ii) State three chemical properties of Calcium Hydroxide.
- (c) Calculate the percentage purity of a sample of limestone when 25.0g of it produced 12.6g of CaO when strongly heated in a kiln.

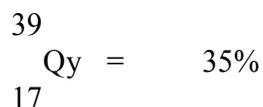
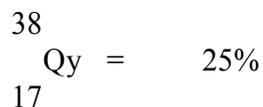
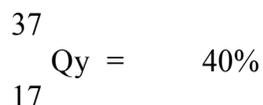
Intended Task

The candidates were expected to define the concept of cracking, apply their analytical skills in solving some mathematical problems and also describe the extraction of calcium metal.

Those who attempted the questions could not solve 'C' part correctly though, they performed well.

Question 5

- (a) Little quantities of the following were mixed with pure water in a beaker. Sodium chloride, potassium trioxocarbonate (IV) and calcium tetraoxosulphate (VI).
- Name three anions present in the solution.
 - Name three cations present in the solution.
- (b) (i) Briefly explain the following terms Saturated Vapour Pressure (SVP), Standard Temperature and Pressure (STP), Isotopy.
- (ii) An element Qy occurs naturally having three isotopes whose percentage compositions are as follows:



Calculate the relative atomic mass of Qy

- (c) Use kinetic Theory to explain this phenomenon:
A distillation flask containing ethanol solution fixed with a thermometer was heated. At 78°C ethanol was boiling off but the temperature remained constant until all the ethanol distilled off.

Intended Task

The candidates were expected to explain some concepts and calculate relative atomic mass. The candidates lacked understanding of the question. They could not differentiate between anions and cations. Also they were not able to explain concepts in the 'b' part of the question.

Many candidates did not attempt this question and the few candidates who attempted it performed poorly.

Candidates' Strength

- ✓ Knowledge of some basic concepts in the questions.

Candidates' Weaknesses

- Poor grammatical expressions.
- Poor knowledge of balancing equations.
- Poor computation skills.
- Poor drawing skills.

Suggestions for Improvement

- ❖ Candidates should endeavour to cover the syllabus before sitting for the examination.
- ❖ Teachers should lay emphasis on the drawing of workable diagrams.
- ❖ Candidates should be encouraged to form notes to aid their explanatory skills.
- ❖ Teachers should make practical lessons compulsory for students with demonstrations in the laboratory.

CHEMISTRY (005-2)

General Comments

The questions covered the syllabus and the performance of the candidates was better than that of last year.

Detailed Comments on Each Question

Question 1

E is a solution of hydrogen chloride acid containing 3.65g per 1000cm³ of solution. F is a solution of hydrated sodium trioxocarbonate (IV), Na₂CO₃·yH₂O containing 1.43g in 100cm³.

- (a) Put E into the burette and titrate with 20.0cm³ or 25.0cm³ portion of F using methyl orange as indicator.
- Record the volume of your pipette.
 - Tabulate your burette readings and calculate the average volume of E used.

The equation for the reaction involved in the titration is:
$$\text{Na}_2\text{CO}_3\cdot y\text{H}_2\text{O}_{(\text{ac})} + 2\text{HCl}_{(\text{ac})} \rightarrow 2\text{NaCl}_{(\text{ac})} + (y+1)\text{H}_2\text{O}^{(\text{i})} + \text{CO}_{2(\text{g})}$$

- (b) From your results and the information provided, calculate the:
- Concentration of E in moldm⁻³;
(Na = 23.00; O = 16.00; C = 12.00; Cl = 35.50; H = 1.00)
 - Value of y in Na₂CO₃·yH₂O in F;
 - Percentage by mass of water of crystallization in Na₂CO₃·yH₂O

Intended Task

The questions required the candidates' ability to handle and manipulate the given apparatus, and record the titre value correctly.

Many of the candidates showed poor understanding of the question and could not compute and record correctly hence, they performed poorly.

Question 2

- (a) Divide G into two portions:
- To the first portion, add dilute ammonia solution in drops and then in excess.
 - To the second portion, add few drops of dilute HNO₃ followed by two drops of AgNO₃ solution, then aqueous ammonia until in excess, shake the mixture.

- (b) Put half of H in a boiling tube.
Heat strongly, allow to cool.
Identify any gas(es) present.

Intended Task

The question required the candidates' ability to identify gases precipitated from the reaction of chemical substances.

Some candidates could not differentiate between substances that exhibit precipitate and those that exhibit gelatinous precipitate neither did they follow the question step. Some candidates did not correctly name the gases present hence, they performed poorly.

Question 3

- (a) State what would be observed on performing the following experiments on each sample of ethanol as indicated on the table below:

	Test applied	Observation
i	Ethanol sample + portion of phosphorus (V) chloride	
ii	Ethanol sample + few drops of concentrated H ₂ SO ₄ + heat	
iii	A small piece of Na + ethanol	

- (b) A sample of a hygroscopic salt had just been recovered by crystallization followed by filtration.
- Name the laboratory equipment in which the salt can be kept dry without heating.
 - Draw and label the equipment.

Intended Task

The candidates were expected to state their observation on performing some experiments on ethanol samples and draw the laboratory equipment which can keep a hygroscopic salt recovered by crystallization dry.

The candidates failed to give the correct observation and changes on adding few drops of concentrated H₂SO₄ to ethanol and heating. They made theoretical statements rather than describing their observation practically. Many candidates who attempted this question could not draw a workable diagram of a desiccator. They could not also label correctly. Hence, they performed poorly

Candidates' Weaknesses

- Poor chemical arithmetic.
- Inability to interpret questions.
- Inability to draw correct inferences from practical observations.
- Poor drawing/sketching skills.
- Poor grammatical expressions.

Suggestions for Improvement

- ❖ Teachers should ensure adequate coverage of the syllabus.
- ❖ The teaching of mathematical application to chemical equations should be emphasized.
- ❖ Government and school owners should build well equipped and functional laboratories for schools.
- ❖ The importance of sketching/drawing apparatus used in the laboratory should be emphasized.
- ❖ The students should learn the appropriate chemistry terms.

BIOLOGY (006-1)

General Comments.

The questions covered the syllabus and the candidates' performance was good.

Detailed Comments on Each Question

Question 1

- (a) Draw a labeled diagram (10-12cm) of microscopic appearance of hydra.
- (b) (i) State two functions of the tentacle.
(ii) Mention two importance of Biology to man.
- (c) List four components of cells and one function each.

Intended Task

The candidates were required to draw labeled diagram of microscopic hydra and state two functions of its tentacle. They were also to mention two importance of Biology to man and list four components of cells..

Candidates performed fairly well in these questions.

Question 2

- (a) (i) Define flowering plant.
(ii) Give four characteristics of an underground stem.
- (b) Explain how perennials are able to persist and renew vegetative growth.
- (c) State four importance of transpiration to plants.

Intended Task

Candidates were expected to define flowering plant, mention four characteristics of an underground stem and state four importance of transportation to plants.

Those who attempted the questions performed well.

Question 3

- (a) Give four characteristics of soil.
- (b) (i) List four soil organisms;
(ii) Mention two uses of soil organisms with one example.
- (c) (i) State four forms of soil erosion.
(ii) Give four factors that determine the water retaining capacity of soil.

Intended Task

The questions required the candidates' knowledge of soil organism. They were also to mention two uses of soil organisms, four forms of soil erosion and give four factors that determine the water retaining capacity of soil.

Candidates could not give correct characteristics of soil. Neither were they knowledgeable as regards the forms of soil erosion and factors that determine the water retaining capacity of soil. Hence, they performed poorly.

Question 4

- (a) (i) State four characteristic features of pisces.
(ii) Mention two major differences between oviparous and ovoviviparous fishes.
- (b) (i) List two dental diseases and their preventions.
(ii) Name two skeletal materials and where they are found.
- (c) State the mode of nutrition in the following animals: lizard, bird, grasshopper and rat.

Intended Task

The candidates were required to state four characteristics of pisces, mention two major differences between oviparous and ovoviviparous fishes. They were also required to list two dental diseases and their prevention, name two skeletal materials, where they are found and also to state the modes of nutrition in lizard, bird, grasshopper and rat.

Many of the candidates could not give the features; hence, their performance was poor.

Question 5

- (a) (i) Give four differences between arteries and veins in tabular form.
(ii) What is the name of the space in which the heart lies?
- (b) (i) List two types of Circulatory systems.
(ii) State two conditions that make amphibians to use their skin for respiration.
- (c) (i) Mention the excretory products of kidney and skin.
(ii) List three components of the nervous system.

Intended Task

The question required the candidates' knowledge of arteries, veins, heart and circulatory systems. They were also required to state two conditions that make amphibians to use their skin for respiration, mention excretory products of kidney and skin and list three components of the nervous system.

Candidates were ignorant of the name of the space in which the heart lies and there were general controversies on the two conditions that make amphibians to use their skin for respiration.

Many candidates wrote on environmental factors as against physiology of the amphibian e.g. skin has large surface area, skin is moist, skin is well vascularised.

They therefore performed poorly.

Question 6

- (a) (i) Define sex linked genes.
- (ii) State four applications of genetics in health.
- (b) List the mode of transmission, symptoms, causative organisms and control of Syphilis, Tuberculosis and Acquired Immune Deficiency Syndrome.
- (c) (i) Give two sources of food poisoning.
- (ii) State two ways of preventing food poisoning.

Intended Task

The question required the candidates' knowledge of sex linked genes, genetics health and food poisoning. They were also required to list the mode of transmission, symptoms, causative organisms and control of syphilis, tuberculosis as well as Acquired Immune Deficiency Syndrome. (AIDS)

Candidates could not properly define sex-linked genes and they were also not familiar with sources of food poisoning and ways of preventing them. Those who attempted the questions performed fairly well.

Candidates' Weaknesses

- Poor grammatical skills.
- Poor drawing skills.
- Wrong approach to answering of questions.
- Spelling errors of biological terms.

Suggestions for Improvement

- ❖ Qualified and experienced teachers should be appointed to teach Biology.
- ❖ Drawing and practical skills should be cultivated by students.
- ❖ Students should develop/cultivate good study habit to improve themselves.
- ❖ Emphasis should be placed on biological terms and the use of one word answer.
- ❖ Efforts should be made by teachers to ensure that the syllabus is covered before examinations.

BIOLOGY (ALTERNATIVE TO PRACTICAL) - 006-2

General Comments

The questions covered the syllabus and the candidates' performance was better than that of last year.

Detailed Comments of Each Question

Question 1

Give one example each of

- (i) (a) Carnivorous animal;
(b) Insectivorous plant.
- (ii) What is the ultimate source of energy in the biosphere?
- (iii) List three conservable natural resources.
- (iv) State two ways by which water could be polluted.
- (v) Define the following ecological terms:
 - (a) Community;
 - (b) Ecosystem.
- (vi) Name the protozoan that causes malaria.
- (vii) Name one plant in the class 'Bryophyta'
- (viii) What is incomplete metamorphosis?
- (ix) State two functions of the mammalian skin.
- (x) List four excretory products in plants.
- (xi) Which instrument is commonly used to measure the rate of transpiration in plants?
- (xii) State the dental formula of a dog.
- (xiii) What name is given to the largest artery in man?
- (xiv) Name the type of germination in:
 - (a) Cowpea seed;
 - (b) Maize grain.
- (xv) Where does absorption of digested food take place in man?

Intended Task

The questions required candidates' knowledge and ability to recall some biological terms. Many candidates failed the questions. The ultimate source of energy which is 'Sun' was written as 'Sunlight'. Candidates were writing small intestine instead of villus/villi. Candidates performed fairly in the questions.

Question 2

- (a) Identify specimens A, B and C without reasons.
- (b) Where is each specimen found?
- (c) State one economic importance of each specimen.
- (d) Draw and label fully the dorsal view of specimen B.
Your drawing should be between 6-8cm long.

Intended Task

The candidates' knowledge was required in the identification and drawing of a given specimen. Many candidates were able to identify the specimen given to them correctly. But they could not draw correctly the dorsal view of specimen B. Also attention was not paid to the size of drawing, clarity of lines, neat labeling as well as details of drawing hence, they performed poorly.

Question 3

- (a) Identify specimens D, E and F without reasons.
- (b) To what class of fruit does each of specimens E and F belong?
- (c) State one agent of dispersal each of specimens D, E and F.
- (d) State two observable differences between the internal features of specimens E and F.

Intended Task

The questions required candidates to identify specimens D, E and F, their classes of fruit, stating one agent of dispersal as well as two observable differences between the internal features of specimens E and F.

Many candidates could not identify specimens E and F. Their points of comparison were not corresponding due to their inability to make proper use of their transverse section. Their performance was therefore, poor.

Question 4

- (a) Identify specimens G, H, I and J without reasons;
- (b) Name one habitat each of specimens G, H, I and J.
- (c) What type of skeleton is present in specimens I and J?
- (d) State one economic importance of specimen H.

Intended Task

The candidates were required to identify specimens G, H, I and J and demonstrate their knowledge of the habitat, type of skeleton and economic importance of one of the specimen.

Many candidates identified specimens G, H, I and J correctly. They equally stated the types of skeletons of specimens I and J correctly.

Those who attempted the questions performed well.

Question 5

- (a) Differentiate between monohybrid and dihybrid cross.
- (b) Define the following ecological terms.
 - (i) Ecosystem;
 - (ii) Trophic level;
 - (iii) Succession.
- (c) A terrestrial environment harbours the following organisms:

Snake, Green grass, Toad and Grasshopper.

- (i) Construct a simple food chain making use of the animals above.
- (ii) What is the ecological implication of killing all available snakes in the environment?

Intended Task

The questions required candidates' knowledge of a monohybrid and dihybrid cross. They were also expected to define some ecological terms and construct food chain.

Many candidates were unable to differentiate between monohybrid and dihybrid cross hence, they performed poorly.

Candidates' Strength

- ✓ Most candidates answered question one correctly and they performed well.

Candidates' Weaknesses

- ❖ Spelling mistakes in technical terms.
- ❖ Poor drawing and labeling.
- ❖ Limited knowledge on ecology and genetics.
- ❖ Poor handwriting.

Suggestions for Improvement

- Teachers should lay more emphasis on technical words.
- Students need to improve on their grammatical expressions.
- Drawing and spelling of technical terms should be stressed by teachers while teaching.

LITERATURE- IN- ENGLISH (007-1)

General Comments

The questions covered the syllabus and candidates generally performed averagely.

Detailed Comments on Each Question

ASARE KONADU. A Woman in Her Prime

Question 1

Comment on the festival of fofie and highlight its importance as described in Konadu's A Woman in Her Prime

Intended Task

The question required candidates to narrate the festival of fofie and its importance.

A good number of the candidates could not give the importance of fofie festival to the people of Brenchoma. In fact, the question was not a popular question among the candidates. Their performance was fair

Question 2

Write short notes on two of the following characters:

- (i) Pokuwaa,
- (ii) Koranoa and
- (iii) Kwadwo Fordwuo.

Intended Task

Candidates were expected to write briefly on some characters from the novel.

The question was a popular one among the candidates and they discussed virtually every point and fact on each of the characters. Their performance was good.

ADICHE CHIMAMANDA NGOZI: Purple Hibiscus

Question 3

Discuss the theme of cultural clash in Adichie's Purple Hibiscus

Intended Task

The question required candidates to discuss the cultural clash in the novel. Many of the candidates did not attempt the question. A few that attempted it misinterpreted the word “clash” for “class” hence, their performance was poor.

Question 4

Compare and contrast the characters of Father Amadi and Father Benedict.

Intended Task

Candidates were expected to give a comparison between Father Amedi and Father Benedict. They were able to point out their differences. Their performance was good.

WILIAM GODING – Lord of the Flies

Question 5

Golding’s Lord of the Flies highlights the struggle between democracy and dictatorship. Discuss.

Intended Task

Candidates were expected to write different types of leadership style that existed in the novel. Many of the candidates were able to high light the meekness of Ralp, meekness of Ject and the blood thirsty spirit of Jack. Their performance was good.

Question 6

Discuss three of the symbols used in the novel Lord of the Flies

Intended Task

Candidates were expected to identify and give a vivid description of the three symbols used in the novel Lord of the Flies. The candidates were able to discuss the various symbols as challenge, Piggy as a symbol of knowledge. Their performance was good.

ERNEST HEMINGWAY: The Old Man and the Sea

Question 7

Comment on the relationship between the old man and the boy in Hemingway’s The old man and the Sea.

Intended Task

Candidates were expected to comment on the relationship between the old man and the boy in Hemingway's The Old Man and the Sea.

Candidates were able to comment on the servant/master relationship of Old Man and Vantiage boy, thereby performing well.

Question 8

Give an account of the old man's perilous journey on the Sea.

Intended Task

Candidates were expected to give account of the old man's perilous journey on the Sea. The candidates were not able to give good account of the old man's perilous journey on the sea and how Marolin contributed to the Old Man Life. They performed poorly.

Candidates' Strength

- ✓ Good knowledge of the subject.

Candidates' weaknesses:

- Inability to study all the recommended novels.
- Inadequate Communication skills.

Suggestions for Improvement

- ❖ Teachers should endeavour to cover the entire syllabus.
- ❖ Emphasis should be laid on the teaching of English Language.
- ❖ Candidates should cultivate the habit of reading novels, journals, magazines, etc.

LITERATURE- IN- ENGLISH (DRAMA AND POETRY) – 007-2

General Comments

The questions covered the syllabus and candidates' performance was fair.

Detailed Comments on Each Question

FEMI OSOFISAN: Women of Owu

Question 1

Discuss Osofisan's Women of Owu as a tragedy.

Intended Task

The question required candidates to discuss the tragic nature of the text Osofisan's Women of Owu

The question was avoided by many candidates. The few that answered it failed to bring out the elements of tragedy from the text. They performed poorly.

Question 2

What are the stylistic devices used in the play Women of Owu?

Intended Task

The candidates were expected to write on the stylistic devices used in the play.

Most candidates that answered this question failed to talk about the historical events, humanization of gods and structure as devices used in the text Women of Owu. They performed poorly.

KOBINA SEKYI: The Blinkards

Question 3

Mention and discuss three dramatic techniques used in Kobina Sekyi's The Blinkards.

Intended Task

The candidates were expected to mention and discuss three dramatic techniques used in the novel. This question was not answered by most candidates. Few that attempted it performed poorly.

Question 4

Write short notes on the following characters:

- (a) Miss Tsiba
- (b) Na Sompá.

Intended Task

The candidates were expected to write brief notes on Miss Tsiba and Sompá. Some candidates who answered this question did not give much information about Sompá. However, they performed fairly.

BENARD SHAW: Arms and the Man

Question 5

How does the playwright explore the themes of love and marriage in Arms and the Man?

Intended Task

The candidates were expected to state how the play wright explored love and marriage in the text. The candidates could not mention the themes of marriage and love from the text as expected. They performed poorly.

Question 6

Discuss the character and role of Nicola in the play.

Intended Task

The candidates were expected to discuss the character and role of Nicola in the play. Many candidates who attempted this question could not distinguish between character and roles hence, they performed poorly.

OSCAR WILDE: The Importance of Being Earnest

Question 7

Critically examine Oscar Wilde's use of Irony in The Importance of Being Earnest.

Intended Task

The candidates were expected to critically examine Oscar Wilde's use of irony in The Importance of Being Earnest. The candidates did not choose the question at all.

Question 8

“The truth shall always prevail”. To what extent can this statement be justified in Wilde’s The Importance of Being Earnest

Intended Task

Candidates were expected to critically justify the title of the text. Many candidates did not attempt the question. A few that attempted it performed poorly.

Question 9

With close reference to the poem, comment on Syl Cheney’s Style in ‘Myopia’.

Intended Task

Candidates were expected to write on Syl Cheney’s Style in ‘Myopia.’ However, candidates exhibited total lack of knowledge of the poem, Myopia. However, a few of them that attempted it performed poorly.

Question 10

Discuss the theme of dejection as expressed by the poet persona in Mtshali’s ‘Boy on a Swing’.

Intended Task

Candidates were expected to discuss the theme of dejection as expressed in the “Boy on a Swing”. Candidates who attempted the question dwelt their responses on racial discrimination in general and could not relate them to the poem hence, their performance was poor.

Question 11

Discuss at least three poetic techniques used by Wilfred Owen in the poem ‘Strange Meeting’.

Intended Task

The candidates were expected to discuss at least three poetic techniques used by Wilfred Owen_in the Poem. Apart from personification, nothing was said about the other poetic techniques used by the poet. Candidates performed averagely.

Question 12

Examine the theme of the sovereignty of God in the poem ‘Upon a Honest Man’s Fortune’ by John Fleckher.

Intended Task

Candidates were expected to examine the theme of the sovereignty of God in the Poem.

Candidates that attempted the question gave room to guess work instead of basing their answers on what the poet said in the poem. They wrote things that will become of a man who relies on God hence, they performed poorly.

Candidates' Weaknesses

- Poor explanation of points.
- Inadequate knowledge of the subjects.
- Inadequate preparation for the examination.
- Poor command of English Language.
- Illegible handwriting.

Suggestions for Improvement

- ❖ Teachers should teach students how to answer questions.
- ❖ Schools should ensure that the teachers cover their syllabus;
- ❖ Candidates should study the questions properly before attempting them.
- ❖ Candidates should cultivate the habit of reading novels, journals and magazines, etc.
- ❖ Candidate should endeavour to write legibly.

INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) 008-1

General Comments

The questions covered the syllabus and candidates' performance was good.

Detailed Comments on Each Question

Question 1

- (a) Explain the term "Information and Communications Technology (ICT)"
- (b) Mention four application areas of ICT
- (c) State any three relevance of ICT to the banking sector.
- (d) Explain briefly a mainframe computer.

Intended Task

The question required candidates' ability to define 'Information and Communications Technology (ICT) and mention four application areas of ICT. They were also to state any three relevance of ICT to the banking sector and explain briefly a mainframe computer.

Many of the candidates attempted this question and they performed well.

Question 2

- (a) Distinguish between internet and intranet.
- (b) Mention any four requirements needed to connect a computer to the internet.
- (c) What is a computer network?
- (d) Distinguish between LAN, WAN and MAN.

Intended Task

The question required the candidates' ability to distinguish between Internet and Intranet, mention any four requirements needed to connect a computer to the internet and distinguish between LAN, WAN and MAN.

Those who attempted the questions performed poorly.

Question 3

- (a) Distinguish between Microsoft Word and Microsoft Excel.
- (b) Write short notes on the following MS-Excel terms:
 - (i) Cell indicator;
 - (ii) Workbook;
 - (iii) Worksheet;
 - (iv) Active Cell and
 - (v) Cell Address.
- (c) State how a new workbook can be created in MS-Excel environment.

Intended Task

The question required candidates' ability to distinguish between Microsoft Word and Microsoft Excel. They were also to write short notes on some terms in Ms-Excel and state how a new workbook can be created in Ms-Excel environment.

Many of the candidates attempted the questions and they performed averagely.

Question 4

- (a) What is Database Management System (DBMS)?
- (b) State four advantages of storing data in a database.
- (c) Explain the following terms as being used in RDBMS:
 - (i) Files;
 - (ii) Records;
 - (iii) Fields.

Intended Task

The questions required candidates' ability to recall what Database Management System (DBMS) is, and to state four advantages of storing data in a database and to explain some terms as used in RDBMS.

Those who attempted the questions could not give detailed answers hence, they performed poorly

Question 5

- (a) What is Microsoft Powerpoint?
- (b) State how a presentation can be created in MS-Powerpoint using Auto-content wizard;
- (c) State any four uses of the slide master in MS-Powerpoint.

Intended Task

The questions required the candidates' ability to define Microsoft Powerpoint, state how a presentation can be created in Ms-powerpoint using Auto content wizard and state any four uses of the slide master in Ms-powerpoint.

Many of the candidates attempted the question and they performed well.

Question 6

- (a) State briefly how AutoCAD can be loaded.
- (b) Mention and state the functions of any four features of AutoCAD screen.
- (c) State the functions of F1, F2 and F3 keys in AutoCAD.

Intended Task

The questions tested candidates' knowledge of AutoCAD and also expected them to state the functions of F1, F2 and F3 keys in AutoCAD.

Almost all the candidates attempted the questions but they performed poorly.

Question 7

- (a) State how a new layer can be created in AutoCAD environment.
- (b) Outline the steps required to change layers in an AutoCAD drawing.

Intended Task

The questions required candidates' knowledge of AutoCAD environment.

Those who attempted the questions performed averagely.

Candidates' Weaknesses

- Poor grammatical expressions.
- Poor arrangement of work.
- Poor presentation of work.
- Inexperience in the use of computers.

Suggestions for Improvement

- ❖ Schools should employ teachers that are experienced in information Communications Technology.
- ❖ Students should be involved more on practicals.
- ❖ Teachers/students should endeavour to cover the syllabus.

SECTION TWO

BUSINESS TRADES

OFFICE PRACTICE (413)

The questions covered the syllabus and candidates' performance was good.

Detailed Comments on Each Question

Question 1

Mention and explain five areas covered by office practice.

Intended Task

The candidates were expected to mention and explain five areas covered by office practice. The candidates did not know the areas covered by Office Practice. The candidates' performance was poor.

Question 2

- (a) List the types of office you know.
- (b) State three advantages and three disadvantages of any type mentioned above.

Intended Task

The question required the candidates to list types of office they know and also state three advantages and three disadvantages of any type they mentioned. The candidates could not state correctly the three advantages and three disadvantages of open and close office. They performed poorly.

Question 3

- (a) What do you understand by the term "Office Layout"?
- (b) Enumerate five principles of Office Planning and Layout.

Intended Task

The questions required the candidates' knowledge of the term "Office Layout" and expected them to enumerate five principles of Office Planning and Layout. The candidates could not differentiate between the principles of office layout and that of office planning. Their performance was poor.

Question 4

List and explain five factors that constitute barriers to effective communication in the office.

Intended Task

The candidates were expected to list and explain five factors that constitute barriers to effective communication in the office. The candidates failed to give barriers to effective communication in an office, hence they performed poorly.

Question 5

Write short notes on the following:

- (a) Alphabetical filing;
- (b) Numerical filing and
- (c) Geographical filing.

Intended Task

The candidates were expected to write short notes on the terms mentioned.

Many candidates answered this question correctly and they performed well.

Question 6

Explain five means of making payment through the Bank.

Intended Task

The candidates were expected to explain five means of making payment through the Bank. Those who attempted it performed well.

Question 7

- (a) Define Motivation
- (b) Outline six ways of motivating office personnel in an organization.

Intended Task

The question required candidates' knowledge of motivation. They were expected to define motivation and also outline six ways of motivating office personnel in an organization. The candidates dealt mainly on one of the ways which is working conditions. But they neglected others like inter personnel relationship and achievement. They however, performed fairly.

Question 8

Briefly explain the following business documents:

- (a) Pro-forma invoice,
- (b) Consignment note,
- (c) Credit note,
- (d) Letter of inquiry and
- (e) Purchase order.

Intended Task

The question required the candidates to briefly explain the business documents listed.

Many candidates confused consignment note for delivery note while others stated that credit note and pro-forma invoice are usually sent by buyers instead of sellers. They performed poorly.

Question 9

Discuss the role of the Secretary:

- (a) before meeting;
- (b) during meeting and
- (c) after meeting.

Intended Task

The question required the candidates to discuss the role of the secretary before, during and after meeting.

The candidates displayed absolute lack of understanding for this question. They seemed not to be conversant with the meeting terms hence, they performed poorly.

Question 10

Mention and explain five factors to be considered in choosing office machines.

Intended Task

The candidates were required to mention and explain five factors to be considered in choosing office machines. The candidates mentioned most of the points but could not explain them correctly hence, they performed poorly.

Candidates' Strength

- ✓ The candidates displayed good knowledge of office terms.

Candidates' Weaknesses

- Poor preparation for the examinations.
- Poor grammatical expressions.
- Inability to interpret the questions.

Suggestions for Improvement

- ❖ More academic programmes should be sponsored by NABTEB on Radio and Television stations aimed at publicizing the activities of the examination body.
- ❖ Emphasis should be laid on passing English Language before promotion to the next class.

COMMERCE (421)

General Comments

The questions covered the syllabus and candidates' performance was poor.

Detailed Comments on Each Question

Question 1

- (a) Distinguish between home trade and foreign trade.
- (b) Explain five different activities engaged in by people in a commercial occupation.

Intended Task

The question required the candidates to distinguish between home trade and foreign trade and to explain five different activities engaged in by people in a commercial occupation. The candidates did not give the straight forward answers but mentioned types of occupations only hence, they performed fairly.

Question 2

List and explain five problems associated with International Trade.

Intended Task

The candidates were expected to list and explain five problems associated with international trade.

Many candidates who attempted the question were able to list and explain the problems associated with international trade hence, they performed well.

Question 3

- (a) List five reasons why consumers need protection.
- (b) Explain five means by which consumers can be protected.

Intended Task

The question required candidates' ability to recall five reasons why consumers need protection and also to explain five means by which consumers can be protected. The candidates could not explain consumer protection hence, they performed poorly.

Question 4

List and explain five importance of transport to commerce.

Intended Task

The question required candidates to explain five importance of transports to commerce. Many candidates attempted it and they performed well.

Question 5

List and explain five documents involved in formation of a public company.

Intended Task

The questions required the candidates to list and explain five documents involved in formation of a public company. Some of the candidates who attempted the question were not able to list and explain the documents hence, they performed poorly.

Question 6

- (a) Define advertising.
- (b) List and explain five media available to an advertiser of goods and services.

Intended Task

The question required candidates' knowledge of advertising. Also, they were to list and explain five media available to an advertiser of goods and services. Most of them could not give the proper meaning of advertising. Therefore, they performed poorly.

Question 7

- (a) Distinguish between indigenization and nationalisation.
- (b) State five advantages of nationalisation.

Intended Task

The question required the candidates to distinguish between indigenization and nationalisation and to State five advantages of nationalisation. Most candidates did not know the distinction. They therefore, performed poorly

Question 8

- (a) State and explain five functions of commercial banks.
- (b) What is marketing?

Intended Task

The questions required candidates to state and explain five functions of Commercial Banks and also define marketing. The questions were answered very well hence, they performed well.

Question 9

Explain each of the following:

- (a) Trade Association;
- (b) Chambers of Commerce;
- (c) Partnership Deed

Intended Task

The questions required the candidates to explain some terms listed.

The candidates could not distinguish among the terms hence, they performed poorly.

Question 10

- (a) What are public relations?
- (b) State and explain any five methods a firm can use to promote its public relations.

Intended Task

The questions required candidates' knowledge on Public Relations and explanation of five methods a firm can use to promote its public relations. The candidates were confused with the method firms used to promote Public Relations hence, they performed poorly.

Candidates' Weaknesses

- Poor grammatical expressions.
- Poor spellings.
- Poor drawings.

Suggestions for Improvement

- ❖ Teachers should lay emphasis on English Language.
- ❖ Students should cultivate the habit of reading novels, news papers, magazines, etc.
- ❖ Teachers should try to cover the syllabus;
- ❖ Students should read their textbooks to improve their knowledge of the subject.

FINANCIAL ACCOUNTING (423)

General Comments

The questions covered the syllabus and candidates' performance was good and better than that of last year.

Detailed Comments on Each Question

Question 1

- (a) Define the term 'Depreciation of Fixed Assets.
- (b) List four causes of Depreciation.
- (c) Outline four factors to be considered in calculating depreciation.

Intended Task

The candidates were required to define depreciation of Fixed Assets, list four causes of Depreciation and outline four factors to be considered in calculating depreciation.

The candidates answered the questions on depreciation well. Hence, they performed well.

Question 2

- (a) Briefly explain the term 'Control Accounts'.
- (b) List five advantages of control accounts.
- (c) Outline five sources of information for the preparation of control accounts.

Intended Task

The questions required candidates' knowledge of Control Accounts. They were also expected to outline five sources of information for the preparation of Control Accounts.

The candidates could not define the term control account very well and many of them that attempted the question performed averagely.

Question 3

The following information was extracted from the Books of ARIRI ERIMBA SOCIAL CLUB, for the year ended 31st December 2011.

	RECEIPTS	PAYMENTS
	₦	₦
Subscription	6,900.00	
Donations	7,500.00	
Interest received	240.00	
Salaries		2,250.00
Scholarship		2,220.00
Drugs for the handicapped		2,070.00
Printing and Stationery		510.00
Office Furniture		3,090.00
Investments		<u>4,500.00</u>
	<u>14,640.00</u>	
<u>14,640</u>		

You are also informed as follows

(a) Subscription outstanding with members	300.00
(b) Accrued expenses:	
i. Salaries	300.00
ii. Scholarship	960.00
iii. Drugs	180.00
iv. Printing and Stationery	240.00

You are required to prepare for the Club:

- (a) income and Expenditure Account and
- (b) Balance Sheet as at 31st December 2011

Intended Task

The question required the candidates' knowledge of income and expenditure account and balance sheet.

Many candidates failed to add accrual to expenditure items in the main answer space. However; those that attempted the questions performed well.

Question 4

B.M. YARADUA is the proprietor of a shop selling books, magazines, dailies, stationeries, sports and games equipment, for the purpose of his accounts, he wishes the business to be divided into two departments: Department 'A' Books, Magazines, Dailies and Stationeries.

Department 'B': Sports and Games Equipment.

The following balances have been extracted from his nominal ledger as at 31st March 2011.

Particulars	Dr.	Cr.
	₦	₦
Sales - Department 'A'		15,000.00
Sales – Department 'B'		10,000.00
Stocks – Department 'A' 1/4/10	250.00	
Stocks – Department 'B' 1/4/10	200.00	
Purchases – Department 'A'	11,800.00	
Purchases – Department 'B'	8,200.00	
Wages of Sales Assistants:		
Department 'A'	1,000.00	
Department 'B'	750.00	
Magazine & Dailies Delivery Wages	150.00	
Rates	130.00	
General Office Salaries	750.00	
Fine Insurance – Buildings	50.00	
Lighting & Air Conditioning	120.00	
Repairs to premises	25.00	
Internal Telephone	25.00	
Cleaning	30.00	
Accounting & Audit charges	120.00	
General office expenses	60.00	
Stocks at 31 st March, 2011 were valued at Department 'A' N300.00, Department 'B' N150.00		

The proportion of the total floor area occupied by each department was:

Department 'A' One-fifth

Department 'B' Four-fifth

Required:

Prepare B.M. YARADUA's Trading Profit and Loss Account for the year ended 31st March, 2011 apportioning the overhead expenses where necessary to show the department's profit and loss.

Intended Task

The candidates were required to prepare a Trading, Profit and Loss Account.

This question was correctly answered by many candidates. However, some of them could not answer the question well because departmental account should include total columns on both sides of the account. However, they performed averagely.

Question 5

AKIBOBO LTD opened a new branch in Okitipupa on July 1st. Head office maintains all records and charges goods to branch at cost. From the following information, prepare appropriate ledger accounts for the branch for year ended June 30, 2010.

	₦
Goods sent to branch at cost by head office	112,500.00
Returns from branch at cost	5,000.00
Branch Credit sales	93,750.00
Cash taking remitted to head office	26,250.00
Cash stolen (uninsured)	375.00
Goods stolen (uninsured)	125.00
Branch expenses paid by head office	4,000.00
Closing stock at branch at cost	31,250.00
There was no cash in hand at branch as at June 30, 2010	-
Discount allowed to branch debtors	3,750.00
Cash received from branch debtors	72,500.00

Head Office:

Opening Stock July 1 st	150,000.00
Purchases	875,000.00
Sales	1,125,000.00
Closing Stock June 30 th	87,500.00

Intended Task

The question required the candidates' knowledge of a ledger account.

This question was poorly answered as candidates left out most of the other ledger accounts to concentrate on the head office trading account only hence, they performed poorly.

Question 6

The Federal Ministry of health incurred in 2011 the following:

	₦
Construction of hospital wards	28,500,000.00
Purchase of beds	920,000.00
Repair of ambulances	25,000.00
Salaries and Wages	31,000,000.00
Maintenance of vehicles	7,500,000.00
Purchase of petrol & lubricants	800,000.00
Purchase of theatre equipment	7,920,000.00
Construction of boreholes	1,200,000.00
Purchase of drugs	10,550,000.00
Purchase of vaccines	1,330,000.00
Maintenance of mortuary buildings	670,000.00
Purchase of incubators	3,800,000.00
Purchase of X-ray machines	4,200,000.00

You are required to prepare statements of capital expenditure and recurrent expenditure.

Intended Task

The question required candidates' knowledge of a capital expenditure and recurrent expenditure. They were asked to prepare statements of capital expenditure and recurrent expenditure.

This was perhaps the cheapest and shortest question but a few candidates preferred to give answers in thousands (000s) without indicating them either under capital or recurrent expenditure. They therefore, performed poorly.

Question 7

The Trial Balance of Miss Lagos – a sale trader at the end of 30th June 2011 is given below. MISS LAGOS TRIAL BALANCE AT 30TH JUNE 2011

DESCRIPTION	DR ₦	CR ₦
Capital		25,000.00
Buildings	22,000.00	
Furniture & Fittings	1,200.00	
Stock-in-Trade as at 1 st July	4,520.00	
Purchases and Sales	32,150.00	50,970.00
Returns inward	120.00	
General Trade expenses	1,400.00	
Discount Allowed	100.00	
Selling expenses	1,350.00	
Expenses on purchase	150.00	
Discount received		300.00
Proprietors drawings	750.00	
Rent of premises	3,140.00	
10% bank loan 1/12/2010		10,000.00
Balance of fixed deposit	5,000.00	4,900.00
Debtors and creditors	7,500.00	
Cash in hand	814.00	
Bank balance	<u>10,976.00</u>	<u> </u>
	<u>91,170.00</u>	<u>91,170.00</u>

You are also given the following additional information:

- i. The rent for the premises was agreed at N300 per month.
- ii. A sum of N200 is still due to be paid for general trade expenses.
- iii. The bank loan was taken out on 1st December 2007.
- iv. It is the policy of the bank to pay 14% interest on all deposit accounts.
- v. Mr. Obasanjo, a customer who owed Miss Lagos was declared bankrupt by the court and Miss Lagos decided to write off this amount as a bad debt.
- vi. Depreciation is calculated at the rate of 5% on buildings and at 10% on furniture and fittings.
- vii. Stock in hand at 30th June, 2011 was N4,580.

You are required to prepare Miss Lagos' Trading and Profit and Loss Account for the year ended 30th June, 2011 and a Balance sheet as at that date.

Intended Task

The candidates were required to prepare a Trading, Profit and Loss Account and a Balance sheet as at the date quoted.

This question was fairly attempted but many candidates failed to get the correct Gross Profit Account of their treatment of expenses on purchases as a profit and loss account item instead of a trading account, item. They also failed to give the correct interest of 10% on bank loan, interest on deposit. Again, they failed to write the correct heading on the account therefore, they performed poorly.

Candidates' Strengths

- ✓ Ability to define Accounting terms.
- ✓ Good knowledge of computations.
- ✓ Ability to make correct entries.

Candidates' Weaknesses

- Poor layout of account by most candidates.
- The use of American System of solving accounts.
- Wrong presentation of headings of the various accounts.
- Lack of understanding of Branch Account.

Suggestions for Improvement

- ❖ The teaching of Branch and Control Account should be intensified.
- ❖ Teachers of Financial Accounting should attend seminars to update their skills.
- ❖ Students should be taught with good grammar and with likely accounting terms.
- ❖ Teachers of accounting should teach their students the correct layout of all accounts and the correct way of heading account.
- ❖ The Nigeria system of accounting should be taught to students.
- ❖ Accounting teachers should emphasize that correct dates should be written on all account as demanded by each question.
- ❖ Qualified teachers should be employed to teach accounts in our technical colleges in the country.

SALESMANSHIP (431)

General Comments

The questions covered the syllabus. The performance of the candidates was good and better than the previous years.

Detailed Comments Each Question

Question 1

- (a) Define the term “Consumer Behaviour”
- (b) Give three differences between a consumer and a customer.
- (c) State three factors that can influence consumers’ behavior.
- (d) List the social groups.

Intended Task

The question required candidates’ knowledge of the concepts relating to consumers’ behavior. The candidates failed to define the term Consumer Behaviour and explain the concepts relating to it. Moreover, the candidates’ conceptual skills were poor. Hence, the candidates performed poorly.

Question 2

- (a) What is culture?
- (b) State three ways culture can influence buying habit.
- (c) Explain two types of personalities.
- (d) Differentiate between culture and traditions.

Intended Task

The question required candidates’ ability to define culture and the ways culture can influence buying habit. They were also to explain the two types of personalities and to differentiate between culture and tradition

The candidates were weak in grammatical expressions hence; their performance was poor.

Question 3

- (a) What is Motivation?
- (b) Explain the techniques of motivation.
- (c) Outline five essential elements of a valid contract.

Intended Task

The candidates were expected to define motivation and enumerate five elements of valid contract.

The candidates' presentation of answers were good hence, the candidates performed well.

Question 4

- (a) (i) What is Hire Purchase?
- (a) (ii) Give three advantages and three disadvantages of Hire Purchase.
- (b) (i) List three documents involved in sale of goods.
- (b) (ii) Mention three conditions that can lead to breach of sale of goods

Intended Task

The question required the candidates' ability to recall some facts. The candidates' conceptual skills were very good because they were able to define hire purchase and the advantages of hire purchase hence, the candidates performed well.

Question 5

- (a) Explain the concept 'Negotiable instrument'
- (b) i. List three negotiable instruments.
- (b) ii. Explain three types of negotiable Instruments.
- (b) iii. Differentiate an agent from a principal.

Intended Task

The candidates were expected to define the concept "Negotiable Instrument, explain and list the types of negotiable instruments and differentiate an agent from a Principal.

Candidates were able to define and list the types of negotiable instrument hence, they performed well.

Question 6

- (a) Differentiate partnership from Limited Liability Company.
- (b) i. What is trade Unionism?
- (b) ii. List any three examples of trade Union.

Intended Task

The question required candidates' ability to differentiate partnership from Limited Liability Company and their knowledge on concepts relating to trade unionism.

The candidates' grammatical expressions were very good and their hand-writing was also good hence, they performed well.

Question 7

- (a) Outline three qualities of a good salesman.
- (b) Give three reasons for the choice of a particular product.
- (c) Define Selling.

Intended Task

The candidates were required to outline the qualities of a good salesman, give three reasons for their choice of a particular product and define the term "selling".

The candidates were able to give reasonable answers to each of the questions; hence their performance was good.

Question 8

- (a)
 - i. Distinguish between a prospect and a lead.
 - ii. Mention four sources of Information for pre-approach planning.
- (b) List five problems associated with pre-approach planning.

Intended Task

The candidates were required to distinguish between a prospect and a lead and to mention the concept relating to pre-approach planning.

The candidates' conceptual skills were good because they were able to distinguish between a prospect and a lead hence, their performance was good.

Question 9

- (a) State three importance of approach in selling.
- (b) List five strategies of presentation.
- (c) List two ethical problems associated with selling.

Intended Task

The candidates were required to state the importance of approach in selling, list five strategies of presentation and list two ethical problems associated with selling.

The candidates' presentation of answers were good and they did well in relating the concepts of selling hence, their performance was good.

Question 10

- (a) What is objection in selling?
- (b) Outline two types of objection.
- (c) State four advantages of after sales services.

Intended Task

The candidates were expected to state the advantages of after sales services and the concepts relating to the objection in selling.

They were able to state the advantages of after sales services and the objection in selling. Their performance was good.

Candidates' Strength

- ✓ The candidates have general knowledge of the concept of Salesmanship.

Candidates' Weaknesses

- Poor grammatical expressions.
- Poor organizational skills.
- Poor in-depth knowledge.

Suggestions for Improvement

- ❖ Competent English teachers should be employed in the school system.
- ❖ Students should be advised to read more novels, newspapers, magazines, etc.
- ❖ Students should read and understand questions before attempting them.

SECTION THREE

TECHNICAL TRADES

INTRODUCTION TO AGRICULTURE (011-1)

General Comments

The questions covered the syllabus and candidates' performance was good and better than the previous year.

Detailed Comments on Each Question

Question 1

- (a) Define the term 'agriculture'?
- (b) State four importance of agriculture.
- (c) List three types of weathering.

Intended Task

The candidates were expected to define the term 'agriculture', state four importance of agriculture and list three types of weathering.

They were able to define Agriculture and state four importance of agriculture. The candidates performed well.

Question 2

- (a) Enumerate three advantages of mechanization.
- (b) State two disadvantages of mechanized agriculture.
- (c) Explain the following:
 - (i) Subsistence agriculture and
 - (ii) Commercial agriculture.

Intended Task

The candidates were expected to enumerate three advantages of mechanization, state two disadvantages of mechanized agriculture, explain subsistence agriculture and commercial agriculture.

Many candidates attempted the question. Their approach in answering question on mechanization was impressive and they performed well.

Question 3

- (a) Identify four roles of science and technology to agriculture.
- (b) State four types of soil.
- (c) What is soil structure?

Intended Task

The question tested candidates' knowledge of soil structure. Candidates were expected to identify four roles of science and technology to agriculture, state four types of soil and explain what soil structure is.

The question was well attempted by many candidates were able to identify the roles of science and technology to agriculture. In addition, the candidates listed the types of soil and explained soil structure. Their general performance was good.

Question 4

- (a) Write short notes on the following:
 - (i) Hunting and gathering and
 - (ii) Cash crop production.
- (b) State four importance of animal husbandry,
- (c) Identify three differences between ruminant and non-ruminant animals.

Intended Task

The candidates were expected to state four importance of animal husbandry, and identify three differences between ruminant and non-ruminants animals. They were also to write short notes on cash crop production, hunting and gathering.

The candidates displayed brilliant approach in answering the question. They were able to list the types of soil and explain the definition of soil structure correctly. The candidates' performance was good.

Question 5

- (a) Explain how threshing takes place in a combine harvester.
- (b) List three harvesters employed for forage making.

Intended Task

The candidates were expected to explain how threshing takes place in a combine harvester and list three harvesters employed for forage making.

They were unable to explain how threshing takes place in a combine harvester and could not list three forage harvesters employed for forage making hence, their performance was poor.

Question 6

- (a) List four maintenance requirements of a milking machine.
- (b) State five parts of a coulter bar mower

- (c) With the aid of diagram, describe the principle of operation of a spinning disc fertilizer distributor.

Intended Task

The candidates were expected to list four maintenance requirements of a milking machine, state five parts of a coulter bar mower and describe the principle of operation of a spinning disc fertilizer distributor with the aid of a diagram.

Those who attempted the question were unable to list four maintenance requirements of milking machine. In addition, the candidates could not state five parts of a coulter bar mower nor could they describe the principle of operation of a spinning disc fertilizer distributor hence, their performances were poor.

Question 7

- (a) Write short notes on the following corn drills parts:
 - (i) blanking plate,
 - (ii) coulter,
 - (iii) toothed rollers and
 - (iv) coulter tube.

- (b) Describe any four primary tillage equipment.

Intended Task

The question tested candidates' knowledge of corn drills. Candidates were expected to write short notes on blanking plate, coulter, toothed rollers, and coulter tube and also to describe any four primary tillage equipments.

Many candidates could not write short notes on blanking plate, coulter, toothed rollers and coulter tube. They failed to describe any four primary tillage equipments. The candidates performed poorly.

Candidates' Strengths

- ✓ Knowledgeable in the basic principles of Agriculture.
- ✓ Ability to answer questions on soil structure.

Candidates' Weaknesses

- Poor grammatical expressions.
- Poor drawing skills
- Poor presentation of answers.

Suggestions for Improvement

- ❖ Emphasis should be placed on the teaching of English Language.
- ❖ Students should be encouraged to read novels, journals, magazines, newspapers, etc.
- ❖ Students should practise drawing and sketching.

TRACTOR SYSTEM (012-1)

General Comments

The questions covered the syllabus and the candidates performed well.

Detailed Comments on Each Question

Question 1

- (a) List four major components of the internal combustion engine.
- (b) With the aid of sketches, briefly explain the operation of the four stroke cycle diesel engine.

Intended Task

The candidates were expected to list four major components of the internal combustion engine and to briefly explain the four stroke cycle diesel engine using a sketch diagram.

They were able to list the major components of the internal combustion engine, thereby performing well.

Question 2

- (a) State the function of a carburettor.
- (b) Explain the operations of the injection pump.
- (c) With a labeled diagram only, show the fuel supply system of a diesel engine.

Intended Task

The candidates were expected to state the function of a carburettor, explain the operations of the injection pump and show the fuel supply system of a diesel engine with a labeled diagram.

The function of a carburettor was well stated by almost all the candidates. The fuel supply system of a diesel engine was equally sketched hence, the candidates performed well.

Question 3

- (a) List three types of air cleaners.
- (b) List four components of the tractor lubrication system.
- (c) State three differences between liquid and air cooling system.
- (d) State four possible causes of overheating.

Intended Task

The candidates were expected to list three types of air cleaners and four components of tractor lubricating system. They were also expected to state four possible causes of over-heating and three differences between liquid and air cooling systems.

Many candidates answered the question correctly. They were able to list types of air cleaners conveniently. Differences between liquid and air cooling systems were also correctly stated.

They could easily recall the causes of over-heating in an internal combustion engine. Hence, they performed well.

Question 4

- (a) List two types of steering gearbox.
- (b) State two advantages of a tubeless tyre.
- (c) With the aid of a labeled diagram, explain the working principles of a gear pump used on tractor hydraulic system.

Intended Task

Candidates were asked to list two types of steering gearbox, two advantages of tubeless tyres and to explain with labeled diagram the working principles of a gear pump used on tractor hydraulic system.

Candidates were unable to list types of steering gearbox used in vehicles. They failed to explain the working principle of a gear pump used on tractor hydraulic system. They therefore, performed poorly.

Question 5

- (a) State the function of battery on a tractor engine.
- (b) Describe briefly how to mix the electrolyte in the proper proportion.
- (c) With a labeled diagram only, show the ignition system on a four cylinder petrol Engine.

Intended Task

The candidates were expected to state the function of battery on a tractor engine, describe briefly how to mix the electrolyte in the proper proportion and show the ignition system on a four cylinder petrol engine with the aid of a labeled diagram.

Some candidates did not know how to prepare an electrolyte hence, they performed poorly.

Question 6

- (a) List two functions of clutch.
- (b) State four causes of clutch slip.
- (c) Briefly describe the correct method of coupling a mounted plough to the tractor.

Intended Task

The question tested candidates on clutch and plough. Candidates were expected to list two functions of clutch, describe the correct method of coupling a mounted plough to the tractor and state four causes of clutch slip.

Many candidates failed to describe the correct method of coupling a mounted plough to the tractor hence, they performed poorly.

Question 7

- (a) List four functions of a bearing in a transmission system.
- (b) Briefly explain the difference between the sliding mesh gearbox and the constant mesh gearbox.
- (c) Give two advantages of the constant mesh gearbox.

Intended Task

The candidates were expected to list four functions of a bearing in a transmission system, explain the difference between the sliding mesh gearboxes and the constant mesh gearbox and give two advantages of the constant mesh gearbox.

Many candidates who attempted the question were unable to list functions of a bearing and to successfully differentiate between the sliding mesh and constant mesh gearbox hence, their performance was poor..

Candidates' Strengths

- ✓ Ability to tackle questions on carburettor.
- ✓ Knowledgeable in questions on air cleaners.

Candidates' Weaknesses

- Poor grammatical expressions.
- Poor drawing skills.
- Poor presentation of answers.

Suggestions for Improvement

- ❖ Students should improve in their reading habits.
- ❖ Teachers should lay emphasis on the salient points of the topics taught.
- ❖ Emphasis should be laid on the importance of drawing and sketching of diagrams.
- ❖ Emphasis should be laid on spellings.

MOTOR VEHICLE MECHANIC WORKS (021-1)

General Comments

The questions covered the syllabus and the performance of the candidates was poor.

Detailed Comments on Each Question

Question 1

- (a) Sketch the Coil Ignition system of a four stroke cycle engine.
- (b) State the functions of four of its part.

Intended Task

Candidates were required to sketch the coil ignition system of a four stroke cycle engine, stating some of its functions. Candidates were unable to produce correct diagrams hence, their performance was poor.

Question 2

- (a) State six Safety precautions to be observed when preparing an electrolyte in the laboratory for battery use.
- (b) List six materials needed before preparation of the electrolyte.

Intended Task

The candidates were expected to state the safety precautions when preparing an electrolyte and the materials needed before the preparations. Many candidates were unable to give six materials needed for electrolyte preparation correctly hence, the candidates performed poorly.

Question 3

What are the causes of the following problems?

- (i) Tyre wear at the centre,
- (ii) Tyre wear at the edge,
- (iii) Vehicle pulls to One side when brake is applied,
- (iv) Brake is applied but no positive effect,
- (v) Reverse gear difficult to engage and
- (vi) Gear engages but vehicle does not move.

State their remedies.

Intended Task

The question tested candidates' ability to recall simple terminologies stating the causes of problems in a vehicle and their remedies.

Many of the candidates could not provide a comprehensive response to the question hence, their performance was poor.

Question 4

- (a) List four different types of steering gear boxes.
- (b) Make a sketch of one of the gearbox listed in 4(a) above and label the parts.

Intended Task

The question tested candidates on steering gearbox. They were to list different types of steering gearbox and concepts relating to it. The candidates had poor drawing skills and many of them could not list the various types of gearbox hence, their performance was poor.

Question 5

- (a) Draw a simple carburetor and label four parts.
- (b) List four different carburetors in use.

Intended Task

The question tested candidates' knowledge of carburetor. Candidates were required to draw a simple carburetor and outline its use. The candidates were weak in grammatical expressions hence, they performed poorly.

Question 6

- (a) List six tools needed for valve adjustment.
- (b) Briefly state how to adjust the engine valves for good performance.

Intended Task:

The question tested candidates' knowledge of engine valve. Candidates were expected to state the tools needed for valve adjustment and the process of adjustment of the engine valves. The candidates performed poorly.

Question 7

- (a) State the three components of a fluid fly wheel.
- (b) What is the major difference between the fluid coupling and torque convertor?
- (c) Make a sketch of a fluid coupling and label three parts.

Intended Task

The candidates were required to state the components and concepts relating to fluid flywheel.

Many of the candidates avoided this question, while those who attempted it performed poorly.

Candidates' Weaknesses

- Poor grammatical expressions.
- Poor Drawing Skills.
- Poor knowledge of automatic transmission.
- Lack of exposure to practical work.

Suggestions for Improvement

- ❖ Teachers should expose students to various engine systems.
- ❖ Teachers should lay emphasis on free hand sketching.
- ❖ The school should ensure that competent English Language teachers are employed in the schools.

AUTOMOBILE ELECTRICAL WORKS (031-1)

General Comments

The paper met the required standard, and the questions were straight forward, clear and based on the current syllabus. Candidates' performances were average.

Detailed Comments on Each Question

Question 1

State two causes and two remedies of the following charging system problems.

- (i) General not charging
- (ii) Low charging rate of battery
- (iii) Excessive charging rate of battery
- (iv) Slack fan belt.

Intended Task

The question tested candidates' knowledge of battery. Candidates were expected to state two causes and two remedies of battery charging system problems.

Those who attempted the question performed averagely.

Question 2

- (a) State the purpose of thermostat in the cooling system of a vehicle.
- (b) Write the specific gravity of a battery when:
 - (i) Fully charged
 - (ii) Half charged
 - (iii) Fully discharged.

Intended Task

The question tested candidates' knowledge of thermostat in the cooling system of a vehicle. Candidates were expected to explain the specific gravity of a battery when fully charged, half charged, fully discharged and the purpose of thermostat in the cooling system of a vehicle. Many candidates performed poorly..

Question 3

- (a) State the functions of a battery in a motor vehicle.
- (b) List two types of batteries used in motor vehicle.
- (c) State the difference(s) between the two types of batteries mentioned in 3(b) above.

Intended Task

The candidates were expected to state the functions of battery, and types of batteries used in motor vehicle as well as differentiate between the two types of batteries. Those who attempted the question performed poorly.

Question 4

- (a) State two factors that control the torque transmission of a clutch.
- (b) List two components of a final drive.
- (c) State the purpose of final drive.

Intended Task

The candidates were expected to state the factors that control the torque transmission of a clutch, list the components of a final drive and state the purpose of final drive.

Many of the candidates could not state two factors that control the torque transmission of a clutch and components of a final drive hence, they performed averagely.

Question 5

- (a) State four advantages of steel alkaline battery over the lead acid battery.
- (b) State the types of material used for the alkaline battery casing.

Intended Task

The candidates were expected to state four advantages of steel alkaline battery over the lead acid battery and to state the types of material used in alkaline battery casing.

Many candidates failed to state the types of material used for the alkaline battery casing and the advantages of alkaline battery over the lead acid battery. Many candidates performed averagely.

Question 6

- (a) Draw neat diagram of a lead acid battery cell and label the parts.
- (b) List the routine maintenance required by a lead acid batter.

Intended Task

The question required candidates to list the routine maintenance required by a lead acid battery, draw a diagram of a lead acid cell and label the parts appropriately.

Many candidates could not list nor draw a neat diagram of a lead acid battery cell hence, they performed averagely

Question 7

- (a) State four safety precautions to be observed when preparing an electrolyte for use in a laboratory.
- (b) What is the function of the high rate discharge tester.
- (c) Sketch the High Rate Discharge Tester.

Intended Task

The candidates were expected to sketch the High Rate Discharge Tester, explain the function of high rate discharge tester and state four safety precautions to be observed when preparing an electrolyte for use in a laboratory. Many candidates performed poorly.

Candidates' Weaknesses

- Poor grammatical expressions.
- Poor drawing skills.
- Poor presentation of answers.

Suggestions for Improvement

- ❖ Teachers should lay emphasis on the teaching of English Language.
- ❖ The Importance of drawing/sketching should be emphasized.

ELECTRICAL INSTALLATION AND MAINTENANCE WORKS (041)

General Comments

The questions covered the syllabus and candidates' performance was average.

Detailed Comments on each Question:

Question 1

- (a) State five advantages of alternating current over the direct current.
- (b) With the aid of a diagram, describe the following alternating quantities.
 - (i) Maximum value
 - (ii) Average value
 - (iii) Root-mean square

Intended Task

Candidates were expected to state five advantages of alternating current over direct current while the question tested candidates' knowledge of drawing skills. Many candidates who attempted this question performed poorly.

Question 2

- (a) Enumerate five procedures to be followed when connecting mineral insulated copper covered cable.
- (b) List ten tools required when connecting the M.I.C.C.

Intended Task

The question required candidates to enumerate five procedures to be followed when connecting mineral insulated copper covered cable and also to list ten tools required in connecting the M.I.C.C. Most candidates who attempted this question performed poorly.

Question 3

Explain briefly the following types of distribution system:

- (i) Single phase 2 wire,
- (ii) Single phase 3 wire,
- (iii) Three phase 3 wire and
- (iv) Three phase 4 wire.

Intended Task

The question required candidates' knowledge of distribution system. The candidates' performance was poor.

Question 4

- (a) Mention four procedures to be observed when operating a blow lamp.
- (b) Use the appropriate conduit system with a labeled diagram, describe the final connection to an electric motor from the control box.

Intended Task

Candidates were required to mention four procedures observed in operating a blow lamp and to describe the final connection to an electric motor from control box with a labeled diagram.

Most candidates attempted this question but failed to identify the flexible conduit needed and they were unable to draw the final connection to an electric motor. Therefore, their performance was poor.

Question 5

With the aid of a well labeled diagram, describe the following types of fuses.

- (i) Rewritable fuse
- (ii) Cartridge fuse
- (iii) High breaking capacity fuse

Intended Task

Candidates were required to describe the three types of fuses mentioned above with the aid of diagram. The performance of the candidates was fair.

Question 6

- (a) State three types of data and communication cables.
- (b) What is co-axial cable?
- (c) State three advantages of co-axial cable.

Intended Task

Candidates were expected to state three types of data and communication cables, define co-axial cables and state three advantages of co-axial cable. Many of the candidates who attempted this question performed averagely.

Question 7

- (a) With the use of a diagram differentiate between lap and wave winding.
- (b) State five factors to be considered when planning to rewind a machine.

Intended Task

The question required candidates to differentiate lap from wave winding and to state five factors to be considered when planning to rewind a machine.

Many of the candidates could not differentiate between lap and wave winding hence, their performance was poor.

Question 8

- (a) Explain four procedures for dismantling motor.
- (b) List six tools used for the dismantling and rewinding of a machine.

Intended Task

The question tested candidates' knowledge of motor. Candidates were expected to explain procedures for dismantling motor and to list six tools used for dismantling and rewinding of a machine. Many candidates who attempted this question performed poorly.

Question 9

- (a) Mention four reasons why we carry out inspection and testing on a machine.
- (b) Enumerate five functions of slip and commutator.

Intended task

Candidates were expected to state FOUR reasons for carrying out inspection and testing on a machine and to enumerate five functions of a slip and commutator. Many candidates who attempted this question performed poorly.

Candidates' Weaknesses

- Inability to spell technical terms.
- Inability to describe some machines.
- Poor drawing skills.

Suggestions for Improvement

- ❖ Emphasis should be laid on drawings.
- ❖ Students should be involved in more practical lessons.

ELECTRONICS WORKS (071-1)

General Comments

The questions covered the syllabus and candidates' performance was on the average.

Detailed Comments on Each Question

Question 1

Draw a well labeled diagram of a cathode Ray Tube and briefly explain its principles of operation.

Intended task

Candidates were expected to draw and label a cathode Ray Tube and to explain its principles of operation. Many candidates who attempted this question drew the diagram correctly. Therefore they performed well.

Question 2

(a) Differentiate clearly between positive and negative feedback under the following

- (i) Definition
- (ii) Gain
- (iii) Bandwidth
- (iv) Frequency response

(b) State four basic features of a transistor that make it preferable to a triode.

Intended Task

Candidates were expected to differentiate between positive and Negative feedback of some appliances and also to state four features of a transistor. Candidates' performance was on the average.

Question 3

(a) Describe the actions of the following:

- (i) Light Emitting Diode
- (ii) Light Dependent Resistor
- (iii) Thyristor
- (iv) Thermistor

- (b) Define oscillator and give four examples.

Intended Task

The question required candidates to describe the activities of Electrical terminologies and also to define Oscillator sighting examples. Many of the candidates who attempted this question performed fairly well.

Question 4

- (a) With the aid of suitable block diagrams, distinguish clearly between a Tuned Radio Frequency (TRF) and a Super heterodyne Radio Receivers.
(b) State two advantages of super heterodyne radio receiver over the TRF receiver.

Intended Task

This question tested the candidates' drawing skills and also their ability to recall some electrical terminologies. Many of the candidates who attempted this question displayed proficiency in drawing the block diagrams of receivers. Hence, candidates' performance was good.

Question 5

- (a) Differentiate between amplitude Modulation and Frequency Modulation.
(b) Describe in details the action of the limiter circuit in an FM radio receiver.
(c) Give three distinct features each of the AM and FM radio receiver.

Intended Task

The question tested candidates' knowledge of Modulation FM radio receiver and features of AM. Candidates were also expected to state the differences between amplitude and frequency modulation and to describe the action of the limiter circuit in an FM radio receiver. Though most candidates who attempted this question answered the C parts of the question correctly, however, they were not able to answer the A & B parts correctly. Hence, their performance was on the average.

Question 6

- (a) Draw the block diagram of a monochrome TV transmitter.
(b) Define an aerial and name five types of a TV receiving aerial.

Intended Task

This question tested the candidates' knowledge of a monochrome TV transmitter, definition of an aerial and the types of a TV receiving aerial. Many of the candidates who attempted this question performed poorly.

Question 7

- (a) Differentiate between luminance and chrominance signals of a colour TV receiver.
- (b) Define synchronization and state its relevance in TV system.
- (c) State the causes of the following faults in a TV receiver and suggest ways of rectifying them.
 - (i) Rolling pictures
 - (ii) Pictures with oversaturated colours.
 - (iii) Weak pictures, tinted colour.
 - (iv) Dead set.

Intended Task

The question required the candidates' ability to differentiate between luminance and chrominance signals of a colour TV receiver define synchronization, state the relevant causes of some faults in a TV receiver, and ways of rectifying them. Many of the candidates attempted this question but they performed poorly.

Candidates' Strength

- ✓ Ability to draw diagrams.

Candidates' Weakness

- Poor computational skill.

Suggestions for Improvement

- ❖ Emphasis should be laid on the prospect of technical education.
- ❖ Teaching aids such as audio-visual chart and live equipment should be made available for effective teaching.
- ❖ Students should cultivate the habit of conducting research after class work.

REFRIGERATION AND AIR CONDIDTIONING WORKS (081-1)

General Comments

The questions covered the syllabus and candidates performed better, compared to the previous years.

Detailed Comments on Each Question

Question 1

- (a) State four types of compressor in use in refrigeration and air-conditioning field.
- (b) Briefly explain where two of the stated compressor could be used.
- (c) State four reasons why oil is used with some of the compressors.

Intended Task

The question required candidates' knowledge of compressor. Many of the candidates attempted the question and they performed averagely.

Question 2

- (a) List two types of absorption refrigeration systems.
- (b) List four components of an absorption system.
- (c) State two advantages and disadvantages of a domestic absorption over a compression system.

Intended Task

The question required candidates' ability to list two types of absorption refrigeration systems, four components of an absorption system and state two advantages and disadvantages of a domestic absorption over a compression system.

All the candidates attempted the question and they performed well.

Question 3

- (a) List six refrigerant flow controls.
- (b) Indicate with diagram the most commonly used refrigerant flow controls with domestic refrigerants.

Intended Task

The question required candidates' ability to list six refrigerant flow controls and to indicate with diagram the most commonly used refrigerant flow controls with domestic refrigerants. Those who attempted the question performed well.

Question 4

With very neat and well labeled diagrams, show the freezing and boiling point of water in Celcius and farenheit thermometer respectively.

Intended Task

The question required the candidates to use neat and well labeled diagrams to show the freezing and boiling point of water in celcius and farenheit thermometer.

All the candidates attempted this question and their performance was poor.

Question 5

- (a) A substance has a temperature of 40°F what would be the temperature in °C?
- (b) How much heat will 1kg of ice °C absorb in changing to water at 0°C?

Intended Task

The question required candidates' ability to recall some facts about temperature and explain how much heat 1kg of Ice at °C will absorb in changing to water at 0°C.

Those who attempted the question performed well.

Question 6

- (a) List three methods by which heat can be transferred from one body to another.
- (b) Explain the principle of each method listed above.
- (c) Where in refrigeration system could these be achieved?

Intended Task

The question required candidates' ability to list three methods by which heat can be transferred from one body to another and to explain the principle of the method used and state where refrigeration system could be achieved in these.

Many of the candidates answered the question and they performed well.

Question 7

- (a) State two types of evaporator that is used in refrigeration and air-conditioning field.
- (b) Differentiate the two with diagrams.

Intended Task

The question required the candidates' ability to state two types of evaporation that is used in refrigeration and air conditioning field, and differentiate the two with diagrams.

All the candidates answered the question and they performed well.

Candidates' Weaknesses

- Poor computational skills.
- Poor interpretation of questions.
- Poor drawing/sketching skills.

Suggestions for Improvement

- ❖ Assignments involving drawing should be given to students.
- ❖ Teachers/students should try to cover the syllabus.
- ❖ Schools should organize seminars/workshops for teachers/students.

VEHICLE BODY BUILDING (091-1)

General Comments

The questions covered the syllabus and the performance of the candidates was good.

Detailed Comments on Each Question

Question 1

- (a) Describe the safety measures which would be necessary when using hand and power tools in vehicle body building shop.
- (b) What purpose do bolts and nuts set screw serve in vehicle body work?

Intended Task

The question required candidates' ability to explain the safety measures to be employed when using hand and power tools in vehicle body building shop and to give the usefulness of bolts and nuts set screw in vehicle body work.

Many candidates were able to respond well to the question hence, they performed well.

Question 2

- (a) Name the three groups of stainless steel.
- (b) Explain the differences between thermoplastics and thermosetting.

Intended Task

The question required candidates' ability to identify three groups of stainless steel and differentiate between thermoplastics and thermosetting.

Many of the candidates attempted the question and they performed well.

Question 3

- (a) Describe three different ways in which steel surface can be protected.
- (b) State four advantages of brazing over welding.

Intended Task

The question required candidates' knowledge of three different ways in which steel surface can be protected and four advantages of brazing over welding.

Many candidates attempted this question well and their performance was good.

Question 4

- (a) What are the essential components of a high pressure system?
- (b) What are the causes of health hazards associated with the vehicle body spraying?

Intended Task

The question required candidates' ability to recall the essential components of a high pressure system and the causes of health hazards in vehicle body spraying.

Many of the candidates answered the question correctly and they performed well.

Question 5

- (a) State four reasons why certain sports car manufacturers prefer F.G.R.P to make their vehicle bodies.
- (b) List the three stages in the production of a spot weld.

Intended Task

The question required candidates to give four reasons why certain sports car manufacturers use F.G.R.P. for their vehicle bodies and list the three stages in the production of a spot weld.

Many candidates answered the question and their performance was on the average.

Question 6

Describe the making of a template and the types of materials that would be used for this purpose.

Intended Task

The question required candidates to explain how template can be produced and the types of materials needed for the production.

Only few candidates answered this question and they performed poorly.

Question 7

State four duties each of an employer and employee in relation to health and safety regulation in vehicle body building industries.

Intended Task

The question required candidates to state four duties each of both employer and employee as related to health and safety regulation in vehicle body building industries.

Only few candidates answered this question and performed fairly.

Candidates' Strengths

- ✓ Candidates responded well to safety measures in using hand and power saw.
- ✓ They answered the question on the three groups of stainless steel and closes of plastics.

Candidates' Weakness

- Poor grammatical expressions.

Suggestions for Improvement

- ❖ Technical colleges should lay more emphasis on the teaching of English Language and communication skills.
- ❖ Students should be exposed to reading novels, newspapers, magazine, etc to improve their spoken and written English.

COMPUTER CRAFT STUDIES (171-1)

General Comments

The questions covered the syllabus and. The candidates' performance was generally good and better than that of last year.

Detailed Comments on Each Question

Question 1

Write short notes on the following terminologies:

- (i) Restore button,
- (ii) Scroll bar box,
- (iii) Program window,
- (iv) Overtyping,
- (v) Page break and
- (vi) Cancel button.

Intended Task

The question required candidates' ability to recall some computer terminologies.

Many of the candidates who answered this question failed to mention the important points needed in the explanations. Therefore, the candidates performed poorly.

Question 2

- (a) List six aims of programming.
- (b) Explain the difference between transaction processing and batch processing.

Intended Task

The question required candidates to list six aims of programming and also to explain the difference between transaction processing and batch processing.

Candidates who answered this question were unable to list correctly the aims of programming.

However, the candidates' performance was on the average.

Question 3

- (a) Convert these binary numbers to decimal:
11101.0111
10111.1001
10101.1111

- (b) List the stages of data entry.

Intended Task

This question required the candidates' knowledge of binary numbers. They were expected to recall the stages of data entry.

Many of the candidates who answered this question performed poorly

Question 4

Write short notes on the different generations of computer.

Intended Task

This question required the candidates' ability to recall different generations of computer. Many candidates who attempted this question failed to differentiate the generations of computer. Hence, the candidates' performance was poor.

Question 5

- (a) State two advantages of AUTOCAD.
- (b) Explain the following terms:
 - (i) Cutting Edge,
 - (ii) Command Line,
 - (iii) Fillet and
 - (iv) Polyline.

Intended Task

The question required candidates' knowledge of Auto Cad and also to explain some terms. Many of the candidates who attempted this question could not state two advantages of Auto- Cad. The candidates' performance was on the average.

Question 6

- (a) List the stages in programming.
- (b) What is the difference between a repeat loop and while Loop?

Intended Task

This question required the candidates' ability to recall stages in programming and also to differentiate between a repeat loop and a while Loop. Many of the candidates could not give expected answers, hence, many of them who attempted this question performed poorly.

Question 7

With the aid of a labelled diagram, explain the following logic operations:

- (i) NOR,
- (ii) AND,
- (iii) OR and
- (iv) NAND.

Intended Task

The question required the candidates to draw and label the logic operations of the items named above. Many of the candidates who answered this question could not draw and label the diagram correctly. Their performance was poor.

Candidates' Strength

- ✓ Good presentation of answers by few of the candidates.

Candidates' Weaknesses

- Poor drawing skills.
- Poor grammatical expressions.

Suggestions for Improvement

- ❖ Teachers should lay emphasis on the correct use of drawing equipment.
- ❖ Students should cultivate the habit of reading novels, magazines, newspaper among others.
- ❖ Students should improve on their drawing and labeling skills.

GENERAL METAL WORKS (191-1)

SECTION 1

General Comments

The questions covered the syllabus and the candidates' performance was good.

Detailed Comments on Each Question

Question 1

- (a) List four direct measuring instruments.
- (b) Give four advantages of the veneer caliper.
- (c) Make a neat sketch of a micrometer and indicate:
 - (i) the thimble,
 - (ii) the flame,
 - (iii) the anvil and
 - (iv) the barrel.

Intended Task

The question required candidates to list four direct measuring instruments, state four advantages of the Veneer caliper and to make a neat sketch of micrometer and indicate the thimble, the flame, the anvil and the barrel.

Many candidates answered this question and they performed fairly.

Question 2

- (a) What is forging? State difference between cold and hot forging process.
- (b) What is heat treatment? Explain the following heat treatment process.
 - (i) tempering.
 - (ii) normalizing.

Intended Task

The question required candidates' knowledge of forging and also to state exactly the meaning of heat treatment as well as its process such as tempering and normalizing.

Many of the candidates attempted this question and they performed fairly.

Question 3

- (a) List four ferrous metals stating what each can be used for.
- (b) Give four non-ferrous metals, giving the application of each.
- (c) Identify four bench tools and give the application of each.

Intended Task

The question required candidates to list four ferrous metals, stating what each can be used for and to give four non-ferrous metals, giving the application of each. Those who attempted this question performed well.

Question 4

- (a) List the four main parts of the lathe.
- (b) Give two advantages and two disadvantages of a three jaw chuck.
With a clear sketch of a lathe tool, indicate the following features:
 - (i) clearance angle.
 - (ii) rake angle.
 - (iii) secondary clearance.

Intended Task

The Question required the candidates to list the four main parts of the lathe and to give two advantages and two disadvantages of a three jaw chuck. They were also expected to draw a clear sketch of a lathe tool and indicate features of clearance angle, rake angle and secondary clearance. Candidates who answered this question could not draw the diagram required, but they performed fairly.

Question 5

- (a) Explain the term “general safety rule”.
- (b) List safety rules as regards the use of machine in the workshop.
- (c) State four safety rules as regards the use of hand tools in the metal workshop.

Intended Task

The question required candidates to explain the term “general safety rule”, list safety rules as regards the use of machine in the workshop and state four safety rules as regards the use of hand tools in the metal workshop.

Many of the candidates could not explain the term “general safety rule”, though their performance was fair.

Question 6

- (a) Differentiate between arc and gas welding.
- (b) Explain what is meant by the following welding terms:
 - (i) molten pool.
 - (ii) penetration.
 - (iii) backfiring.

Intended Task

The question required candidates to differentiate between arc and gas welding. Also, they were to explain what is meant by molten pool, penetration and backfiring.

Many of the candidates attempted the question and they performed fairly.

Candidates' Weaknesses

- Poor presentation of answers.
- Poor drawing skills.

Suggestions for Improvements

- ❖ Schools should lay emphasis on the teaching of English Language.
- ❖ Emphasis should be placed on teaching of Technical Drawing.

GENERAL WOOD WORKS (192-1)

General Comments

The questions covered the syllabus and candidates' performance was generally good and better than that of last year.

Detailed Comments on Each Question

Question 1

- (a) State three reasons for applying finishes to wooden construction.
- (b) State two classifications of finishes and write short notes on any ONE
- (c) Explain two ways of treating work surfaces.

Intended Task

This question required the candidates' ability to recall three reasons for applying finishes to wooden construction, state two classifications of finishes, write short notes on any one and explain two ways of treating wood surfaces. Many of the candidates who attempted this question performed well.

Question 2

- (a) Differentiate between "Veneer" and "Veneering"
- (b) List three methods of cutting veneer.
- (c) State three advantages of plywood over solid wood.

Intended Task

This question required the candidates' ability to recall the difference between "Veneer" and "Veneering", list three methods of cutting veneer and state three advantages of plywood over solid wood.

Many of the candidates who attempted these questions performed well.

Question 3

- (a) List five cutting operations who can be performed on a circular saw machine.
- (b) Sketch any three of the above mentioned operations.
- (c) State the function(s) of these parts of a circular saw machine.
 - (i) mitre gauge,
 - (ii) ripping gauge and
 - (iii)isolator.

Intended Task

The question required the candidates' ability to recall by listing any five cutting operations that can be performed on a circular saw machine and also to sketch any three of the operations. Many of the candidates attempted this question. Though they had the idea of questions, they could not sketch any of the three correctly. The candidates' performance was fair.

Question 4

- (a) Give three reasons necessary to observe safety precautions in the workshop.
- (b) State five general causes of accident in the workshop.

- (c) State three precautions to be kept in mind when operating a NARROW BANK SAWING MACHINE.

Intended Task

The question required the candidates' practical knowledge of a precautionary safety in the workshop. Virtually all the candidates answered these questions and many of them performed well.

Question 5

- (a) Make a neat sketch of the cross-section of a tree trunk and label the following parts:
 - (i) pith,
 - (ii) heartwood,
 - (ii) annual rings,
 - (iii) medullary rays and
 - (iv) bast.

- (b) Make neat sketches of the following hinges:
 - (i) tee hinge.
 - (ii) Strap hinge.

Intended Task

This question required the candidates' ability to sketch correctly. Many of the candidates attempted this question but they could not sketch all the diagrams correctly, though they performed well.

Candidates' Strengths

- ✓ Good knowledge of safety precautions in the workshop.
- ✓ Good knowledge of wood finishes.

Candidates' Weaknesses

- Poor drawing skills.
- Poor grammatical expressions.
- Poor presentation of answers.

Suggestions for Improvement

- ❖ Students should read and understand questions very well before attempting them.
- ❖ Candidates should cultivate the habit of reading novels, magazines, newspapers among others.
- ❖ Students should learn to draw sketches to illustrate their answers on questions that require diagrams.

BUILDING/ENGINEERING DRAWING (193-2)

General Comments

The questions covered the syllabus and candidates' performance was generally well.

Detailed Comments on Each Question

Question 1

Draw a regular pentagon with sides 30mm long and construct its involute.

Intended Task

The question required the candidates to draw a regular pentagon and construct its involute. Many of the candidates who attempted this question failed to draw correctly. Hence, the candidates' performance was poor.

Question 2

Produce the tangency problem shown below. Show all construction lines.

Intended Task

This question required the candidates' ability to produce the tangency problem shown, they were to show all construction lines. Many of the candidates who attempted this question were unable to construct the r80 and R40. Instead they used free hand to sketch.

However, the candidates' performance was on the average.

Question 3

The front elevation and plan view of a drive belt bracket are shown in the diagram below.

- i. Reproduce the views.
- ii. Project an end elevation in first angle projection.

Intended Task

The question required the candidates' ability to recall how to reproduce the views above and also to project an end elevation in first angle projection.

Many of the candidates approached this question wrongly and failed to project an end elevation. Candidates' performance was poor.

Question 4

The drawing below shows the floor plan of a two-bedroom apartment. Study the specification and use them to attempt the questions that follow:

Foundation footing		450x150 at 900 from ground level
Floor	-	30 Screed, 150 concrete slabs, 300 hardcore and 50 binding.
Walls	-	All walls 22
Doors	-	D1, 2100 x1200, D2, 2100 x 1000, D3, 2100 x 600
Windows	-	W1, 1800 x 1200, W2. 1200 x 1200, W3, 600 x 430
Headroom	-	3000
Roof	-	Gable end with corrugated roofing sheets
Draw		

- (i) The floor to scale 1:100
- (ii) A front elevation
- (iii) A section on X-X from ground level to the roof.

Intended Task

The question tested candidates' ability to read the building drawing, interpret correctly the use of T-square and set Square. Many of the candidates who attempted this question were good in this area and had good demonstrative skills in the arrangement of the components of a building hence, the candidates performed well.

Question 5

The figure shown on page 5 shows the views of the various parts of a small adjustable spanner, drawn in third angle projection.

The plan and elevation of the main body is shown, and the clamp is shown in plan and elevation only.

The clamp fits into the main body and its position is adjusted by means of the knurled adjuster which screws onto the M4 thread of the clamp and fits into the 13 x 22 rectangular hole in the main body.

Draw full size with the jaws positioned 10mm apart:

- i. a plan of the complete assembly.
- ii. A sectional elevation taken through the centre line of the plan.
- iii. An end elevation viewed from arrow C.

NOTE:

Draw in first angle projection.

Do not show any hidden details.

Do not section the knurled adjuster.

Intended Task

The question was designed to test candidates' skills in the Jaws positioned 10mm apart drawing. Many of the candidates failed to approach the question correctly. They could not distinguish between the first and the third angle projections. They also failed to show the plan and the side views. The candidates did not have knowledge of the subject. They used drawing equipment wrongly and they could not distinguish between constructions and drawing hence, they performed poorly.

Candidates' Weaknesses

- Poor grammatical expressions.
- Poor drawing skills.
- Deficiency in geometrical and solid drawing constructions.
- Inability to distinguish between drawing and construction.

Suggestions for Improvement

- ❖ Teachers should lay emphasis on the correct use of drawing equipment.
- ❖ Students should cultivate the habit of reading novels, magazines, newspapers, among others.
- ❖ Students should improve on drawing and also illustrate their answers on questions that require diagrams.

INTRODUCTION TO BUILDING CONSTRUCTION (211)

General Comments

The questions covered the syllabus. Generally, candidates' performance was poor.

Detailed Comments on Each question

Question 1

- (a) Using well labeled diagrams, describe dependent and independent scaffold.
- (b) Enumerate with four reasons while tubular scaffold is preferred.

Intended Task

The question tested the candidates' drawing and labeling skills. Candidates were expected to mention reasons while tubular Scaffold is preferred.

Most candidates who attempted this question did not understand the question clearly hence, they performed poorly.

Question 2

- (a) List five tools under each of the following sub-headings:

- (i) Block laying
- (ii) Finishing
- (iii) Wall Straightening

- (b) Explain the term 'Grading'

Intended Task

The question required the candidates' knowledge of grading and they were expected to list five tools used in blocklaying, finishing and wall straightening

Many of the candidates who attempted this question performed poorly.

Question 3

Describe the most suitable type of foundation for each of the following:-

- (i) Sandy soil
- (ii) Loamy soil
- (iii) Made up ground
- (iv) Firm clay.

Intended Task

The question required the candidates to describe the most suitable type of foundation for sandy soil, loamy soil, made up ground and firm clay.

Most candidates who attempted this question performed poorly.

Question 4

- (a) List three methods of testing drain.
- (b) Briefly describe one of the methods mentioned in (a) above.

Intended Task

The question required candidates' knowledge of methods of testing drain.

Most candidates attempted this question and they performed poorly.

Question 5

With aid of neat sketches, show the tools for carrying out the following craft work:

- (i) Picking mortar from the head pan,
- (ii) Cutting holes on chases,
- (iii) Cutting bricks,
- (iv) Levelling courses vertically and
- (v) Carrying mortar during pointing procedure.

Intended Task

The question tested the candidates' knowledge of sketching/drawing skills.

Many of the candidates who attempted this question lacked drawing skills hence, they performed poorly.

Question 6

- (a) Name the various supervisory personnel involved in the construction of a building.
- (b) Name three types of traditional building materials commonly used in Nigeria.

Intended Task

The question required the candidates to name the various supervisory personnel involved in building construction and types of traditional building materials commonly used in Nigeria.

Many of the candidates attempted this question and they performed poorly.

Question 7

- (a) List four types of concrete ground floor finishes.
- (b) Write a working procedure for applying one of them.

Intended Task

Candidates were required to list types of concrete ground floor finishes and state the procedures for applying one of them.

Many of the candidates who attempted this question performed poorly.

Candidates' Weaknesses

- Poor grammatical expressions.
- Poor understanding of questions.
- Poor computation skills.
- Poor sketching/drawing skills.

Suggestions for Improvement

- ❖ Technical drawing should be emphasized in Technical Colleges.
- ❖ Qualified Technical teachers should be employed.
- ❖ The teaching of English Language should be intensified.

BRICKLAYING/BLOCKLAYING AND CONCRETING (212)

General Comments

The questions covered the syllabus and the candidates' performance was fair.

Detailed Comments on Each Question:

Question 1

Briefly explain the following terms in relation to aggregates:

- (i) Fine aggregates.
- (ii) Coarse aggregates
- (iii) Bulking
- (iv) All in aggregates.

Intended Tasks

The question required the candidates' knowledge of fine aggregates, coarse aggregates, bulking and all-in aggregates. Their performance was poor.

Question 2

With the aid of neat sketches, identify the tools/equipment used in carrying out the following works:

- (i) Spreading adhesives on the floor,
- (ii) Plumbing a short wall,
- (iii) Laying/Spreading bedding mortar for block work and
- (iv) Mixing concrete manually.

Intended Task

The question tested the candidates' knowledge on sketching skill and identification of tools/equipment used in some works.

Those who attempted the question performed well.

Question 3

- (a) Explain the term site preparation.
- (b) Explain any five items involved in site preparation.

Intended Task

The question required candidates' knowledge on site preparation..

Candidates who attempted this question performed well.

Question 4

- (a) Make a cross-sectional sketch of a solid ground floor. Use the sketch to describe how rising ground moisture is prevented from entering the building.
- (b) With the aid of the sketch in 4(a) above identify:
 - (i) Hardcore,
 - (ii) Oversite concrete,
 - (iii) Floor finish and.
 - (iv) Adjoining ground floor.

Intended Task

Candidates were required to make a cross-sectional sketch of solid ground floor.

Those who attempted the question performed well.

Question 5

- (a) Explain the term 'Joggle' and state its function in arch construction.
- (b) Describe the use of the following in arch construction:
 - (i) Deadman
 - (ii) Arch centre.

Intended Task

The question required candidates' knowledge of joggle, stating its function in arch construction.

Many of the candidates attempted it and they performed well.

Question 6

- (a) List four types of stones that can be used for rubble work or masonry.
- (b) Describe with aid of sketches, the following:
 - (i) Random rubble and
 - (ii) Rag rubble.

Intended Task

The question required candidates to list types of stones that can be used for rubble work or masonry.

Those who attempted the question performed fairly.

Question 7

- (a) State three advantages of tubular scaffold over wooden scaffold.
- (b) With the aid of sketch(es), identify the following parts of scaffold:

- (i) Transom,
- (ii) Baseplate,
- (iii) Lodger,
- (iv) Platform,
- (v) Brace and
- (vi) Standard.

Intended Task

The question required candidates' knowledge on advantages of tubular scaffold over wooden scaffold and sketching skills.

Those who attempted the question performed fairly.

Candidates' Weaknesses

- Poor sketching skills.
- Poor grammatical expressions.
- Lack of confidence in their abilities.
- No in-depth knowledge of the subject.

Suggestions for Improvement

- ❖ Colleges should lay greater emphasis on the teaching of English Language.
- ❖ The importance of drawing/sketching should be emphasized.

CARPENTRY AND JOINERY (221)

General Comments

The questions covered the syllabus and the performance of the candidate was better than the previous years.

Detailed Comments on Each Question:

Question 1

- (a) Using the first two steps, describe how a piece of timber can be prepared.
- (b) Make a list of tools that can be used in carrying out each step as in 1(a) above
- (c) What is the purpose of face marks?

Intended Task

The question required candidates' knowledge of preparation of timber, lists of tools used in carrying out the steps and explanation of face marks.

Those who attempted the question performed well.

Question 2

Explain the following terms as they are used in carpentry and joinery:

- (i) Sawing,
- (ii) Chamfering,
- (iii) Planning,
- (iv) Grooving and
- (v) Trenching.

Intended Task

The question required the candidates to explain some terms which are sawing, chamfering, planning, grooving and trenching as they are used in carpentry and joinery.

Those who attempted the question performed well.

Question 3

Sketch a close couple roof and indicate the following members on it.

- (i) Tension,
- (ii) Run,
- (iii) Span and
- (iv) Ceiling joist.

Intended Task

The question required the candidates to sketch a close couple roof and indicate tension, Run, Span and Ceiling joist. Many of the candidates who attempted this question could not sketch,. Their performance was poor.

Question 4

- (a) What is cladding?
- (b) State four purposes of cladding to a building.

Intended Task

The question required candidates to define cladding.

Many of the candidates who attempted this question lacked grammatical expressions, hence, they performed poorly.

Question 5

With the aid of a sketch, explain a marking gauge.

Intended Task

The question required candidates to sketch and explain a marking gauge.

Many of the candidates who attempted this question lacked sketching skills and they performed poorly.

Question 6

- (a) Define preservation of timber.
- (b) Identify the three main groups of preservatives.
- (c) How is plywood preserved?

Intended Task

The question required candidates to give definition of preservation of timber, identify three main groups of preservatives and explain how plywood is preserved.

Many candidates attempted this question and they performed poorly.

Candidates' Weaknesses

- Poor computation skills
- Poor grammatical expressions.
- Poor sketching/Drawing skills.
- Poor Presentation of answers.

Suggestions for Improvements

- ❖ Candidates should be taught how to sketch, draw and label diagrams.
- ❖ Teachers should make practical lesson compulsory for students.
- ❖ There should be capacity building for teachers to enhance their knowledge of the teaching methodology.

FURNITURE MAKING (231-1)

General Comments

The questions covered the entire syllabus and candidates' performance was poor compared to the previous year.

Detailed Comments on Each Question

Question 1

- (a) State four characteristics of synthetic foam.
- (b) Give two reasons why we lip edges of particle board and plywood used in furniture construction.

Intended Task

The candidates were required to state four characteristics of synthetic foam and give two reasons why edges of boards are lipped.

The performance of the candidates was generally poor.

Question 2

Explain the four stages involved in preparing a surface of wood for finishing.

Intended Task

The candidates were expected to explain the four stages involved in preparing a surface of wood for finishing. Candidates' performance was good.

Question 3

Describe how you would assemble a writing chair with curved arms & back rest rails.

Intended Task

The question required the candidates to describe how they would assemble a writing chair with curved arms and back rest rails.

Many of the candidates answered this question and performed poorly.

Question 4

- (a) Explain the differences between solid end carcass and framed panelled carcass. Give five advantages of framed panel over the solid panel.
- (b) Explain the differences between a fix shelf and an adjustable shelf.

Intended Task

The question required candidates' understanding of both solid end carcass paneled and to explain the difference between a fix shelf and an adjustable shelf

Many of the candidates could not differentiate appropriately and so, performed poorly.

Question 5

What type of finishing would you apply to the following cabinets? Give two reasons for your choice:

- i. Bedroom furniture
- ii. Dining table
- iii. Clarden chair.

Intended Task

The question required the candidates to recall the type of finishing touch they will apply to the cabinets.

Many candidates performed well.

Candidates' Strength

Candidates' answers to the questions were generally good.

Candidates' Weaknesses

- Poor grammatical expressions.
- Poor presentation of answers.
- Mis-interpretation of questions.
- Spelling errors.

Suggestions for Improvement

- ❖ The teaching of English Language should be intensified.
- ❖ Candidates should endeavour to write legibly and avoid spelling mistakes.
- ❖ Students should understand questions before attempting them.

PAINTING AND DECORATING (251-1)

General Comments

The questions covered the syllabus and candidates' performance was poor compared to the previous year.

Detailed Comments on Each Question

Question 1

- (a) List seven essential tools used for carrying out glazing work.
- (b) Describe briefly the use of five of the tools mentioned above.

Intended Task

The question tested candidates' ability to list seven tools used for glazing work and their knowledge of the use of five of the tools mentioned above. Their performance was good.

Question 2

The fluffy white which appears on a new plastered surface is efflorescence.

- (a) Describe briefly how the effect is removed and treated for painting.
- (b) List and describe tools required for the treatment of efflorescence.

Intended Task

The question required candidates' knowledge on efflorescence. Candidates were expected to describe how the effect of efflorescence can be removed and treated for painting and to list tools required for the treatment of efflorescence. The few candidates who attempted the question performed well.

Question 3

Describe briefly the procedures of obtaining the following in broken colour decorative design.

- (i) Solvent spattering and
- (ii) Shading.

Intended Task

The question required candidates' knowledge of procedures of obtaining broken decorative design in solvent spattering and shading. The performance of the candidates was fair.

Question 4

Explain the following terms in spray painting work:

- i. Overspray
- ii. Arcing
- iii. Arris-effect.
- iv. Pin holing
- v. Holiday
- vi. Spattering

Intended Task

The question required candidates to explain some overspray, arcing, arris-effect, pin-holing, holiday and spattering in Spray Painting Work.

Many of the candidates who attempted the question performed well.

Question 5

- (a) Define the word “Snatch” in wall hanging.
- (b) State two causes of the problem in (a)
- (c) Describe briefly how it can be corrected.

Intended Task

The question required the candidates to define “Snatch”, state the causes of its problems and to describe how the problem can be corrected. Some candidates who attempted the question performed well.

Question 6

- (a) Draw and label the colour wheel
- (b) What is complementary Colour?
- (c) Give three examples of primary colour.

Intended Tasks

The question required candidates to draw the colour wheel, define complementary colour and give three examples of primary colour.

Many of the candidates who attempted this question performed well.

Question 7

A roll of wall paper measured 10.05m long and 0.510m wide. It is required that a sitting room measuring 10m long, 8m wide and 3.5m high is to be wall papered.

Calculate:

- i. The numbers of roll of wall paper required for the sitting room.
- ii. The total cost of the numbers of roll required if a roll cost N500.00.

Intended Task

The questions tested candidates' computational skills. Candidates' performance was poor.

Candidates' Strengths

- ✓ Ability to answer questions on tools used for carrying out glazing work.
- ✓ Candidates' responses to complementary colour and colour wheel drawing were encouraging.

Candidates' Weaknesses

- Lack of understanding of the questions asked.
- Poor computation skills
- Poor grammatical expressions.

Suggestions for Improvement

- ❖ Candidates should study the questions properly before attempting them.
- ❖ Candidates should involve themselves in more practical work.

PLUMBING AND PIPE FITTING (261-1)

General Comments

The questions covered the syllabus and candidates' performance was good.

Detailed Comments on Each Question

Question 1

Briefly explain the following testing systems for a new drainage layout:

- (i) Ball test,
- (ii) Smoke test,
- (iii) Water test,
- (iv) Air test.

Intended Task

The question required the candidates to explain the terms mentioned in drainage layout.

Candidates attempted the question very well and their performance was good.

Question 2

- (a) Illustrate with simple sketches how you would carry out the welding together of a two dissimilar metals and to the welding system you will employ and materials to be used.
- (b) Mention the components of a bronze welding rod.

Intended Task

The question required candidates to illustrate with sketches how they would carry out the welding of two different metals and name materials to be used.

Candidates who attempted the question could not sketch correctly. Their performance was poor.

Question 3

List and explain four advantages of a Polyvinyl Chloride pipe when used for cold water and drainage works.

Intended Task

Candidates were expected to list and explain four advantages of Polyvinyl chloride pipe when used for cold water and drainage works.

Many candidates who attempted the question performed well.

Question 4

List and describe six ways by which trap can lose its seals and state the remedy.

Intended Task

The candidates were expected to describe SIX ways by which trap can lose its seals and state the remedy.

Candidates attempted the question very well and their performance was good.

Question 5

- (a) Explain what should be done to a steam pipe in order not to lose its heat to the atmosphere.
- (b) Briefly explain the purpose of a steam trap used on steam pipe for hot water system

Intended Task

The question required candidates' knowledge of steam pipe and steam trap. Candidates were expected to explain what should be done to a steam pipe in order not to lose its heat to the atmosphere, and the purpose of a steam trap used on steam pipe for hot water system.

The candidates who attempted this question performed very well.

Question 6

- (a) What is a domical grating and where is it used in the building?
- (b) Sketch neatly a back inlet gulley used with kitchen sink in a domestic building.

Intended Task

The question required the candidates' knowledge of a domical grating and where it is used in the building. They were also required to sketch a back inlet gulley used with kitchen sink in a domestic building.

Those who attempted the question could not sketch correctly, though they performed fairly.

Candidates' Strengths

- ✓ Candidates answered the question on testing of drange correctly.
- ✓ Candidates answered the question on steam trap correctly.
- ✓ Many of the candidates stated the purpose of domical grating correctly.

Candidates' Weaknesses

- Poor grammatical expressions.
- Poor drawing skills.

Suggestions for Improvement

- ❖ Students should be taught more practically.
- ❖ Emphasis should be laid on drawing and sketching.
- ❖ Students should endeavour to read recommended textbooks.

FOOTWEAR MANUFACTURE (353-1)

General Comments

The questions covered the syllabus and the performance of the candidates was fair.

Detailed Comments on Each Question

Question 1

- (a) Name two machines for multiple cutting of man-made upper.
- (b) (i) Enumerate the advantages of “mulling of uppers”
(ii) State the reasons for “mulling of uppers”.

Intended Task

The question required candidates’ ability to identify two machines needed for multiple cutting of man-made upper and to state the advantages of “mulling of uppers”. They were also to give reasons for “mulling of uppers”

Candidates responded poorly and so performed poorly.

Question 2

Enumerate the operations involved in outside and inside heel attaching.

Intended Task

The question required candidates’ ability to recall the operations required for both outside and inside heel attaching.

Those who attempted the question performed poorly.

Question 3

- (a) Explain the operation of “pounding” in roughing.
- (b) Describe the halogenations of P.V.C. sole.

Intended Task

The question required the candidates to explain the operation “pounding” in roughing and then to illustrate halogenations of P.V.C. sole. Those who attempted it performed poorly.

Question 4

Explain the following terms:

- (i) Elasticity
- (ii) Plasticity
- (iii) Flexibility

Intended Task

The question required the candidates to explain some terms like elasticity, plasticity and flexibility.

Candidates who attempted the question performed well.

Question 5

- (a) List four needles commonly used in closing room.
- (b) Draw a needle and label its parts.

Intended Task

The question required candidates' ability to mention four needles universally used in closing room and then draw a needle with the parts well labeled.

Many of the candidates attempted the question and they performed well.

Candidates' Weaknesses

- Poor grammatical expressions.
- Shallow responses to some questions.

Suggestions for Improvement

- ❖ Students should read more newspapers, novels, magazines, etc.
- ❖ Students should be encouraged to improve on their study habits.

CERAMICS AND DESIGN (391-1)

General Comments

The questions met the required standard and covered the syllabus. Candidates performed better than the previous years.

Detail Comments on Each Question

Question 1

Explain the relationship between plaster of paris (pop) and gypsum rock.

Intended Task

The question required the candidates' knowledge of relating plaster of paris (pop) and gypsum rock. The candidates failed to explain and mention the chemical composition of gypsum or plaster of paris hence, they performed poorly.

Question 2

- (a) List five equipment used in ceramic production.
- (b) Define the term "Decoration" as used in ceramics.

Intended Task

The question required candidates to list some of the equipment used in ceramic production and to define the term "decoration" in ceramics.

Those who attempted it could not list the equipment used in ceramic production.

The performance of the candidates was poor.

Question 3

- (a) With the aid of diagrams explain three types of shading techniques.
- (b) What is perspective?

Intended Task

The question required the candidates to enumerate three types of shading techniques and the term perspective.

Those who attempted the question could not enumerate the types of shading techniques neither could they define the term "perspective". Their performance was poor.

Question 4

With your knowledge of ceramics, define the term “mould” and explain the two types you know.

Intended Task

The question required the candidates to define the term “Mould” and explain two types they know. Those who attempted the question could not define mould nor could they explain the two types they know. They performed poorly.

Question 5

- (a) List five materials for slip preparation.
- (b) Explain the processes of making a good slip.

Intended Task

The question required the candidates to list the materials for slip preparation and the process of making a good slip.

Those who attempted the question were able to list the five materials and explain the process of making a good slip, hence, they performed well.

Candidates’ Weaknesses

- Poor grammatical expressions
- Poor organizational skills.

Suggestions for Improvement

- ❖ Teachers should lay emphasis on the teaching of English language.
- ❖ The importance of drawing/sketching should be emphasized.
- ❖ The students should be encouraged to read various ceramics journals or text books.
- ❖ Candidates should be taught the differences between equipment, tools and materials that are used in ceramics and design.

TOURISM (441)

General Comments

The questions covered the syllabus and the performance of the candidates was good.

Detailed Comments on Each Question

Question 1

- (a) Define Insurance.
- (b) State the benefits of insurance coverage for travellers.

Intended Task

The question required candidates to define insurance and to state the benefits of insurance coverage for travelers.

Many candidates attempted the question and they performed well.

Question 2

- (a) What is transportation?
- (b) List the various mode of transportation in Nigeria.
- (c) What are the problems associated with transportation in Nigeria?

Intended Task

The question required candidates to define transportation and to mention the various means of transportation and problems associated with transportation.

Many of the candidates misunderstood the question by writing on mode of transportation instead of means of transportation. Those who attempted it performed poorly.

Question 3

- (a) What are the important requirements of a successful destination?
- (b) What is infrastructure?
- (c) State its relevance in destination building?

Intended Task

The question required candidates' understanding of successful destination, infrastructure, and its relevance in destination building. Many of the candidates attempted this question and they performed well.

Question 4

- (a) Define commission.
- (b) What are the methods used by operator?
- (c) List sources of income for travel agencies.
- (d) Explain one of the sources of income for travel agencies.

Intended Task

The question required the candidates to define commission, list the methods used by operator, mention sources of income for travel agencies and explain one of the sources of income for travel agencies.

Those who attempted the question performed poorly.

Question 5

- (a) List six factors that influence agricultural activities in Nigeria.
- (b) Explain four of the listed factors above that influence agricultural activities in Nigeria.

Intended Task

The question required candidates to list six factors that influence agricultural activities in Nigeria and explain four of the listed factors.

Many candidates attempted this question and they performed well.

Question 6

State the importance of the following in the tourist industry:

- (i) Visa,
- (ii) Credit card,
- (iii) Accommodation,
- (iv) Advance reservation form,
- (v) Cancellation and
- (vi) Transportation.

Intended Task

The question required candidates to state the importance of the items mentioned above. Many of the candidates could not state the importance of cancellation and accommodation. Their performance was fair.

Candidates' Weaknesses

- Bad handwriting.
- Poor grammatical expressions.

Suggestions for Improvement

- ❖ Colleges/schools should lay emphasis on the teaching of English language.
- ❖ Candidates should read books on tourism.