

FORMAT OF PAPER

This paper consists of 3 questions. Candidates are required to answer 2 questions in Section A and 1 question in Section B. The time allocated for this paper is *one hour and fifteen minutes*. Candidates are advised to spend *30 minutes* to answer the questions in Section A and *45 minutes* for Section B.

Section A consisted of 2 *parts* which required candidates to read and understand linear texts and transfer the relevant information into non-linear forms. Part 1 required candidates to complete a table and Part 2 required candidates to complete a graphic organiser. The text for **Part 1** was on *Sound and Light Waves* and **Part 2** was on *Body Movements*.

Section B required candidates to write a report, make a choice, elaborate, compare, analyse and justify the choice made. A stimulus on three methods of farming was provided.

GENERAL PERFORMANCE OF THE CANDIDATES

On the whole, candidates performed well. The majority attempted all the questions. Candidates performed better in Section A compared to Section B.

SECTION A (Part 1 and 2)

Good candidates were able to understand the rubric and text, select and transfer the relevant information by completing the table and graphic organiser given. Average candidates were able to transfer the accurate information but were careless and made spelling errors. Weak candidates misunderstood the task and transferred irrelevant information.

Based on the information from the text, complete the table below.

SOUND	
Type of wave	1. Longitudinal wave
Travels slowest through	2. Gases.
Does not travel through	3. Vacuum.
Source of energy	4. Vibrating vibrated objects.

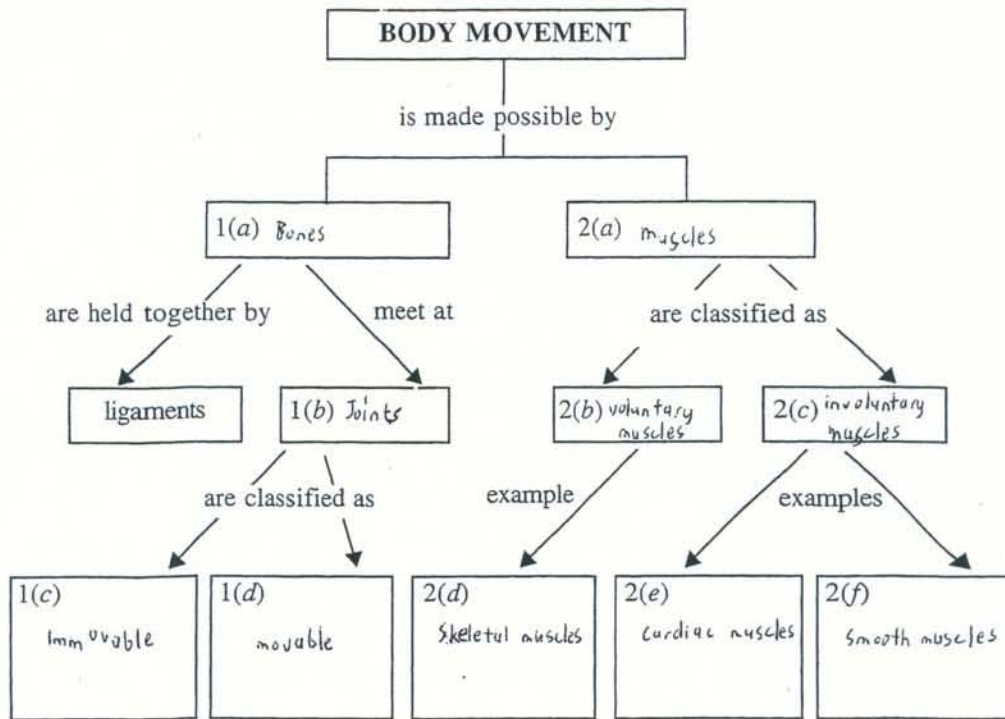
LIGHT		
Type of wave	5. Transverse	
Travels slowest through	Property of Material	6. Transparent
	Example	7. Glass
Does not travel through	Property of Material	8. Opaque
	Example	9. Wood
Source of energy	10. Glowing objects	

[10 marks]

Comments :

Good candidates were able to lift relevant, accurate information from the text to complete the table. The words or phrases lifted were also spelt correctly. Weaker candidates made spelling errors (e.g. 'transverse' was spelt as 'traverse'). Some answers given were incomplete. For example, the answer required for question 10 was 'glowing objects', but some candidates just wrote 'glowing'.

Based on the information in the text on page 4, complete the graphic organizer below.



[10 marks]

Comments :

Good candidates were able to transfer the relevant information from the text to complete the graphic organiser. However, weaker ones made a lot of spelling errors. For example, 'muscles', was spelt as 'musles', 'immovable' as 'imovable' and 'skeletal' as 'skeletal'. Students also made errors in completing the boxes for 2b and 2c. For question 2b and 2c, the answers given must match with the examples for boxes 2d, 2e and 2f. For instance, the example given by the candidates for 'involuntary muscles' was 'skeletal muscles', which was wrong. The examples for 'involuntary muscles' given in the text were 'cardiac muscles' and 'smooth muscles'.

SUGGESTIONS FOR CANDIDATES

1. Read carefully and understand the rubric and text given.
2. Complete the task by transferring only the necessary information and avoid copying mindlessly.
3. Accuracy in spelling is important in transferring information.
4. Know the significance of adjectives, articles, prepositions and plural forms that may affect meaning when the information is transferred from linear to non-linear forms.
5. Ensure handwriting is legible so as not to hamper reading and meaning.

SUGGESTIONS FOR TEACHERS

1. Expose students to the skills of information transfer.
2. Provide students with materials of different text-types pertaining to themes incorporated in the syllabus.
3. Give students plenty of practice in using a variety of graphic organisers.

SECTION B

Good candidates

Task Fulfilment

Candidates showed an understanding of the task given very well. A choice was clearly made and all the points were used and elaborated. Comparisons were clearly made.

Points and Elaboration:

Candidates used all the points given in the stimulus to support the choice made. The points were well-elaborated.

To: Estate manager of Queen's Farm

Re: Method for Enriching Soil

As stated above, the research team of Queen's Farm have come to the conclusion that the inter-cropping method is the best and most beneficial way to enrich the soil of Queen's Farm.

The advantages of inter-cropping is that it replenishes nutrients in the soil. This means that there will be no necessity for chemical fertilisers or natural fertilisers. Crops will always have enough nutrients to survive and flourish on. Besides that, inter-cropping will allow us to grow different crops at the same time. This will be highly profitable as we need not depend on one type of crop only. Take for example, the only crops on Queen's Farm were corn - if the market demand for corn should go down, Queen's Farm would suffer and would certainly incur a major money loss. Queen's Farm would not face such a dilemma if the inter-cropping method is used.

It is undeniable that the inter-cropping method has its disadvantages as well. But for Queen's Farm, these disadvantages will be but minor problems. For inter-cropping, we will need to be highly selective in our choice of crops as to ensure that the right nutrients are returned to the soil. The research team has already covered this problem and have come up with a list of suitable crops. Inter-cropping also requires a big plot of land for it to be profitable. Queen's Farm covers a huge amount of land so this should not pose as a problem for us.

Comparing and Analysing:

In addition to making a choice and giving reasons, good candidates were able to compare and contrast the method chosen with the other two methods effectively, using the points given in the stimulus. Good candidates were also able to analyse by using relevant additional information to support their answer.

Chemical fertilisers are no doubt, ^{dubbed} the scientific phenomenon. However, it has its fair share of disadvantages. Its benefits would include an increase in yield and a lower probability or likelihood of plants to get a disease. On the other hand, chemical fertilisers, when washed by rainwater, causes the nitrates to seep through the soil and contaminate our drinking water. Nitrates make up a very high percentage of fertiliser content. Large quantities of nitrates in rivers and lakes often cause the death of aquatic organisms thus tremendously decreasing their population.

Chemical fertilisers that end up in rivers and streams often cause algae to multiply rapidly. The growth of algae on the surface of these rivers reduce the sunlight that reaches the living things that live on the bottom of the river. This results in the extinction of certain river fish species. This phenomenon is known as eutrophication.

Language:

Good students were able to write the report using accurate language – grammatically correct sentences, precise vocabulary, good linkers and accurate spelling as well as punctuation.

In comparison, crop-rotation is less beneficial but more environmentally friendly. Crop-rotation allows the soil to retain its nutrients that have been lost. Soil has been found to be replenished throughout the year. Crop-rotation also allows various crops to be planted, thus according to market demands. Unfortunately, even though this method does not contaminate the soil, it has its disadvantages. This way is not suitable for all types of crops as some do not replenish certain nutrients or the amount needed by the soil. This method also produces low yield and is not commonly used anymore.

Average Candidates

Task Fulfilment

Candidates did not fulfill the task completely. Although a choice was made and points were used, the scripts lacked elaboration or comparison.

Points and Elaboration

Candidates in this category only used and elaborated some of the points in the stimulus.

No doubt that we need to be highly selective in choice of crops to ensure the right ~~market~~ nutrient are ~~returned~~ returned into soil but ~~with~~ ~~we~~ we can get good crops. Although than the crop-rotation. Although this method requires big plot of land for it to be profitable but this is more benefit good to our environment and people than chemical fertilisers that harmful to us and our planet.

Comparing and Analysing

Candidates analysed by making some comparisons but lacked relevant additional information. The comparisons and additional information were only satisfactory compared to the good candidates.

Chemical fertilisers are no doubt, ^{dubbed} the scientific phenomenon. However, it has its fair share of disadvantages. Its benefits would include an increase in yield and a lower probability or likelihood of plants to get a disease. On the other hand, chemical fertilisers, when washed by rainwater, causes the nitrates to seep through the soil and contaminate our drinking water. Nitrates make up a very high percentage of fertiliser content. Large quantities of nitrates in rivers and lakes often cause the death of aquatic organisms thus tremendously decreasing their population. Chemical fertilisers that end up in rivers and streams often cause algae to multiply rapidly. The growth of algae on the surface of these rivers reduce the sunlight that reaches the living things that live on the bottom of the river. This results in the extinction of certain river fish species. This phenomenon is known as eutrophication.

Language

Language used was largely accurate and there were minor errors in spelling as well as some serious grammatical errors.

However, there are also disadvantages by using the inter-cropping method. In relation to that, we advise your company to be highly selective in choice of crops. This is to ensure that the right nutrients are returned to the soil. This minute problem can be overcome by following the guidelines our research board have set for your company. The guidelines include the proper crops to be used to maximise the nutrients returned to the soil.

Weak Candidates

Task Fulfilment

Candidates fulfilled minimal requirements of the task. A choice might have been made and points might have been evident. However, the script lacked both elaboration and comparison.

Points and Elaboration

Weaker candidates merely stated the points for the method chosen but were not able to elaborate the points. There was also no attempt to analyse and justify.

To : Estate manager

I choosing a Chemical fertilisers because
a same thing. Chemical fertilisers are widely use in the
agricultural sector to enrich the soil although they have
been found to be hazardous. Advantages: increase yield.
Plants less likely to get disease.
Disadvantages a thing, nitrates get into drinking
water. Nitrates, rock and underground stream. Rainwater
washes nitrates through the soil go to the rivers.
Nitrates can seep into underground streams and
contaminate our drinking water. Large quantities
of nitrates in rivers and lakes can cause the
death of fish and other small animals. I hope
you take my idea. Thank you.

Atlanis
VOTE FOR ADAM

Language

Candidates showed very poor language ability. Language was distorted and meaning did not come true. There were many types of serious errors and candidates were unable to communicate ideas or opinions.

To: The Estate Manager

Title: The agricultural sector to enrich the soil although they have been found to be hazardous.

Sir,

I choose chemical fertilisers because ^{have many} the advantages (and they were ~~have disadvantages~~). In advantages, the chemical increase yield and the plants less likely to get disease. All the chemical can found nitrates get into drinking water.

SUGGESTIONS FOR CANDIDATES

1. Read carefully and understand the requirements of the task.
2. Use, elaborate and analyse the points given in the stimulus. Factual accuracy is important.
3. Use appropriate terminology related to the topic tested in the question paper.
4. Grammatical accuracy is important to ensure that facts are not distorted. Use clear, concise and accurate language in presenting your response.
5. Read more science and technology materials in English so as to widen knowledge and improve vocabulary.
6. Ensure handwriting is legible so as not to hamper reading and meaning.

SUGGESTIONS FOR TEACHERS

1. Teach candidates to use the correct format and conventions of report-writing.
2. Emphasise thinking skills in the classroom so that candidates are able to elaborate and analyse viewpoints.
3. Expose candidates to the relevant aspects of language in EST writing such as the use of the passive, modals and connectors to produce a coherent answer.
4. Use a variety of EST materials so that candidates can widen their knowledge and acquire terminology related to the different themes.
5. Teach candidates scientific writing styles that are precise and concise.
6. Encourage candidates to do extensive reading on topics taught via electronic and printed media.
7. Teachers also need to read more on topics taught to be able to exchange ideas and information with candidates.
8. Provide more practice on examination- type questions.