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MINISTRY OF EDUCATION AND HUMAN RESOURCES

National Form III Assessment – 2013 Report

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INTRODUCTION

The lower secondary curriculum (Forms I-III), as laid out in the National Curriculum Framework provides the student with an incremental process of development with regard to knowledge, skills, values and attitudes.

In this context, the National Form III Assessment aims at providing a ‘checkpoint’ between the CPE examinations and the School Certificate examinations. It allows schools, students and other stakeholders to take stock of the progress in learning which has taken place in lower secondary. Schools can therefore evaluate students’ performance and, hence, they can make necessary adjustments in pedagogy.

The piloting phase of the National Form III Assessment ended in 2012. As from 2013 it is a full-fledged national assessment involving all state and private secondary schools in Mauritius and Rodrigues. Students are assessed in English Language, French Language, Mathematics, Computer Studies, Physics, Biology and Chemistry.

GENERAL COMMENTS

The pass rate in English, French and Computer Studies was above 60% as compared to that in Mathematics, Biology, Chemistry and Physics, where the pass rate was 48.2%, 48.6%, 31.4% and 47.9% respectively.

Table 1 shows the percentage of students scoring less than 40%, more than 40% and more than 80% in the different subjects.

Subject	% scoring less than 40%	% scoring more than 40%	% scoring more than 80%
English	19.7	80.3	10
French	24.6	75.4	7.4
Mathematics	51.8	48.2	11.2
Computer Studies	32.5	67.5	6.2
Biology	51.4	48.6	6.8
Chemistry	68.6	31.4	2.9
Physics	52.1	47.9	4.6

Table 1: Performance of students

Languages - English and French

The assessment in English Language and French Language focused on communicative competence with questions testing skills in reading comprehension, writing and knowledge of grammar in context.

Students fared well in exercises testing basic knowledge and understanding as opposed to questions requiring higher order skills. It was observed that syntax, verb tenses and vocabulary proved to be problematic in both English and French. In longer pieces of prose, students demonstrated little creativity and organization skills.

Mathematics

The competencies tested are knowledge and understanding of mathematical concepts and problem solving. It was noted that many basic concepts, were not mastered by a large number of students. Questions relating to concepts taught in Form II and Form III were wrongly answered

by a majority of students. These concepts are essential for further studies in Mathematics. Recalling of formulae remains a matter of concern.

Computer Studies

Students have performed well in low order questions and questions which did not require much writing such as Multiple Choice, True/False, Fill-in-the-blanks and Matching questions. They had difficulty in answering questions requiring higher order thinking skills and application. Questions relating to practical work were not satisfactorily answered.

Biology

Most students were able to tackle low order questions testing Knowledge and Understanding. One-word and short answer questions were easily answered. However, students had difficulty with analysis of data and questions requiring descriptive answers.

Chemistry

Several concepts appear to be problematic to students, namely, the writing of balanced chemical equations, experimental techniques and the environmental aspect of the subject. The performance points to poor observational skills.

Physics

In general, the paper was perceived as challenging, given that students faced significant difficulties with the meaning of some physics concepts examined, the meaning of mathematical concepts needed to solve questions, the application of physics concepts in everyday examples, the use of mathematical formula, construction of diagrams and interpretation of graphs. Many students did not attempt all questions.

ENGLISH

The pass rate in English language was 80.4%. The mean mark was 56.4. Figure 1 below shows the percentage of students in each mark band.

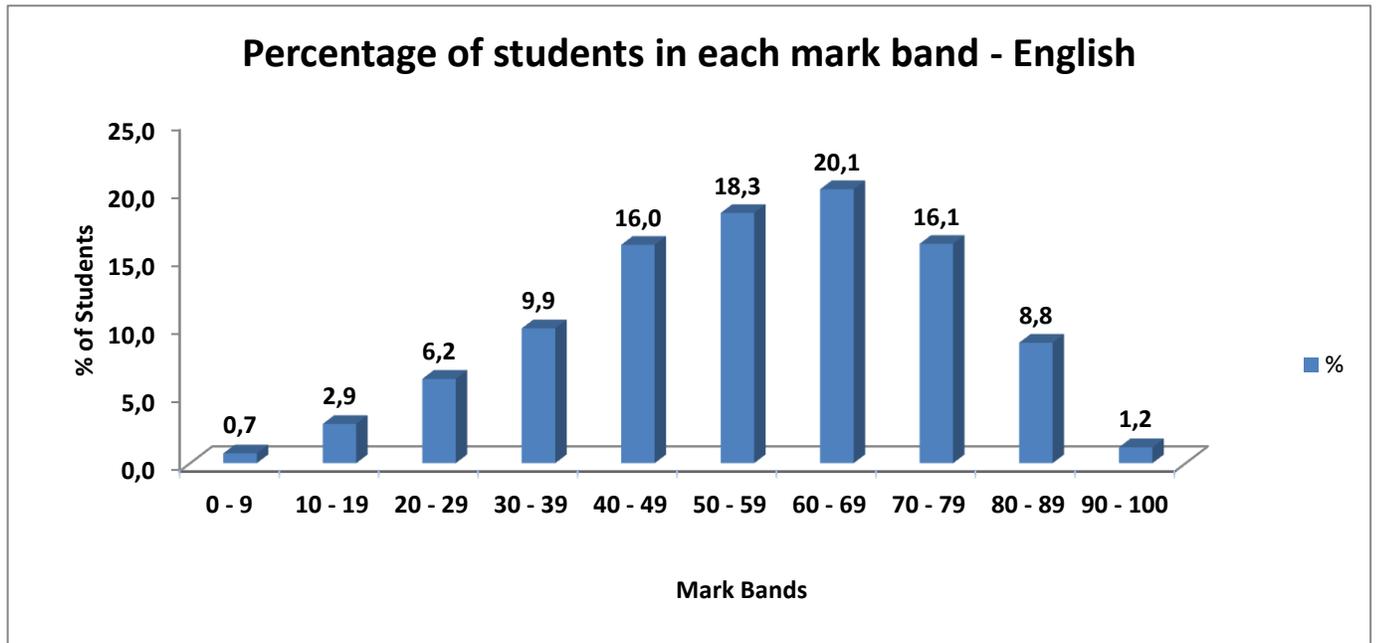


Figure 1: Percentage of students in each mark band

Section A- Reading Passage (40 Marks)

Section A comprised a factual passage on Mark Zuckerberg, the creator of Facebook, and a narrative passage about a shipwreck. In both comprehension passages, questions that required literal understanding were better answered than questions requiring inferences and knowledge of uncommon vocabulary items.

Question 1

Question 1 consisted of a comprehension passage with 11 items.

Item 1(a)

Items (a) (i) and (ii) of this question required students to choose a sentence from the passage to support their answer. Both parts of this question were well attempted. The word “**bright**” in the second question led students to the right answer easily.

Item 1(b).

This question required students to decide whether statements are “true” or “false” and to support their answers with relevant evidence from the passage.

Item (b) (i) was well answered by most students. However, some students randomly chose “true” or “false” and were not able to support their answers with evidence from the passage.

Item (b) (ii) was equally well answered by most students. However, students lost marks as they identified the sentence “**He was admitted to Harvard University in 2002**” as being the logical piece of evidence to support their answer.

In item (b) (iii), students failed to provide the right evidence to support their answer. Some students did not understand the word “**graduated**” and the phrasal verb “**dropped out**” proved to be difficult for them to grasp. Students picked out irrelevant sentences haphazardly to support their answers.

Item 1 (c)

Item 1(c) required students to put statements in the right order.

This item was well answered by the majority of students. However, some students faced difficulty to understand the passage, and, hence, could not re-organise the sentences.

Item 1(d)

This question required students to find a piece of evidence to support a statement. Some students indiscriminately copied sentences containing computer-related words like “**technology**” “**messaging system**” or “**Facebook**” which were not related to the question.

Item 1 (e)

The question required students to pick out the sentence which proved that Facemash was not developed for money. A common wrong answer was

“In Facemash, students from Harvard could upload their names and pictures where others could comment on them”.

This reveals that students misinterpreted the question. Students used their personal experience to answer this question instead of focusing only on the passage.

Item 1 (f)

This question required students to find the word **“precursor”** to show that Facemash was created before Facebook. Some students answered this item correctly while others copied the whole sentence instead of the required word. A common wrong answer was **“turned out.”**

Item 1 (g)

This item required students to find the disadvantage of ‘Facemash’.

A fair number of students could not provide the right answer.

Item 1 (h)

This question required students to identify the first users of Facebook.

Some students attempted this item without much difficulty. A large number of students gave the answer **“Mark Zuckerberg”** instead of the word **“students”**.

Item 1 (i)

This item was poorly answered by most students. The word **“dormitory”** proved to be problematic for a large majority of students.

Item 1 (j)

This item required students to find evidence for the **“universal appeal of Facebook”**.

It was well answered by most students. The wording of the question, “**worldwide phenomenon**”, led the students to the right answer.

Item 1 (k)

For this question, students were required to interpret the metaphor “... **the sky is the limit**”.

This item proved to be difficult for most students. Students gave answers like, for example, “**he cannot go beyond the sky**” or “**he cannot cross the sky**”. Most students could not understand and interpret the metaphor.

Question 2

Question 2 consisted of 12 items based on a comprehension passage.

Item (1)

This question required students to state two factors which helped the narrator reach the shore.

Many students lifted the sentence

“**I was a good swimmer but the water was so rough that I could not breathe**”.

They made no effort to use their own words.

Item (2)

This question required students to give one piece of evidence from paragraph 1 to show that the sea was “**angry**”.

The use of the word “**angry**” in the question led the students to identify other vocabulary items synonymous to “**angry**” in the paragraph where the adjective has been used.

Item (3)

This item required students to describe the “**physical state**” of the narrator. Many students copied sentences indiscriminately. They gave irrelevant answers like

“**after hours he was washed ashore...**” or

“Suddenly a gigantic wave carried me forward towards the shore and left me there, half dead.”

Item (4)

In this question, students had to find two reasons as to why the narrator shouted in terror.

The question was well answered by most students as the required answer was easily retrieved from the passage.

Item (5)

Students had to identify the element of **“surprise”** in the paragraph.

Students could not grasp the element of **“surprise”** and, therefore, were unable to highlight it in their answers. They gave irrelevant answers like

“as he was tired and away from danger” or

“to my great surprise in the morning he saw the ship had floated with the high tide and was near the island”

These answers show that students spotted the word **“surprise”** in this particular sentence and copied the whole sentence despite the fact that it had no link with the question.

Item (6)

This question required students to give an explanation for the sadness of the narrator.

Indiscriminate lifting was done by students from paragraph 3

“the sight of the wrecked vessel renewed my grief at the loss of my comrades who had all been drowned”.

A common wrong answer was **“the ship was damaged”** because many students ignored the second part of the sentence which contained the answer. (**“...at the loss of my comrades who had all been drowned”**).

Many students could not relate the word “**sad**” in the question to the word “**grief**” in the passage and were, therefore, unable to give the right answer.

Item (7)

Item (7) required students to identify two reasons as to why the narrator built a shelter on a hill.

The question was well answered by the majority of students as the answer was obvious and could easily be picked out.

Item (8)

This question required students to explain why the narrator called his shelter a “**fortress**”.

Students did not understand the meaning of the word “**fortress**”. This is illustrated by unsuitable answers like:

“**because he would live there**” or

“**because it was dangerous**”.

Item (9)

This question required students to deduce why the author pulled up the ladder once inside his fortress. The question proved to be difficult for a large majority of students.

Students gave irrelevant answers like:

“**so that he could enter in the fortress as a door**” or

“**he could see well if something is approaching**”

Item (10)

In this item, students had to provide a reason as to why the narrator called the sharpened piece of wood a ‘**gun**’.

The question was well answered by the majority of students as the answer could easily be retrieved from the passage.

Item (11)

This question required students to choose 2 adjectives that best described the narrator and to justify their choice.

Some students chose words haphazardly and could not justify their choice. A large majority of students were able to give the right answer and to provide appropriate justification for their answers.

Item (12)

This was a vocabulary question where students had to give the meaning of 3 words out of a list of 5 given words.

In general, this question was wrongly attempted by many students. It was left blank by some students. The words “**prowling**”, “**renewed**” and “**struggled**” posed greater difficulty as compared to the other 2 words. Students did not understand the meaning of the words. They, for example, interpreted “**prowling**” as “**wild**” or “**jungle**”.

SECTION B: GRAMMAR AND WRITING (60 Marks)

Question 3

This question required students to re-write a text, making necessary transformations in number form, from singular to plural, and in verb tense.

Many students failed to notice the change in the form of the word “**policeman**”. Thus, they did not make the necessary changes in the personal pronoun “**he**” and in verb agreement throughout the text. Some students only scored marks for appropriate verb agreement.

Question 4

This exercise tested students’ knowledge and application of punctuation. The majority of students could not identify all the required transformations. They, for example, failed to use the possessive form in “**Sarah’s**” and “**uncle’s**” and overlooked the use of the comma when listing

(old, remote and unsafe). Many students managed to score marks only for inserting a capital letter at the beginning of the sentence and a full stop at the end.

Question 5 (A) & (B)

Item 5 (A) required students to correct mistakes that had already been underlined in the text. Students had to correct noun forms, verb tense, adjective and preposition.

This item was well attempted by a small majority of students. The words “**places**” and “**found**” were rightly corrected by most students. Many students did not make the proper change in the form of the verb “**to go**”. They gave the answer “**have already go**”, instead of “**have already gone**”. The change required for the word “*peacefull*” led many students to give the adverb “**peacefully**” instead of the adjective “**peaceful**”. The double “l” probably led them to think that they had to convert the word into an adverb by adding a “y”.

Item 5 (B) required students to identify and correct mistakes in the given text. The question required knowledge of the use of gerunds, past tense, adjectives and future tense. It also tested students’ ability to use appropriate vocabulary relevant to the context.

The words “**delightful**” and “**sent**” were correctly transformed by some students. The words “**like**” and “**status**” posed a lot of difficulty for many students. Moreover, students transformed words that required no change. Examples of this are:

- “**mentioned**” changed into “*mentionned*”
- “**smell**” changed into “*odour*”
- “**incense**” changed into “*incence*”
- “**Buddha**” changed into “*Budha*”

Question 6

This question required students to read a text and to transform the reported conversation into direct speech. Students had to apply the basic rules of direct and indirect speech and carry out the transformations in verb tenses, punctuation marks and modals correctly.

The question was wrongly attempted by majority of students. Some students either did not attempt this question or copied the given text in the blank space provided.

Verb changes in this exercise proved to be a major difficulty. Many students did not make the necessary changes from past tense to present tense. Students ignored the grammatical rule of moving the tense one step forward into the present.

An example to illustrate this is the transformation of the sentence:

“I was so excited that I exclaimed that the birds were there”

into **“*I was so excited the birds were here” I exclaimed***”

instead of **“*The birds are here!*” I exclaimed excitedly.**

Moreover, students made wrong use of inverted commas. Students used inverted commas haphazardly without considering the grammatical rule.

Changes in modals were not carried out. For example,

“.....they could be in the bushes...” was maintained without making the change of the modal **“could”** into **“can”**.

Question 7

This exercise was based on the formation of adjectives, nouns and adverbs in a given context. The question was well attempted in general. However, the words **“colour”** and **“draw”**, in particular, posed problem for many students. A common wrong answer for **“colour”** was **“coloured”** instead of **“colourful”**. For **“draw”**, a common wrong answer was **“drawing”** instead of **“drawings”**. For the word **“appealed”**, many students gave the right form of the word but misspelt it. They spelt it as **“appealling”** instead of **“appealing”**.

Question 8

This question required students to write a diary entry of about 100 words. The exercise tested the students’ writing skills, organization skills and creativity.

The writing piece was assessed on the following:

-relevance of ideas (3 marks)

-Language (4 marks)

-Creativity (3 marks)

Some students did not attempt the question. Those who attempted it demonstrated little relevance, mastery of grammatical rules and creativity. Many students related the event in the past tense though they were required to plan a future event.

Sentence construction was a major problem for many students. Many of the sentences written by these students were wrongly structured and were, therefore, meaningless.

Examples of sentences written by students are given below:

We have planned to do activities and give to students

Last Monday I has been selected to organize a dance party in my school! "I had decided that it would take place in the hall.

Arriving that day, singers and dancer had already come. Parents were invited and everybody can dance.

Some students could hardly write 80 words. They restricted themselves to the given notes without any elaboration or personal response.

Only a handful of students showed elements of creativity. These students brought personal responses and originality in their ideas. They used a variety of sentence forms and vocabulary to enhance their pieces of writing.

Question 9

This question comprised writing a composition of about 200-250 words. A choice of three titles, of which 2 narratives and one argumentative, was given. The composition was marked according to 4 main criteria:

-General impression (5 marks)

-Language (grammar, spelling and punctuation) (8 marks)

-Organisation (4 marks)

-Vocabulary (3 marks)

Some students did not attempt this question. Most students attempted the narrative essays . The majority of students demonstrated a lack of proficiency in language .Poor vocabulary, inability to sustain verb tenses and failure to use compound /complex sentences properly were major weaknesses identified for this exercise.

The inability of students to sustain verb tenses throughout their pieces of writing remains a major issue. The wrong use of verb tenses and wrong verb agreement acted as a hindrance to the logical flow and coherence of essays. Examples of mistakes made by students are given below:

they did not saw me

I have been selected to organized

we will stand up and sang the song of the independent day

he don't found me

Poor vocabulary, wrong spelling and failure to use compound /complex sentences properly were a recurrent feature in many essays. Some examples are given below:

it prevent teenagers to learnt or to concentrate on their edution. This is sometime due to the mobile internet which lead the youngsters to stay on it mostly all their time.

some youngsters are very addited with mobile phones and this a bad thing.

everyone came to buy staff, non-staff, student, everyone was happy and praised.

The interference of mother tongue (Creole) and French remains a major problem. Immediate translation from Creole and French was evident in many cases. The following examples illustrate this:

I searched something to eat

when my alarm ring , my heart was beaten very fast

you are talking my talk

the use of mobile phone depends on the mind of the youngster

She was his boyfriend

The use of informal English (“gonna”, “me and my friends”), wrong use of conjunctions (“**and**, **because**”), and misuse of punctuation were common features. The examples below demonstrate this:

“Cali and Maya will work with me they will help me.”

“a thief came in my room and told me to kill him I refused.”

FRENCH

Commentaires Généraux

Comme l'indique le tableau ci-dessous, 75.4% des élèves ont obtenu la note 40 à 100. La note moyenne a été de 52.3.

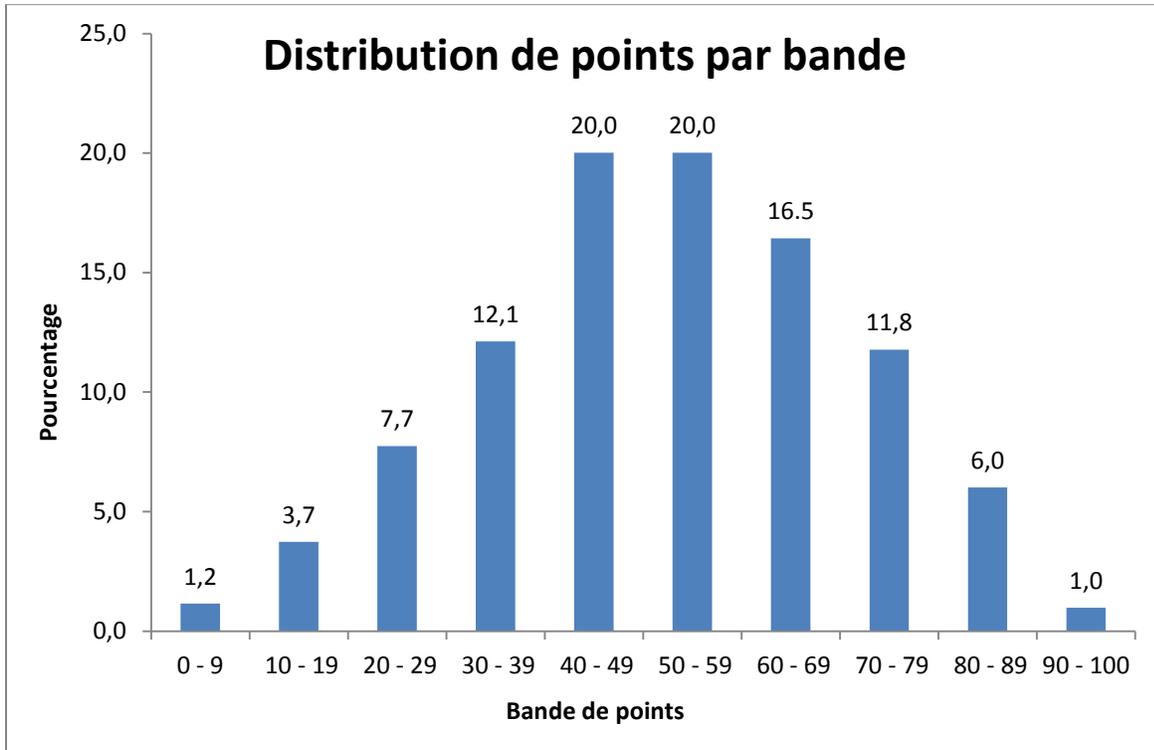


Figure 1: Performance des élèves en français

Analyse de la performance

Question 1

Les élèves devaient démontrer leur compréhension d'un texte informatif sur "Les Aborigènes en Australie" et répondre aux questions sur le texte.

Les questions étaient de deux niveaux: les questions directes et les questions d'inférence. En ce qui concerne les questions directes, les élèves devaient relever des informations élémentaires du texte. Par contre, pour les questions d'inférence, les élèves devaient démontrer leur capacité à analyser et à interpréter des éléments d'information du texte.

Les questions suivantes ont été bien répondues: 1(a), 1(c) (ii) ,1(h) (i), 1(h) (ii), 1(j) and 1(k).
Les élèves ont été moins performants dans les questions suivantes: 1(b), 1(e), 1(i) and 1(l).

Analyses des questions qui ont été mal répondues par les élèves

Item 1(b)

Ils ont été peu nombreux à réussir à opérer la transformation de « à pied sec » à « en marchant » ou « à pied ». La plupart des élèves ont recopié la phrase entière : « Ils sont arrivés à pied sec, profitant d'une baisse du niveau des mers... ». Certains élèves n'ont fait que reproduire des extraits non-pertinents du texte.

Item 1(e)

Ils ont été peu nombreux à avoir réussi cette question. Une explication probable est que la plupart des élèves ont mal compris la question. Ils ont numéroté les paragraphes au lieu des évènements.

Item 1(i)

Cette question d'inférence a posé des difficultés pour certains élèves. Ils n'ont pas compris les mots « gibier » et « traditionnelle ». Les réponses données étaient non-pertinentes comme : « ils portent des chemises et des casquettes ».

Item 1(l)

Ils ont été très peu nombreux à avoir trouvé le mot « multiculturel » pour « composé de gens d'origines diverses ».

Question 2

Les élèves devaient lire un texte narratif, avec pour protagonistes deux personnages principaux, au cours d'un voyage en voiture à Paris, et à répondre aux questions sur le texte.

Comme pour la question 1, les questions étaient de deux niveaux : les questions directes et les questions d'inférence. En ce qui concerne les questions directes, les élèves devaient relever des informations élémentaires du texte. Pour les questions d'inférence, les élèves devaient démontrer leur capacité à analyser des incidents précis au cours du voyage et à en tirer des conclusions ou à faire preuve de jugement critique.

Les élèves devaient également montrer leur appréciation critique du caractère des personnages. On exigeait aussi des élèves une connaissance du vocabulaire.

Les questions directes ont été bien répondues par la plupart des élèves. Comme cela a été le cas pour le texte 1, certains élèves n'ont pas compris le texte et n'ont pas pu faire le lien entre la question posée et les éléments pertinents du texte. Ils ont répondu à côté.

La performance de nombreux élèves confirme le constat fait à partir du texte 1, c'est-à-dire ces élèves n'ont pas encore maîtrisé une des compétences essentielles à ce stade de leur scolarité: lecture et compréhension.

Les questions suivantes ont été bien répondues par les élèves : 2(a), 2(c), 2(d), 2(e), 2(f) (ii), 2(i), 2(l) (i).

Les élèves ont mal répondu aux questions suivantes: 2(b), 2(f) (i), 2(g), 2(h), 2(j), 2(k), 2(l) (iii).

Analyses des questions qui ont été mal répondues par les élèves

Item 2 (b)

Les élèves devaient mentionner les occupants de la voiture. La plupart ont mentionné « Françoise » ou « la famille ».

Item 2 (f) (i)

Ils ont été peu nombreux à comprendre « proposition » et ont donné des réponses plus ou moins farfelues comme « arrivâmes sans encombre jusqu'à Paris » ou « en dépit de ce double pilotage ».

Item 2 (g)

Les élèves n'ont pas compris « double pilotage » et ont copié des parties entières du texte, sans aucun lien avec la question posée.

Item 2 (h)

Les élèves n'ont pas pu faire la relation entre « critiques» et « les haricots sont pleins de fils» et « il y a trop d'huile». Certains ont pu trouver la première partie de la réponse, mais pour la deuxième partie, au lieu de «il y a trop d'huile», ont répondu «l'huile d'olive lui restera sur l'estomac.»

Item 2 (j)

Les élèves n'ont pas pu trouver le nom mis pour « ils». Les réponses récurrentes étaient «lavabo bouché», « le petit coin douteux ». Certains n'ont simplement pas répondu à la question.

Item 2 (k)

Les élèves n'ont pas compris «qu'est-ce qui prouve le contraire ?» et ont copié les extraits peu pertinents du texte. De nombreux élèves ont copié des phrases entières du texte : «Malgré tout, comme il ...puis se coucha».

Item 2 (l) (iii)

La plupart des élèves n'ont pas pu trouver le terme «scruta».

Question 3

La question 3 comprenait deux items de réécriture qui évaluaient l'application des règles grammaticales et la production écrite (phrase et texte). Les élèves devaient réécrire des phrases en opérant des transformations grammaticales.

Dans l'ensemble, peu d'élèves les ont réussies. Même si en général, les élèves ont pu repérer les éléments de grammaire à modifier, ils ont été peu nombreux à avoir réussi à les transformer et à les orthographier correctement.

Les élèves ont rencontré des difficultés au niveau de l'application de la grammaire: les temps verbaux, les accords, l'identification et la correction des fautes d'orthographe. On a constaté les mêmes lacunes dans la production écrite.

Item 3 (i)

La majorité des élèves n'ont pas pu accorder « affectueux » à « elles ». Certains ont utilisé « leurs » au lieu de « les ». La plupart n'ont pas réussi l'accord du participe passé « élevées ».

Question 3(ii)

Une majorité des élèves, ont obtenu la bonne réponse. A noter que les erreurs récurrentes étaient: « s'installèrent », et « s'instalèrent », « ouvrirent » et « ouvèrent » « mettèrent » et « mettent ». Les élèves n'ont pas maîtrisé la terminaison l'orthographe et la terminaison des verbes. Quelques élèves ont simplement conservé le présent de l'indicatif.

Question 4

Pour cette question, les élèves devaient insérer les signes de ponctuation et une lettre majuscule dans un texte.

5 signes de ponctuation figuraient dans le texte : 2 virgules, 2 points finals et 1 lettre majuscule pour commencer une nouvelle phrase. : (, . S, .)

En général la performance a été satisfaisante pour cette question.

Question 5

L'objectif de cette question était de tester les compétences des élèves dans l'écriture et la compréhension des mots de différente nature. La question visait à tester la capacité de l'élève à opérer la transformation des mots comme suit :

- a) d'un nom abstrait à un nom concret (art-artiste)

- b) d'un nom propre à un adjectif (Inde-indienne)
- c) d'un nom abstrait à un participe - passé utilisé comme adjectif (inspiration- inspirées)
- d) d'un nom abstrait à un adjectif qualificatif (grâce- gracieuses)
- e) d'un adjectif à un nom abstrait (serein-sérénité)

Commentaires

(a) Les erreurs les plus courantes pour cette partie de la question comprenaient les fautes d'orthographe (*artiste*, *artiche* et *artise*) et l'utilisation du mot anglais « *actor* ». Quelques élèves ont laissé le mot inchangé.

(b) Cette partie s'est avérée assez difficile pour la plupart des élèves. L'utilisation des mots anglais « Indian, India » et des mots tels que « *indition*, *indiennement*, *indemment* » montre l'incapacité des élèves à effectuer la transformation d'un nom propre à un adjectif.

(c) Très peu d'élèves ont réussi à transformer un nom abstrait en un participe passé. Certains élèves ont simplement copié le mot donné, d'autres ont donné des réponses comme « inspireur, inspirant ». Souvent l'accord du participe passé n'a pas été fait. Ils ont écrit « inspirés et inspirée » au lieu de « inspirées ».

(d) La transformation d'un nom abstrait à un adjectif s'est avérée problématique pour beaucoup d'élèves. Les réponses les plus récurrentes étaient « gracieuses » « *graciales*, gracieux et *gracement* ».

(e) Très peu d'élèves ont bien fait cette partie. Certains élèves n'ont pas pu transformer l'adjectif en un nom abstrait et ont donné des réponses comme « sereinement » ou des noms mal orthographiés « *serenition* et *sereintion* ». D'autres élèves ont laissé le mot inchangé.

Question 6

La question 6 comprenait deux parties.

Les élèves devaient corriger les erreurs d'orthographe (lexicale et grammaticale) dans les textes.

Dans la première partie, les erreurs étaient soulignées. Dans la deuxième les élèves devaient identifier les erreurs et les corriger.

En général, la question a été bien travaillée par la plupart des élèves.

Item 6 (i)

Les erreurs dans ce texte étaient soulignées et les réponses attendues étaient : « campagne, marcher, noire, étaient, et ».

- (a) En général, les élèves ont pu corriger cette faute d'orthographe. Cependant certains ont donné des réponses telles que : « champagne » et « champagnes ».
- (b) Les élèves devaient trouver la réponse « marcher » au lieu de « marchait ». La règle grammaticale à maîtriser était l'usage d'un infinitif après une préposition. Les mauvaises réponses étaient: « marchait, marché et marche ».
- (c) L'élève devait accorder l'adjectif à un sujet au féminin singulier. Il fallait donc ajouter « e » à l'adjectif donné, c.à.d. « **noir** ». Certains ont remplacé « **noir** » par « **matin** », ce qui démontre qu'ils n'ont pas compris la question.
- (d) La réponse attendue était: « Étaient » au lieu de « été ». Il fallait utiliser « l'imparfait » pour la description et faire l'accord avec le sujet. La majorité des élèves ont trouvé la bonne réponse. Certains élèves ont répondu par d'autres temps du verbe « être »: les réponses étaient « **ont** » et « **sera** ». Quelques élèves n'ont pas répondu à la question.
- (e) L'erreur à trouver était : « est ». L'élève devait utiliser la conjonction au lieu du verbe. L'erreur a été repérée par la majorité des élèves. Certains cependant n'ont pas répondu à la question.

Item 6 (ii)

L'objectif de l'exercice 6 (ii) était le même que celui de l'exercice 6(i), bien que le niveau de difficulté fût plus élevé. Les élèves devaient montrer plus de discernement dans l'identification

des erreurs laissées dans le texte car celles-ci n'étaient pas soulignées. En général, le taux de réussite pour cette épreuve a été moyen. Certains élèves n'ont pas pu identifier les erreurs et ont corrigé des mots qui ne nécessitaient pas de correction. Ceux qui ont trouvé les erreurs n'ont pas toujours su les corriger. Les mots à souligner étaient : *quelque, prit, arriver, hauts, s'avavançait*. Les réponses correctes étaient: *quelques, pris, arrivé, hautes* et *s'avavançaient*.

- (i) **Quelque** – La réponse attendue était « quelques ». Les élèves devaient faire l'accord entre l'adjectif indéfini et le substantif « pas » au pluriel. Certains élèves n'ont pas trouvé l'erreur.
- (ii) **Prit**- Les élèves étaient appelés à montrer leur compétence à discerner les terminaisons des participes passés des verbes du 3^e groupe. Certains élèves n'ont pas pu identifier l'erreur. La réponse exigée était « pris ».
- (iii) **Arriver**- La réponse correcte était « arrivé ». L'élève devait montrer sa connaissance de l'usage du participe passé au début d'une phrase et son accord avec le sujet. La plupart des élèves n'ont pas pu identifier l'erreur, ou n'ont pas trouvé la bonne réponse. Les réponses récurrentes étaient : « **arrivait, arrivant ou arriva** ».
- (iv) **Haut**- La réponse attendue étaient « hautes ». Les élèves devaient faire l'accord entre un nom et un adjectif. De nombreux élèves n'ont pas pu identifier l'erreur. Ceux qui l'ont identifiée n'ont pas toujours fait le bon accord.
- (v) **S'avavançait**- Les élèves devaient accorder « s'avavançait » à « qui », ayant pour antécédent « vagues hautes ». La majorité des élèves n'ont pas pu trouver l'erreur. Certains l'ont trouvée sans pouvoir la corriger.

Question 7

L'objectif de la question 7 était d'évaluer la compétence de l'apprenant à compléter des phrases en utilisant la syntaxe appropriée. L'apprenant était appelé à faire preuve d'un certain degré de créativité.

En général, la performance a été moyenne et ils ont été peu nombreux à obtenir la note maximale par item. Les items (i), (ii) et (iv), où la fin des phrases devait être complétée, ont été moyennement bien travaillés.

Item (i)

Item (i) exigeait une proposition principale pour compléter la phrase.

Très peu d'élèves ont complété la phrase en utilisant la syntaxe appropriée. Les erreurs les plus récurrentes concernaient l'orthographe, par exemple «lessivre» au lieu de «lessive», les temps de verbe «maman fait» plutôt que «maman faisait». Certains élèves n'ont pas pu compléter la phrase.

Item (ii)

Item (ii) exigeait une proposition subordonnée conjonctive de conséquence commençant par la conjonction « que ».

La réponse la plus récurrente a été « qu'il a mal au ventre ». Toutefois « ventre » n'était pas toujours correctement orthographié.

Question 8

L'objectif de la question était d'évaluer les aptitudes des élèves à écrire un texte narratif, descriptif ou argumentatif. La rédaction a été corrigée en prenant en compte les critères suivants :

- (i) Impression générale (5 points)
- (ii) Vocabulaire (3 points)
- (iii) Organisation des idées - syntaxe et paragraphes (4 points)
- (iv) Qualité de la langue - grammaire, orthographe et ponctuation (8 points)

Dans l'ensemble, la performance a été peu satisfaisante, démontrant ainsi l'incapacité des élèves à produire un texte créatif en utilisant la grammaire, le vocabulaire et la syntaxe appropriés. Ceci est dû sans doute à l'absence de lecture et de pratique de l'écriture.

La majorité des élèves ont fait le choix de la narration. Cependant ils ont été très peu nombreux à avoir écrit des rédactions originales, imaginatives et bien structurées qui eussent pu susciter l'intérêt des correcteurs.

Ceux qui ont opté pour la description n'ont pas décrit le personnage, mais ont construit une histoire autour du personnage ou ont raconté un incident impliquant ce dernier et l'élève.

Les élèves qui ont choisi la rédaction argumentative n'ont fait que répéter le même argument, démontrant ainsi leur absence de préparation pour ce type de rédaction.

Impression générale

Très peu d'élèves ont écrit des textes intéressants et bien structurés, utilisant un vocabulaire et une syntaxe variés.

La plupart ont produit des textes d'un niveau satisfaisant, mais pas toujours élaborés, manquant souvent d'originalité avec des expressions stéréotypées relevant du cliché ; par exemple: *prendre ses jambes à son cou, le soleil brillait dans un ciel bleu, mon cœur battait la chamade.....*

Les textes écrits étaient peu pertinents, en-dessous du nombre de mots exigé, avec un vocabulaire très pauvre, des constructions syntaxiques maladroites et incomplètes, et des fautes de grammaire et d'orthographe.

Vocabulaire

La majorité des élèves ont un vocabulaire très élémentaire.

L'interférence de la langue créole et du langage *sms* semble évidente. Les erreurs récurrentes étaient:

sur le bis-stop, sur la gar, mon cœur batte dans mollet, sorti de lecol, mon largent, j'ai marké le bus, je sonne papa, elle est courte, elle met la guerre entre les amies, elle veut etre plus boss, sous les boutiques, je ne connaît pas quoi faire, en colere avec moi, il gagne connaissance, deux heures temps, il commence a faire noir.

Organisation des idées

La majorité des élèves ont écrit des phrases courtes, incomplètes, utilisant très peu ou pas de propositions subordonnées. Ceux dans les bandes inférieures ont écrit des phrases décousues, incomplètes et pour la plupart traduites du créole.

Exemples : *En retournant a la maison. Je décide de prendre un taxi.*

Alors quand je aller pres du voiture, est j'ai vu ma mère et mon sœur.....

Cette une lundi comme je devais partir prendre des cours après l'école.

Et arrivant a la maison maman était très inquiet.....

Langage (grammaire, orthographe et ponctuation)

Les fautes de langue ont été très nombreuses.

La plupart des élèves n'ont obtenu aucune note pour la langue.

Les fautes de langue comprenaient la mauvaise utilisation des temps de verbe, les fautes d'accord, l'utilisation arbitraire des temps des verbes, la mauvaise concordance des temps, l'absence d'accord entre le sujet et le verbe, et le nom et l'adjectif, la mauvaise utilisation des pronoms, des prépositions et des conjonctions, la mauvaise terminaison des verbes, la mauvaise utilisation des auxiliaires, les fautes d'orthographe et de ponctuation.

Les fautes les plus récurrentes étaient :

Mauvaises terminaisons: *J'avait décidé, j'avais appeler, j'ai rater le bus, j'ai grimpais, j'avait peur, ils me regardait, j'ai paniquer, j'ai continuer de marcher, je grimpa, quand je fini de jouer, ils nous aimes, les parents ne doivent pas restait, j'alluma, j'arriva, je commença, je me mit.*

Mauvais accords: *Les vieilles personnes doit, ils nous a donner, moi et mon ami vont.*

Mauvaise utilisation des auxiliaires: J'ai arrivé, j'ete peur, j'étais peur, mon frère et moi ont arrivé.

Mauvais accords des participes : Mon ami et moi sont sorti, la nuit était déjà tombé, ils sont allé.

Mauvaises terminaisons des participes : j'ai ouvert, il a mit.

Mauvaise utilisation des pronoms: Je le dis, je lui vis, je la telephone, mon père pardonne moi.

Mauvais accords entre nom et adjectif: leurs petit enfants, les grande vacances, tous les reponses, cette incident, les vieils personnes, a cet heure.

Mauvais orthographe: le ciel est blue, kilometes, a ma mer, le terin de lecol, a toute vites, trois heur, pusa un crit, j'abiter, les examins.

MATHEMATICS

General Comments

The pass rate in Mathematics is 48.2. The estimated mean mark is 41.5. Figure 1 below provides a summary of the performance in Mathematics with the percentage of students for each mark band.

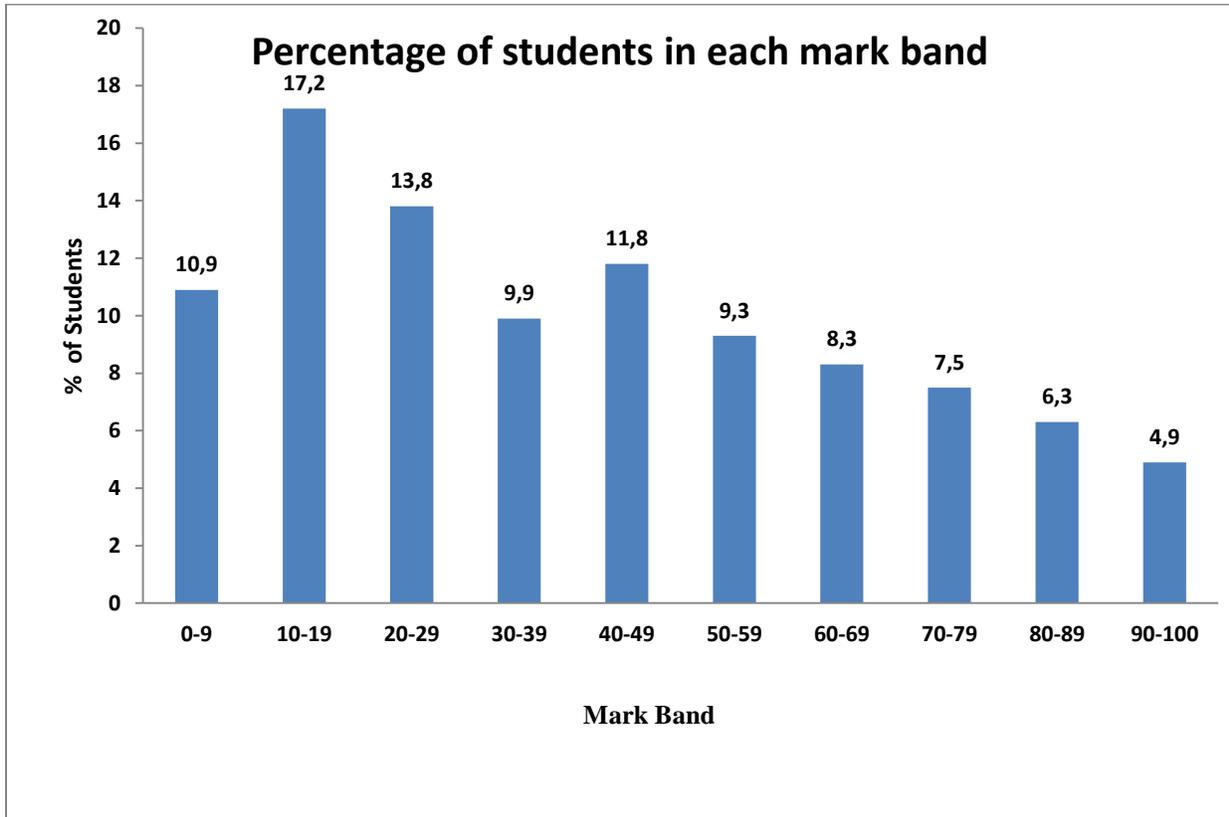


Figure 1: Percentage of students for each mark band

The majority of the students demonstrated poor problem solving skills. It was also noted that many basic concepts, particularly in algebra, necessary for further learning in Mathematics were not mastered by a large number of students. Difficulty in adding, subtracting and multiplying negative integers caused loss of a considerable number of marks among students. Many concepts which are generally taught in Form II and Form III were wrongly answered by the majority of students.

This year also many students were unable to recall formulae for length of arc, area of sector, gradient of a line and volume of cylinder.

Questions accessible to the majority of students were as follows:

Qu.1, Qu.2(a),(b), Qu.3(a), Qu.4, Qu.5(a), Qu.7(a),(b)(i), Qu.9(a) and Qu.14(a).

The following questions presented difficulties to a large majority of students:

Qu.9(c), Qu.10 (b), Qu.14 (b), (c), Qu.16 (a), Qu.17(c) (ii) and Qu.18.

Comments on Specific Questions

Question 1

In general this question was well answered.

In part (b), some students carried out the calculation in wrong order, that is, addition followed by division, to obtain $12 + 8 = 20$ and, then, $20 \div 4 = 5$.

Answers: (a) 6 (b) 14 (c) 5.63

Question 2

Parts (a) and (b) were well attempted by many students.

In part (c), some students shifted the decimal point by 2 digits to the right, thus obtaining the wrong answer 638.7. A significant number of students gave the answer as 6.38.

Answers: (a) 96 (b) 750 (c) 6.39

Question 3

Part (a) was the most successfully answered question in this paper.

In part (b) the wrong answer 0.5 was very common.

In part (c) some students gave the answer as $\frac{24}{27}$ thus not reducing it to the lowest terms.

Answers: (a) 240 (b) 0.2 (c) $\frac{8}{9}$

Question 4

This was generally a well answered question.

In part (a) some students multiplied the powers to obtain a^{28} .

A common mistake in part (b) was to divide 10 by 6, thus obtaining $x^{\frac{5}{3}}$. A small number of students added the two powers.

In part (c) the wrong answer y^7 , obtained from adding 3 and 4, was seen in some scripts.

Answers: (a) a^{11} (b) x^4 (c) y^{12}

Question 5

Many students did well in part (a). Some students multiplied the matrix **A** by the scalar 2 and the matrix **B** by the scalar 3 but then did not continue further to add the resulting matrices.

Part (b) was not well attempted by the majority of students. Multiplying the corresponding elements of the two matrices, $\begin{pmatrix} 5 & 3 \\ 2 & 4 \end{pmatrix}$ and $\begin{pmatrix} 2 & 1 \\ 7 & 6 \end{pmatrix}$, to obtain $\begin{pmatrix} 10 & 3 \\ 14 & 24 \end{pmatrix}$ was frequently seen.

Some students added the two matrices. Some students did not attempt this part. It was noted that some students answered part (b) correctly but could not answer part (a).

Answers: (a) $\begin{pmatrix} 16 & 9 \\ 25 & 26 \end{pmatrix}$ (b) $\begin{pmatrix} 31 & 23 \\ 32 & 26 \end{pmatrix}$

Question 6

This question was not well answered.

In part (a) many students wrongly evaluated -4×-5 as -20 .

In part **(b)** a significant number of students expanded $(3x - 5)^2$ as $9x^2 - 25$. Expressing $(3x - 5)^2$ as $(3x + 5)(3x - 5)$ and then carrying out the expansion was a very common mistake. Some students wrongly multiplied $3x$ by $3x$ to obtain $9x$ instead of $9x^2$.

In part **(c)** **(i)** the wrong answer $5y^3$, obtained by multiplying y^2 and $5y$, was very common. Some students gave the wrong answer $(y + 3)(y + 2)$.

In part **(c)** **(ii)** a common wrong answer was $m m - 9$. Some students recognised $m^2 - 9$ as a difference of two squares, $m^2 - 3^2$, but then gave the wrong answer $(m - 3)^2$.

Answers: **(a)** -7 **(b)** $9x^2 - 30x + 25$ **(c)(i)** $y(y + 5)$ **(c)(ii)** $(m + 3)(m - 3)$

Question 7

This question was well answered except for part **(b)(ii)**.

Some students gave the answer 4 instead of $\frac{4}{17}$ in part **(a)(i)** and 11 instead of $\frac{11}{17}$ in part **(a)(ii)**.

In part **(b)** **(i)** some students listed the correct elements without the braces.

Part **(b)** **(ii)** was left unattempted by a considerable number of students. Some students listed the elements instead of giving the number of elements.

Answers: **(a)(i)** $\frac{4}{17}$ **(ii)** $\frac{11}{17}$ **(b)(i)** c, e, h **(ii)** 3

Question 8

Many students lost some marks due to numerical mistakes. A significant number of students who managed to equalise the coefficient of x in both equations either stopped there or added the two equations instead of subtracting. Some students simply subtracted the corresponding terms of the two given equations, without equalising the coefficient of one of the two terms, thus obtaining $-x + y = -5$.

Answers: $x = 8$ and $y = 3$

Question 9

A large number of students obtained the correct answer in part (a).

In part (b) the common mistake was to divide the total frequency 200 by 6 instead of 50. A significant proportion of students used the correct method but there were cases of numerical slips.

Part (c) was not well answered. Some students were unable to identify that there were two middle terms in the distribution and took the 25th term as being the middle term thus obtaining the wrong answer 4. Some students proceeded as follows:

$$\begin{aligned}\text{Median} &= \left(\frac{50+1}{2}\right)^{\text{th}} \text{ term} \\ &= 25.5^{\text{th}} \text{ term} \\ &= 26^{\text{th}} \text{ term} \\ &= 5\end{aligned}$$

Some students took the given figures for the frequency (i.e. 5,7,6,7,15,10) as a distribution and rearranged them in ascending order (5,6,7,7,10,15) to obtain 7 as the median. Some students confused between the methods for calculating mean and median, thus $\frac{200}{50}$ leading to the answer 4 for the median.

Answers: (a) 5 (b) 4 (c) 4.5

Question 10

This question was not successfully answered by many students.

A common mistake in part (a) was to wrongly expand $6(4x + 1)$ as $24x + 1$ and $5(3x - 2)$ as $15x - 2$. A frequent mistake was not changing the sign when shifting a term from one side of the equation to another.

In part (b) $3x > 23 - 5$ instead of $-3x > 23 - 5$ was frequently seen in an intermediate step of the solution. Also, a large number of students did not reverse the inequality symbol when dividing by -3 .

In part (c) many students did not change the sign when shifting the term $4q$ on the other side of the equation, thus obtaining $7x = p + 4q$ instead of $7x = p - 4q$. In many scripts $7x = 4q - p$, instead of $-7x = 4q - p$ was seen in an intermediate step. Some students transposed q instead of x .

Answers: (a) $-\frac{16}{9}$ (b) $x < -6$ (c) $x = \frac{p-4q}{7}$

Question 11

In general this question was **not** well attempted.

In part (a) many students calculated the gradient correctly but did not proceed further to find the equation of the line. Some students used the wrong formula $\frac{x_2 - x_1}{y_2 - y_1}$. Some students obtained the wrong value for the y-intercept, c , due to numerical slip.

In part (b) the wrong answer 068^0 , obtained from $180^0 - 112^0$, was very common. Another common wrong answer was 248^0 obtained from either $360^0 - 112^0$ or $180^0 + 68^0$.

Answers: (a) $y = 3x - 1$ (b) 292^0

Question 12

Generally, this question was wrongly answered.

In part (a) the wrong trigonometric ratio was used by many students. A significant number of students, who used the correct trigonometric ratio, had difficulty in multiplication involving decimal number which led to wrong answers such as 86.1 and 0.861. Some students, after

reaching at $AC = \sin 35^\circ \times 15$, did not substitute the value of $\sin 35^\circ$ and simply multiplied 35 by 15 to obtain 525 as answer.

In part **(b) (i)** the concept of negative vector was not well mastered by the majority of students. This part was left unattempted in a significant proportion of scripts. A common mistake was to swap the x - component and the y - component in the vector **PQ** to obtain $\begin{pmatrix} -6 \\ 8 \end{pmatrix}$ instead of $\begin{pmatrix} -8 \\ 6 \end{pmatrix}$.

In part **(b) (ii)** a common error was to write $(-6)^2$ as -36 . Some students used the wrong formula $\overline{x^2 - y^2}$. It was also noted that a significant number of students who answered this part correctly were unable to score in part **(b)(i)**.

Answers: **(a)** 8.61 **(b)(i)** $\begin{pmatrix} -8 \\ 6 \end{pmatrix}$ **(ii)** 10

Question 13

In general this question was wrongly answered.

In part **(a) (i)** many students used wrong formula such as $\frac{\theta}{360^\circ} \times \pi r^2$, πr^2 and $2\pi r$ for length of arc.

In part **(a) (ii)** also, the use of wrong formula such as $\frac{\theta}{360^\circ} \times 2\pi r^2$ and $\frac{\theta}{360^\circ} \times \pi r$ for area of sector was common.

It was also noted that some students interchanged formulae for length of arc and area of sector.

It was observed that in part **(b)** $\frac{180}{30}$ instead of $\frac{360}{30}$ was frequently used. Some students wrote $\frac{30}{360} = 12$. Another common mistake was to subtract 30 from 180, resulting into 150, and then dividing 360 by 150 to obtain 4 as answer.

Answers: **(a) (i)** 22 **(ii)** 385 **(b)** 12

Question 14

Part (a) was well answered by many students. However, some students wrongly evaluated $2 \times 2 \times 2$ as 6.

Part (b) was well answered by a minority of students. Some students correctly obtained the LCM of 15, 30 and 45 as 90 but then did not convert 90 minutes into 1 hour 30 minutes and simply added 08 40 to 90 to obtain 08 130. A considerable number of students coincidentally obtained the correct answer by using a wrong method. Those students simply added 15, 30 and 45 to obtain 90 instead of considering the LCM of 15, 30 and 45.

Part (c) was not well answered by the majority of students. The wrong answer 300 obtained from 30×10 was very common, showing that many students were unable to identify that there were only 29 intervals of 10 m between the first tree and the last tree. Some students obtained the correct answer by drawing all the 30 trees.

Answers: (a) 8 (b) 10 10 (c) 290

Question 15

A large number of students succeeded in answering part (a). Some students subtracted 5^2 from 12^2 . The wrong evaluation of $\sqrt{169}$ as 14 was seen in a few scripts.

In part (b) some students were unable to recall the formula for area of triangle and in some scripts $12 \times 13 \times 5$ was seen, where 13 represents the length of AD. It was also noted that some students used the correct formula but wrongly identified the height of the triangle. Thus $\frac{1}{2} \times 12 \times 13$ or $\frac{1}{2} \times 5 \times 13$ figured in some scripts.

Part (c) was not well answered. It was observed that some students missed the area of one or two faces. Some students used a method similar to that of calculating total surface area of a solid cuboid and evaluated $2(30 \times 5 + 12 \times 5 + 12 \times 30)$. Another common mistake was the calculation of the total surface area of the prism using the formula for volume of prism, that is, area of cross section \times length.

Answers: (a) 13 (b) 30 (c) 960

Question 16

Generally, this question was not well answered.

Part (a) was not attempted by quite a large number of students. Some students were able to obtain an expression for area of rectangle. They either stopped there or equated it to zero and solved the equation. A common mistake was to expand $(x + 2)^2$ as $x^2 + 4$. Some students got the correct expressions for the area of the rectangle and the area of the square but then they either stopped there or equated the two expressions ignoring the fact that the area of rectangle is twice the area of square.

In part (b) the quadratic expression $x^2 - x - 12$ was wrongly factorised as $(x + 4)(x - 3)$ in a significant number of scripts.

Answers: (b) -3, 4 (c) 9

Question 17

In part (a), many students divided the increase by the new value instead of the original value and evaluated $\frac{30000}{180000} \times 100$ instead of $\frac{30000}{150000} \times 100$.

A common mistake in part (b) was to calculate 60% of 180 000 instead of 150 000.

In part (c) (i) $\frac{50000}{250000} \times 100$ was seen in some scripts, indicating that some students rather calculated the percentage of listeners who did not vote in 2012.

Part (c) (ii) was the least well answered question of this paper. The majority of students were unable to recognise that the percentage of listeners who voted in 2011 and 2012 should be represented as 100% and 125% respectively. Many students gave the wrong answer 99 000 from 55% of 180 000, where 55% was obtained by subtracting 25% from 80% which was the correct answer to part (c)(i). Another common wrong answer was 137 500, which was obtained from

$\frac{200\,000}{80} \times 55$. Some students subtracted 25% from 100% to obtain 75% and then calculated 75% of 200 000.

Answers: (a) 20 (b) 90 000 (c)(i) 80 (c)(ii) 160 000

Question 18

This question was not well answered by the majority of students.

The use of the wrong formula, $2\pi r^2 h$, for volume of cylinder was common in a considerable number of scripts. Some students succeeded in finding the height of water in container **B** but could not use the given ratio to find the height of container **B**. A significant number of students found the volume of cylinder correctly but did not proceed further.

Answer: 47.1

COMPUTER STUDIES

General comments

The pass rate in Computer studies was 68.3 %. The mean mark was 49.1. Figure 1 below shows the percentage of students for each mark band.

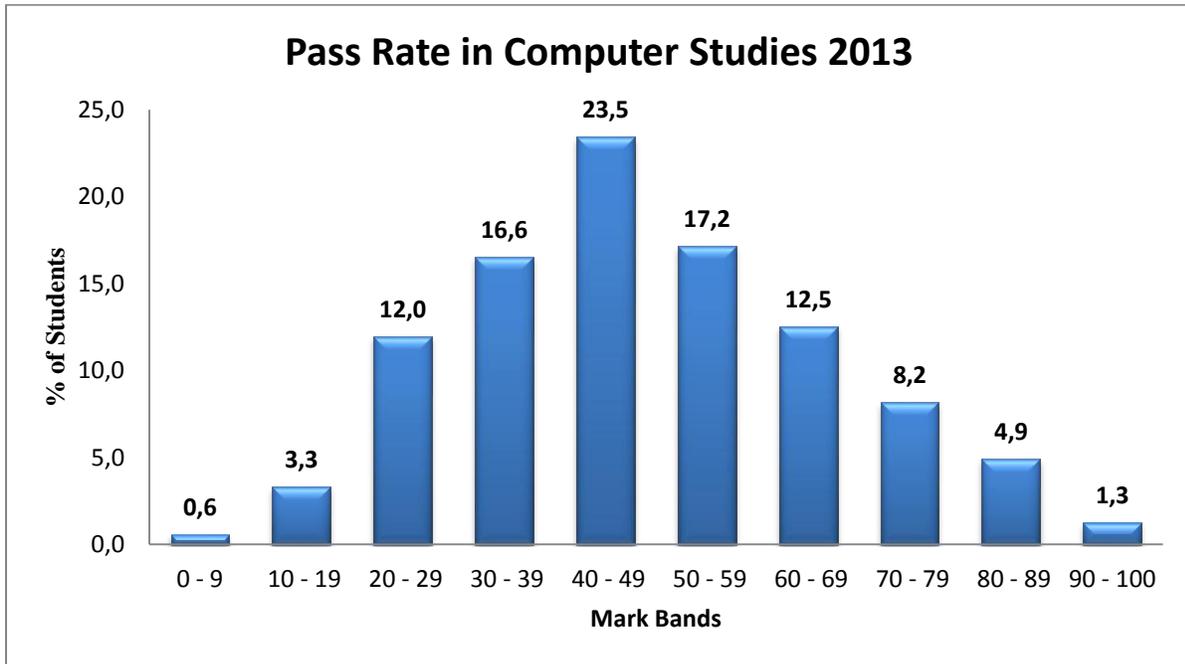


Figure 1: Percentage of students in each mark band

It was observed that a number of students obtained high marks for this paper as they were able to apply their knowledge to the questions. Students' responses to open-ended questions were too general and the quality of written communication was poor.

Questions 1(i), (ii), (vii), (viii), Question 3(ii), Question 7(iv), and Question 8(i) were poorly answered. Section B was generally badly answered. A large majority of students had major difficulty in writing formulae in the Excel questions. The flow chart questions were the least popular option in section B.

Qualitative Analysis

SECTION A

Question 1- 10 Multiple Choice questions (10 marks)

In general, students performed well in the Multiple-Choice section.

Item (i)

A majority of students failed to identify the components of the CPU.

Item (ii)

Students were required to identify non output devices. Many students ignored the word “**NOT**” in the question. As a result of this, response B was very common.

Item (vii)

Students were required to recognize a valid email address. Most students confused the correct response B, the email address (abc@gov.mu), with the incorrect response C (<http://www.abc@gov.mu>), which is a website address.

Item (viii)

Students were required to identify solutions for health hazards. This part of the question proved to be the most challenging one. Response B was the most common wrong answer.

Items (iii), (iv), (v), (vi), (ix) and (x) were generally well answered.

Question 2

Students were required to differentiate between memory and storage devices. This question was generally well answered except for section (ii), where students failed to distinguish between the two main concepts. Although memory (internal storage) and backing store (external storage) were mentioned in the question, only a minority of students answered this part correctly.

Question 3

Students were required to identify different peripheral devices in a computing environment. They answered the question satisfactorily.

Item (ii), relating to storage capacity, proved to be a difficult question. Only a few students answered it correctly.

Question 4

This question required students to match technical terms with their explanation. All parts of this question were well answered.

Question 5

This question required students to identify different applications of ICT in society. It was well answered by the majority of students.

Question 6

Students attempted this “True or False” question well with the exception of part (i), where many students believed that all banking services are available through ATM.

In part (iv) a minority of students could not relate LAN to “**a large geographical area**”.

Question 7

This question required students to assess the impact of ICT in society. With the exception of section (i), this open-ended question proved to be difficult.

Part (i) was well answered with students correctly identifying “**virus**” as the correct answer.

Part (ii) was satisfactorily answered by students.

Part (iii) was very badly answered. A large majority could not give **both** correct answers.

For part (iv), very few students explained fully what should be done to recover lost files and data.

A common answer for part (v) was “**buying original game software**”, which earned students only one mark out of two.

Question 8

The question required students to identify and describe potential health problems related to ICT in society. Except for Section (i) part 2, this question was very well answered.

SECTION B

Option1 - Word Processing.

Question 1

Students were required to identify Word processing features. Students did not fare well in this question. The word processing features like **WordArt** and **ClipArt** were not well understood. Tasks on formatting like **Centre**, **Underline** and **Bold** were partially identified. Students were required to provide two formatting tasks. A large majority of students identified only 1 formatting task.

Question 2

Students were required to give the meanings of 3 features in Word processing.

Part (a) was not well answered. The majority of students were not able to explain clearly the correct meaning of the three terms: **Paragraph formatting**, **Cut and Paste** and **Scroll bar**. Many students provided partial definitions.

Part (b) also proved to be a difficult question for the majority of students even though the **Print Dialog box** is a common feature in any printing exercise. Many students were able to state the number of blank sheets correctly. However, they failed to provide an appropriate justification.

In part (iv) the correct term “**Print Preview**” proved to be difficult for the majority of students. “**Print the file**”, “**Page Preview**” and “**Print**” were the common wrong answers.

It was observed that students were not able to identify the button which had to be clicked to open the whole document.

Option 2 – Spreadsheets

Question 1

Students were required to identify the features of a spreadsheet.

Part (i) proved to be difficult. Very few students correctly answered the question. Most of them could not label A as “**address box**” and B as “**formula bar**”.

Question 2

Students were required to write correct formulae.

Parts (i) and (ii) were answered particularly well.

In Part (iii) the majority of students experienced great difficulty with writing the correct formulae. They missed either the “=” sign when writing the formula or used “x” instead of “*”. Only a minority fared well in this question.

Part (iv) also proved to be difficult as students were not able to write the search condition correctly. The difficulties mentioned in part (iii) were recurrent in this part.

Option 3 – Database

Question 1

Students were required to know key field and its importance. Parts (i) and (ii) were poorly answered. A minority of students knew what a “**key field**” is and why it is needed in a table. Many students gave only the definition of “**Key field**”.

In Part (iii), students were required to identify primary key field in the 2 tables in the database.

Part (iv) was satisfactorily answered. The “**supplier code**” in the Item table could not be identified as the “**linked field**”.

Question 2

Students were required to identify the primary key field.

In part (i) students had difficulty to identify “**CODE**” as the primary key field.

Part (ii) was not satisfactorily answered because the majority of students could not identify the correct data type.

The number of fields in part (iii) was correctly identified. The number of records proved to be difficult to the majority of students as they counted the topmost row as a record. The most common wrong answer was “**7 records**”.

Part (iv) was not well answered. Many students could not understand the logical operator “**AND**” combined with the relational operators “> , <”.

“**Writing a query**” in part (v) was not understood by most students.

Option 4 – Program Flowchart

This option was the least popular one.

Question 1

Students were required to draw a diagram to represent “selection” structure using appropriate flow chart symbols.

Part (a) was poorly answered, with the majority of students failing to understand the control structure for “**selection**”.

Part (b) was equally answered poorly. Dry running a flowchart proved to be difficult.

Question 2

Students were required to complete a given Program flowchart. Students did not fare well in this question. Only a minority of students was able to complete the given flowchart.

BIOLOGY

General comments

The pass rate in Biology was 48.8 %. The national mean mark was 20.5 out of 50. Figure 1 below shows the distribution of marks within the different mark bands.

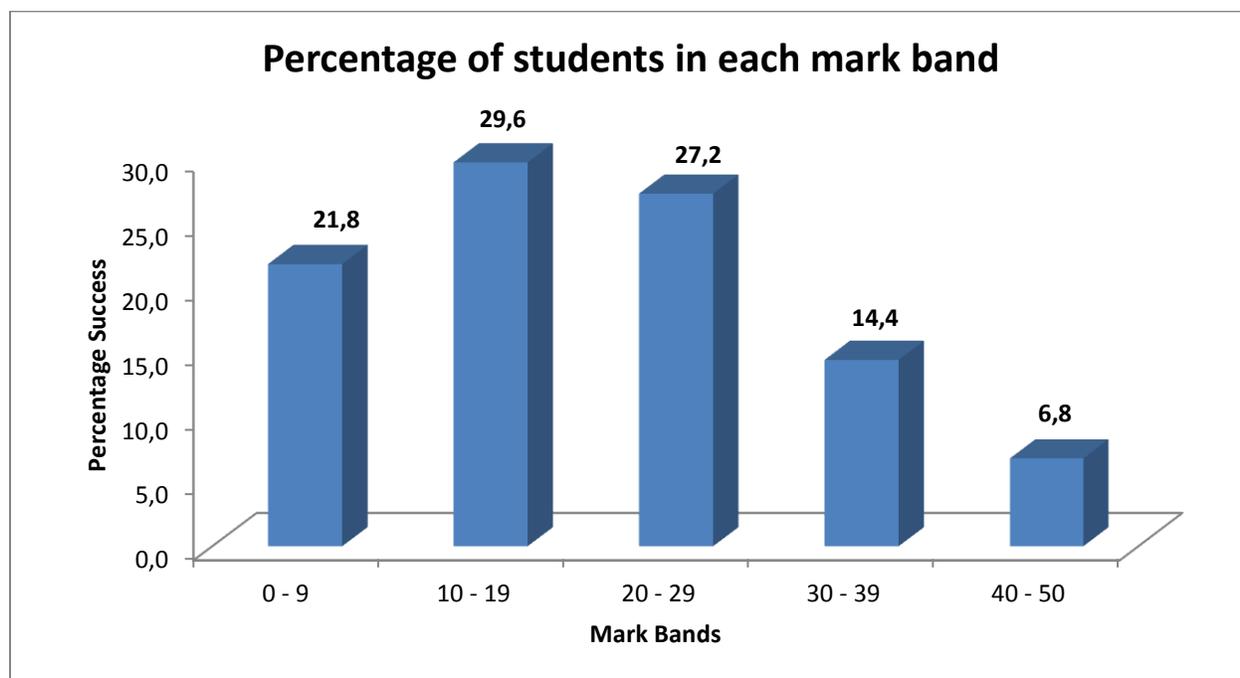


Figure 1: Percentage of students in each mark band

Analysis of the sample scripts revealed that many students were able to tackle questions which test 'Knowledge and Understanding'. One-word and Short answer questions were easily answered. However, students faced difficulty with analysis of data and with questions requiring descriptive answers. Questions based on 'Health & Safety', 'Biodiversity', and 'Transport' and 'Reproduction' proved particularly difficult.

Qualitative Analysis

Question 1

Question 1 comprised 5 Multiple Choice questions on different chapters.

Items 1(a) and 1(b)

Questions 1(a) and 1(b) were answered correctly by the majority of students.

The main distractor for question 1(a) was answer D (**cell membrane**) which was confused with cell wall.

That students had difficulty with question 1(b) may be explained by the fact that they could not link pollution and recreational activity.

Items 1(c) and 1(d)

Questions 1(c) and 1(d) were successfully tackled. In question 1(c), some students confused the capillary of figure 1.1 with the vein and, thus, gave answer B (**Vena cava**) and D (**pulmonary vein**) instead of C (**capillary**).

Item 1(d)

Item 1(d) proved particularly challenging for some students. It was a question on air pathway during inhalation. Some students confused between bronchus and bronchiole. In addition, students were confused with answer D as bronchioles are part of the lungs.

Students achieved the highest rate of success in Item 1(e) as they could use their general knowledge to answer it correctly, though the question was testing the competency of 'scientific investigation'.

Question 2

Question 2 comprised 4 items, testing students on communicable diseases.

Item 2 (a)

This was a direct recall question on communicable diseases. Students could not differentiate between the terms '**define**' and '**explain**'. Some students could not use the proper terms required for the question.

Item 2 (b)

The majority of students fared badly in this question. Some students simply stated the mode of transmission instead of describing it. The most common answer for this question was limited to the vector '**mosquitoes**', without proper description.

Some students could not interpret the word '**mode**' in item 2(b).

Item 2 (c)

This item tested awareness of students on prevention of malaria. Most students gave only one piece of advice instead of two as required by the question. Most students could not provide relevant advice present in sensitisation campaigns. Students who did not know that malaria is spread by mosquitoes could not answer on the prevention issues.

Item 2 (d)

This item required students to give one sign of AIDS. Many students did not attempt this question.

Question 3

Item 3 (a)

Students could not identify the '**two most**' energy providing nutrients among lipids, carbohydrates and proteins. The key word '**most**' in the question was overlooked by many students and thus they gave 'protein' as answer.

Item 3 (b)

Item 3b (i) was a highly scoring question that required students to make a simple calculation from the set of data given. However, some students could not locate relevant values and carry out the required mathematical calculation.

Students had difficulties in items 3b (ii), (iii) and (v) which tested inferential skills. They had to extrapolate from the given data and give relevant suggestions.

In Item 3b (ii) students tried to locate the answers from the table and gave figures but failed to give an explanation.

In Item 3b (iii), many students related calcium need to growth and not to bone formation.

In Item 3b (iv) some students related protein to growth but not to growth of foetus.

Students fared least well in Item 3 (b) as they had to relate iron with haemoglobin and RBC and further on to menstruation.

Question 4

Item 4 (a)

Students were required to have an understanding of the concept of biodiversity and to apply it to the Mauritian context. Some students had difficulty with this item as they did not understand the concept of biodiversity as being a higher number of different species.

Item 4 (b)

This was a question on invasive species. Many students could not relate the concept of invasive species to '**goyaves de chine**'.

Item 4 (c) (i)

Students gave vague answers such as ‘**atmosphere is affected**’. Students could not differentiate between **reasons** and **effects** of deforestation. Many students could not relate the key word ‘**consequence**’ with ‘**effects**’.

The same trend is observed for item 4c (ii). Students could not recall that conservation and legislation were ways of reducing deforestation. Some students even mentioned planting of trees.

Question 5

Question 5 proved to be quite difficult.

Item 5 (a)

In item 5(a), students had to state one function of the artery and the vein. Students were confused with regards to the direction of blood flow in an artery and a vein.

Item 5 (b)

Those who did not know the function of artery in item 5(a) did not attempt item 5(b). Reference to the structure of the artery confused students.

Some students understood that a clot would block the small lumen and obstruct blood flow.

Item 5 (c)

In this item, students could not understand that cholesterol causes fatty deposits and leads to cardiovascular disease.

Question 6

Item 6 (a)

Students produced vague answers such as ‘*breathing is taking in of oxygen*’ and ‘*respiration is breakdown of food*’, without any mention of release of energy.

Many students did not attempt this question. Moreover, misconception between breathing and gaseous exchange was also noted in addition to the common misconception between breathing and respiration.

Item 6 (b)

This question required a detailed understanding of the concept of the mechanism of breathing.

It was a 'fill in the blanks' question. The expected answers and the common errors made for this question are given in the table below:

SN	Expected answers	Common errors
1	inspiration/inhaling/ inhalation	breathing, respiration
2	upwards	inwards
3	thoracic	air cavity
4	flattens/contracts	expands

Item 6 (c) (i)

Item 6 (c) (i) was quite well tackled by a few students, but the majority of students gave vague answers like '*feels uneasy*'.

Item 6 (c) (ii)

For Item 6c (ii) students were able to recall that tuberculosis is a communicable disease.

Question 7

Item 7(a)

A high number of students gave photosynthesis as the answer instead of transpiration.

Item 7 (b) (i) was a question on analysis of graph and proved to be challenging for most students. Many students could neither interpret nor describe graphs.

Items 7 (b) (iii) and (iv)

Many students could not properly understand the “*concept of movement of water up the plant*” and identify the “*xylem as the vessel through which water moves up the plant*”.

Item 7 (c)

A similar trend is observed for item 7 (c), where few students recalled that food is transported in phloem.

Question 8

Item 8 (a)

In item 8(a), many students mentioned only sperm or egg instead of ‘gametes’.

Item 8 (b)

In item 8(b) students could not name the parts of the reproductive system correctly. Some even confused with other organs in the body, mainly digestive.

Item 8 (c)

This question required students to identify the fertile period based on calculations. Many students did not follow instructions properly and shaded either more or less than 6 days.

CHEMISTRY

Performance Analysis

General Comments

The percentage pass in Chemistry was 31.4%. The paper was set on 50 marks and the mean score was 16. Figure 1 below indicates the percentage of students in each mark band.

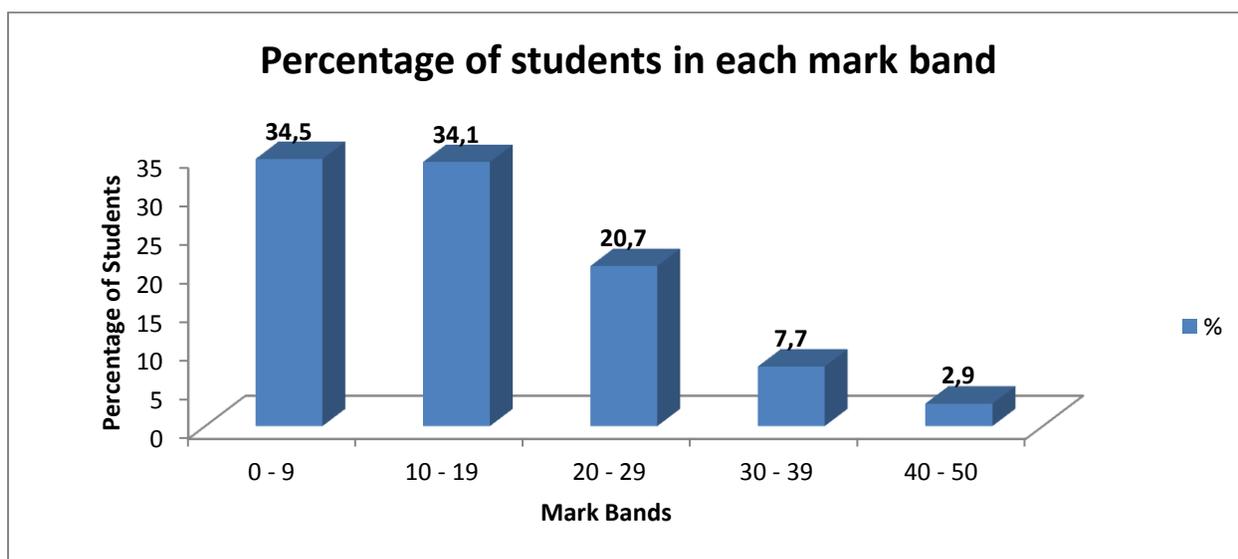


Figure 1: Percentage of students in each mark band

Qualitative Analysis

Question 1

Question 1 comprised 5 Multiple Choice questions on different chapters.

Item 1 (a)

Question 1(a) required students to be familiar with simple separation technique. It was answered correctly by a majority of students. The main distractor for question 1(a) was answer **B (distillation)** as students associate “**muddy water**” with distillation.

Item 1(b)

Item 1(b) required students to know reactivity of metals or the reactivity series. It was generally well answered. The main distractor for question 1(b) was the term “**low**”.

Item 1(c)

Item 1(c) required students to know and understand the process of ‘**precipitation**’. It was successfully answered by very few students. Students faced difficulty with this item as they could not link ‘**precipitation**’ with preparation of insoluble salt.

Item 1 (d)

Item 1 (d) required students to know reactivity of metals or the reactivity series. It was generally well answered.

Item (e)

Item (e) was based on neutralization and was correctly answered by very few students.

The main distractor for this item was answer D as students are more familiar with ‘**vinegar**’ as a household substance.

Question 2

Question 2 comprised 2 parts.

Item 2 (a)

In Question 2 (a), students were required to match sentences. The question was generally well answered.

Question 2 (a) (ii) required students to know reactivity of metals.

Items 2 (a) (iii), (iv), (v), & (vi) required students to know the uses of salt.

In Item 2 (a) (iii), the term **Plaster of Paris** posed problem to students.

The majority of students correctly answered question (a) (iv), which involves simple application and everyday use of a salt. Students associated toothpaste with **fluoride**.

In Item 2 (a) (v), some students were unable to link sodium chloride with kitchen salt and, as a result, only a small majority attempted the question correctly.

Item 2 (a) (vi) was correctly answered by most students as they associated **fertilizers** with **ammonium**.

Item 2 b

Item 2 (b) (i) and (ii) required students to fill in the blanks to complete sentences. Students had to choose between chemical and physical change.

Some students failed to identify **melting** as a physical change, though both part b (i) & b (ii) involve the same concept.

Question 3

Question 3 comprised 5 items testing students' knowledge on 'pollution'.

Item 3 (a)

Item 3 (a) was not well attempted by most students. The question required students to **“Explain”** how inhaling carbon monoxide is harmful to humans. The majority of students were not able to **‘explain’**. They merely stated the effect of the pollutant on humans.

Item 3 (b)

Item 3 (b) was correctly answered by very few students. The word ‘**type**’ led students to alternative answers.

Item 3 (c)

Item 3 (c) was correctly answered by a minority of students. They could not relate the protective role of the ozone layer with its capacity to prevent harmful ultra violet radiations from the sun to reach earth. A common wrong answer given was “**It protects the earth’s surface**”.

Item 3(d)

Item 3(d) required students to suggest 2 possible consequences of global warming. Very few students correctly answered parts (i) and (ii) respectively. A common wrong answer was “**rise in temperature**”.

Item 3 (e)

Item 3 (e) required students to give 1 harmful effect of ‘**oxides of sulfur**’. It was not well attempted by a majority of students. Students could not link oxides of sulfur to acid rain.

Question 4

Question 4 comprised 4 parts. The question was on formulae of compounds and chemical equations.

Item 4 (a)

Item 4 (a) was split into 2 parts where students were required to count the number of atoms in 2 formulae. Both parts were attempted by a minority of students.

Item 4 (b)

Item 4 (b) required students to write the formulae of 2 compounds. Very few students could correctly answer this part which involved knowledge and recall of symbols and valencies.

Item 4 (c)

In item 4 (c) students had to state whether sodium hydrogen carbonate is an acid or normal salt. A majority of students correctly answered this question.

Item 4 (d)

Items 4 (d) (i), (ii) and (ii) required students to balance 3 chemical equations. This part was correctly answered by very few students.

Question 5

Question 5 comprised 2 parts (a) and (b). The question was related to the separation technique of chromatography.

Item 5 (a)

Item 5 (a) (i) was correctly answered by a small majority. Many students gave alternative answers like “**filtration**”.

Item 5 (a) (ii) required students to provide a ‘**reason**’ to explain the pattern of colours formed in Figure 2. Very few students could attempt this question.

Item 5 (b)

Item 5 (b) (i) required students to label a diagram. Very few students were able to carry out the task. Some students did not refer to the previous experiment in 5 (a). Others inverted the order of the colours. A great majority did not attempt this question.

Item 5 (b) (ii) was correctly attempted by a minority of students. Students could not explain that ink also consists of several colours which would have separated during the experiment.

Item 5 (b) (iii) was wrongly attempted by most students. They could not explain that the dried spot would dissolve in the solvent.

Item 5 (b) (iv) was poorly answered by a majority of students. The latter did not understand that the container was closed with the lid to prevent evaporation.

Question 6

Question 6 comprised 7 parts. This question related to preparation of salt.

Items 6 (i)-(vii)

Item 6 (i) required students to state an observation of the reaction that takes place when zinc is added to sulphuric acid. It was not well answered by many students. Most students gave “**zinc will react with the acid**” as answer.

Item 6 (ii) required students to state why zinc metal is used in excess in the experiment. A very slight minority were able to provide the correct answer.

Item 6 (iii) involved the observational skills of students. It was answered by a small minority of students.

Item 6 (iv) required students to give the “**colour**” of the solution of zinc sulphate in water. Very few provided the correct answer which was “**colourless**”. Students have not have associated “**colourless**” with “**colour**” of solution.

Item 6 (v) required students to explain how unreacted zinc would be removed. This question required knowledge of separation techniques. A small minority could correctly attempt this question.

Item 6 (vi) required students to state 2 “**things**” that could be done when drying the crystals. This question required knowledge of separation techniques. Students could not recall the steps involved in drying of crystals. A large majority could not attempt this question.

Item 6 (vii) required students to give an alternative to zinc metal in the preparation of zinc sulphate crystals. Many students did not attempt this question.

Question 7

Question 7 comprised 2 parts. The question was on reactivity of metals.

Item 7 (a)

Item 7 (a) (i) required students to provide the name of the arrangement of metals according to their reactivity. Many students were able to provide the correct answer.

Item 7 (a) (ii) required students to give the symbol of a metal in the reactivity series that does not react to dilute acids. This question was correctly answered by many students.

Item 7 (b)

Item 7 (b) (i) required students to have a knowledge of reaction of metals with acid. Their observational skills were also being tested. Very few students attempted this question. Students were confused by the two different concepts: Displacement Reaction & Reaction of Metal with acid. For observation in Beaker 3, many students were unaware that “**no reaction occurring**” is an observation.

Item 7 (b) (ii) required students to give the name of the reaction occurring in Beaker 1 of the experiment. A small minority were able to give the right answer and very few were able to attempt this question.

Item 7 (b) (iii) required students to explain why no reaction occurs when the strip of magnesium copper is replaced by a strip of copper. Very few students answered this question correctly. Many students seemed to have been confused between beaker 2 and beaker 3. Asking students to “**explain why no reaction will occur**” may have caused further confusion as this implies that a reaction has occurred in beaker 3 in Figure 5.

PHYSICS

General Comments

The pass rate in Physics was 47.8%. The mean mark was 16.8 out of 50. The Figure below gives the percentage of students in each mark band.

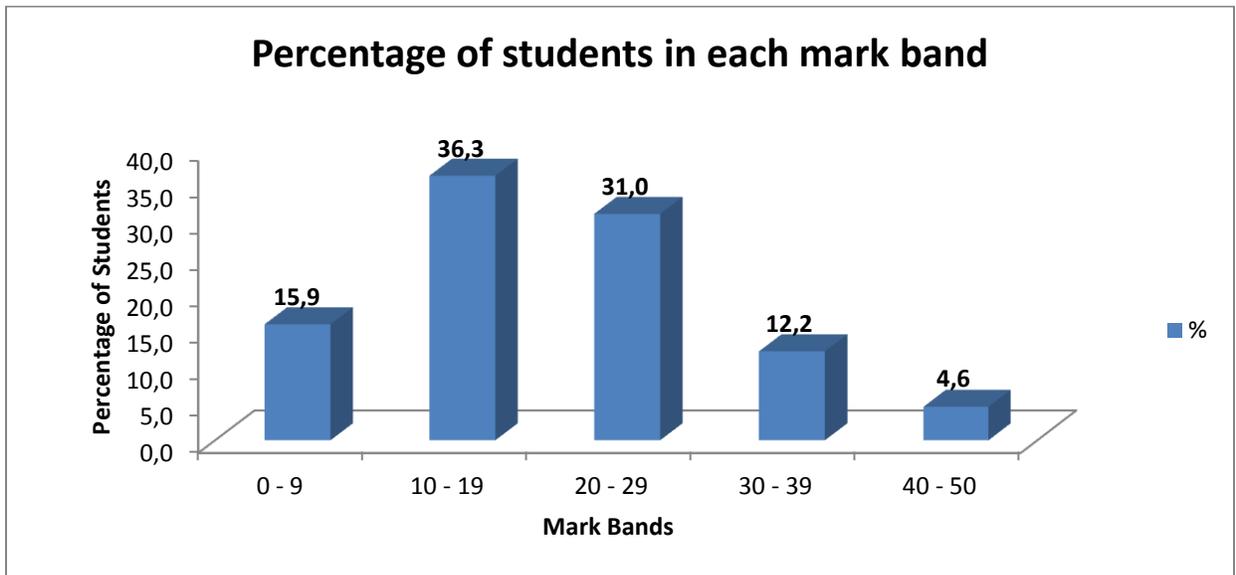


Figure 1: Percentage of students in each mark band

Qualitative Analysis

Question 1

Question 1 Comprised 5 multiple choice items on different topics.

In general, students scored well in the multiple choice questions which tested their knowledge with understanding.

Item 1(a)

Item 1(a) required students to provide the S.I unit to measure power. It was well answered by the majority of students.

Item 1(b)

Item 1(b) was about energy change occurring when a kettle is switched on to boil water. It was well answered by the majority of students.

Item 1(c)

Item 1(c) students were required to choose a circuit in which the lamps will not light. A small majority of students answered the question correctly. The main distractor for this question was diagram A. Students assumed that the two bulbs will not light up with only one cell.

Item 1(d)

Item 1(d) required students to identify the correct diagram (A) showing the appropriate path of the incident ray and the reflected ray from the plane mirror. It was well answered by a large majority of students.

Item 1(e)

Item 1(e) required students to understand the concept of '**constant speed**'. It was correctly answered by many students. A high number of students showed a lack of understanding of constant speed and selected the statement '**the speed of the car is increasing**' or '**the car's acceleration was increasing**'.

Question 2

Question 2 comprised 4 parts. It tested measurement of physical quantities.

Items 2 (a)

Item 2 (a) required students to identify the correct sequence in the procedure of finding the volume of a stone by the displacement method. A fairly large number of students were able to score full marks.

Item 2 (b)

Item 2 (b) required students to state 2 precautions to be taken when carrying out the set procedure. The majority of students attempted this question well. Often students had the correct ideas but they could not express these clearly. On the other hand, some very precise answers were recorded.

Item 2 (c)

Item 2 (c) required students to calculate the period of a pendulum moving between 2 points. This part was very poorly answered. A significant number of students clearly did not understand the meaning of the term “**period**”.

Item 2 (d)

Item 2 (d) required students to give the vernier reading of the width of a wooden block. Very few students successfully answered this part. The latter had broken their answers in two parts - main scale and vernier scale reading.

Question 3

Question 3 comprised 3 parts and was based on the characteristics of the image formed by a plane mirror.

Item 3 (a)

Item 3 (a) required students to give 1 characteristic of the image formed by the plane mirror. Many students attempted the question successfully. Unsuccessful students either failed to respond or wrote irrelevant answers.

Item 3 (b)

Item 3 (b) required students to draw the image formed by the plane mirror. Again many students completed the question successfully. Some students did show complete constructions (line drawn, etc.) to come to result. However, most drew image with counting of distance on number line provided. Many of the unsuccessful students translated the object rather than perform a reflection. Some unsuccessful students did not draw image at correct distance, or in rare cases, image was strongly distorted.

Item 3(c)

Item 3(c) required students to calculate the distance between the new position of the object and its new image when it was moved 2 cm towards the mirror.

Only a small proportion of students scored full marks. Most students did not respond to the question. Of those who responded wrongly, the first difficulty was to determine the new object position and, therefore, the new object distance. In some cases, even when students had done so correctly, there was confusion between new image and old image.

Question 4

Question 4 comprised 2 parts based on an application of the reflection of light.

This question tested the ability of students to apply their knowledge of reflection of light to draw the normal and complete the path of a ray of light in a periscope.

Item 4(a)

Item 4(a) required students to draw the normal to the mirror line, which was inclined to the horizontal. This proved to be challenging to a large number of students. Very few correctly

answered this part of question 4. The oblique mirror line presented some difficulty for students in drawing the perpendicular line. Many students failed to locate the point of incidence resulting in answers with a variety of points at which the normal was drawn.

Item 4 (b)

Item 4 (b) required students to continue a ray of light incident on 1 mirror of the periscope. A fair number of students gave correct answers with the diagrams drawn in fine pencil showing the arrows on the rays represented by straight lines. Many students scored the marks for part (b) even without drawing a correct diagram.

In many diagrams the rays were drawn in dotted lines. They either did not have an arrow on them or the arrow was pointing in the opposite direction. For ray diagrams, an arrowhead which identifies a ray on a diagram was expected.

Question 5

Question 5 comprised 3 items based on conductors and insulators of electricity.

Item 5(a)

Item 5(a) required students to state an electrical component connected at terminal Z to show whether a current passes through the circuit. This part was poorly answered. Many students did not pay attention to the word ‘**show**’ in the question. Students mentioned a material that would allow current to flow instead of an electrical component.

Item 5 (b)

Item 5 (b) required students to state the name given to describe an object that does not conduct electricity. The majority of students were able to answer this part correctly.

Item 5 (c)

Item 5 (c) required students to identify the conductor from the list of objects. The vast majority of students were able to score one mark. A few students ticked only one box.

Question 6

Question 6 comprised 2 parts. It required students to carry out calculations using Ohm's law.

Item 6 (a)

Item 6 (a) required students to calculate the potential difference across a resistor. Most students did not attempt the question. Of those who attempted this question, only a small proportion answered correctly. Many students faced difficulty to apply the law to calculate the potential difference. Furthermore, many students did not do well because of inappropriate use of unit. They used Ohm instead of volt.

Item 6 (b)

Item 6 (b) required students to calculate the total resistance of the circuit. Only a small proportion of students answered this question correctly. Relatively few students stated the required formula. Some students quoted the formula for resistance in series without being able to apply it.

Question 7

Question 7 comprised 5 parts. It was based on motion of 2 athletes represented by a speed-time graph.

Item 7 (a)

Item 7(a) required students to state and explain which athlete had the greater acceleration. The gross majority of students were unable to interpret the v-t graph to compare the magnitude of acceleration of the cyclists. Among those who successfully answered part (i), a large proportion were unable to explain their choice.

Item 7 (b)

Item 7(b) required students to state and explain which of the athletes won the race. This part called for deducing graphically when the race ends and to choose a winner accordingly. Many of those who attempted this question failed to relate the winner to the one who ends the race in the

shortest time. Of those who correctly answered part (i), many failed to give a valid explanation to justify their choice.

Item 7 (c)

Item 7(c) required students to calculate the acceleration of one of the athletes in a given time interval. Although the majority of students were able to recall the equation for acceleration, many failed to use it to calculate a value for the acceleration. Students had difficulty to identify the value of the initial speed.

Item 7(d)

Item 7(d) required students to shade the region covered on the graph. A significant proportion of the students were unable to identify the region of constant speed from the graph.

Item 7(e)

Item 7(e) required to calculate the distance covered by the athlete at constant speed. As a consequence of the poor response to part (d), very few students correctly attempted this part. Some used area under graph while others used the equation relating speed to distance and time.

Question 8

Question 8 comprised 4 parts based on the principle of conservation of energy as applied to a swing in motion.

Item 8 (a)

Item 8 (a) required students to state the main form of energy at the highest point in the oscillation.

Most students were able to identify the main form of energy as Potential Energy.

Item 8 (b)

Item 8 (b) required students to state the change in energy from the highest to the lowest point in the oscillation. The majority of students were unable to apply the principle of conservation of energy to this part. Very few of them gave the correct explanation regarding the conversion of stored Potential Energy to Kinetic Energy as the object moves from X to Y.

Item 8 (c)

Item 8 (c) required students to calculate the amount of energy which the boy had at the highest point. A significant proportion of students were unable to write the formula for Gravitational Potential Energy. Students were not able to use the correct value of 'g' in the formula.

Item 8 (d)

Item 8 (d) required students to calculate the amount of energy lost as the boy moves from the highest to the lowest position. This part was very poorly answered. Students were unable to apply of the principle of conservation of energy and identify the forms of energy involved in that change.