

UNIVERSITY OF MALTA

**SECONDARY EDUCATION CERTIFICATE
SEC**

ENVIRONMENTAL STUDIES

May 2012

EXAMINERS' REPORT

**MATRICULATION AND SECONDARY EDUCATION
CERTIFICATE EXAMINATIONS BOARD**

1. Summary of Results

Table 1 below summarises the general performance in the examination:

Table 1: Distribution of candidates' grades for the SEC Environmental Studies Exam - May 2012

Grade	1	2	3	4	5	6	7	U	Absent	Total
No. of Candidates										
Option A	53	189	247	244	204	-	-	347	5	1289
Option B	-	-	-	58	87	146	154	236	48	729
Total %	2.6	9.4	12.2	15.0	14.4	7.2	7.5	29.0	2.6	100

2. Moderation of projects findings

The examiners moderated 478 projects spread out over 27 state, private and church schools

- Some marks in various schools were clearly inflated but there were also some projects which were under-marked. They were all moderated accordingly.
- Candidates need to be instructed to indicate the Topic Number, Title, Candidate's Name and Matsec Index Number on the Title Page.
- A number of projects were well planned, providing a table of contents, bibliography, chapters and illustrations. Others lacked captions under pictures, references, graphs or charts to substantiate arguments.
- Some teachers in specific schools have produced guidelines for their students and this help appeared to have been very useful as evident from the high quality of the work presented.
- Many, however, resulted not to be of the required standard and this indicates that the process in the development of such projects need to be monitored more closely.
- Many relied on websites and inserted every questionnaire that was distributed when more focus on the analysis would have produced better results.
- Generally, more emphasis needs to be given in the skills of collecting and analysis of data and in more critical suggestions in meaningful conclusions.
- Some candidates inserted teacher's notes in their work and these, in many cases, lacked acknowledgement.
- Most projects lacked evidence of fieldwork and they were generally weak when it comes to conclusions to indicate ideas, recommendations or ideas for future environmental care.
- Some candidates tended to ignore the approximate length of 1500 to 2000 words.

NOTE: A new list of project titles is now part of the SEC Environmental Studies syllabus for 2013

3. General Comments About the Answers To Examination Questions

- Many candidates give the impression that they have not yet grasped the meaning of several basic terms, e.g. colony, democracy, building legacy, cultural heritage, cultural sites, human rights and others.
- There are candidates that seem to be unable to express themselves in good idiomatic sentences. Many jot down points without even adding any explanation.
- Candidates often tend to produce vague explanations and to produce negative answers emphasising what is not or should not be, rather than what is or what should be.
- There are candidates who simply do not read well the questions.
- There are candidates who still lack the ability to write definitions and good explanations, to think positive when writing answers to questions like what it is, what it does, how it works, what effects it has on others, what it consists of, why it is important and many others.
- Overall, throughout the second section of Paper 1, it can be deduced that in those cases where the answer was not implied or provided in the text, a large amount of candidates found it difficult to answer the question.
- It has also been noted, that candidates are not doing that extra effort to answer the questions in an
- adequate way according to the amount of marks allocated to the question part and to the whole

4. Paper I

Section A

1. The major common climatic characteristic of deserts.

(2)

Most candidates provided a straightforward explanation to the major climatic characteristic of deserts, and correctly described them as dry and collectively and incorrectly as hot (ignoring the fact that there are also cold deserts). There were very few candidates who elaborated further on the low amount of annual precipitation and other specifications. This showed a lack of knowledge in the candidates' answers and in such cases, candidates were not awarded full marks.

2 The processes that lead to the formation of sedimentary rocks.

Some candidates erroneously listed the five layers of rock making up the Maltese Islands. Only few candidates attained full marks for this question as a number of them failed to mention the formation process through biological sedimentation and the composition of rocks.

3. (a) **The main difference between the coastal characteristics of the north-east coast and the South-west coast of Malta.**
(b) **One type of soil found on the Maltese Islands.**

This question was divided into two parts. In the first part, most of the candidates found it difficult to provide an adequate answer to this question. A large amount of candidates decided to skip this question and move on to the next. Some candidates gave a correct answer to this question by referring to the difference between the topographic features of the north-west cliffs exposing in full the Maltese geology and the low-lying coast of the southeast exposing only two Maltese rock layers.

In the second part, most candidates attained full marks where they were asked to mention and explain one of the Maltese soils. In the explanation most of the students explained the formation of the rock out of its respective parent Maltese rock. Others referred to the low fertility which characterises most of the Maltese soil.

- 4 (a) **The location of Carnivores, Producers and Herbivores within a food web matrix.**
(b) **A reason why the nutrient cycle is essential for the ecosystems of the Earth.**
(c) **The role of decomposers in the ecosystem.** (2)
(d) **An example of a decomposer organism.**

This question was divided into four parts. In the first part, the candidates were asked to copy and complete the food web matrix and most of the candidates completed it correctly.

In part b, most candidates provided a satisfactory answer and provided a brief explanation of how nutrients are passed from one component to the other and why this is important for the survival of each component.

In part c, a good percentage of candidates gave a good explanation of the role of decomposers in the ecosystem and this was followed by a correct answer in part d where the candidates were asked to give an example of a decomposer. On the other hand, erroneously, others referred to compost as being very important to increase soil fertility. This was followed by part d of the question where many candidates wrongly gave compost as an example of a decomposer.

5. (a) **The importance of Keenan's Report and the development of education in Malta.**
(b) **How this report affected the languages in use in Malta at that time.**

This question was divided into two parts. On a general overview, most candidates explained the importance which the Keenan report had on the development of education in Malta and elaborated further by giving examples of suggestions for the improvement in education which were forwarded in the same report.

Overall attainment in part b was of an average level. Most candidates explained briefly that this had an effect over which language was to be used in Malta between Italian and English and the formation of the two political parties. However, a large amount of candidates repeated what was suggested in the Keenan

report without being precise on the effects which the report brought about. This showed a lack of accuracy in the candidates' answers and in such cases, candidates were not awarded full marks.

6. Recent foreign influences on Maltese culture and life style.

On a general overview, most candidates provided a satisfactory answer. Nevertheless, there were some candidates who mistakenly concentrated on how past colonial powers influenced the Maltese culture and lifestyle rather than concentrating on recent influences.

7. (a) Two means of transport that were used in Malta during the 19th century (b) How the introduction of buses in the 20th century affected Maltese life

(a) This question was answered correctly by practically all candidates, with a significant number of them mentioning the increased ease of travel to places of work away from urban areas and the improved relations between peoples from different towns and villages, owing to the introduction of buses. There were quite a few who included either means of transport that had been used during previous centuries (e.g., sedan chair) or others which were introduced during the 20th century (like cars, buses and aeroplanes) or wrote generic words (like boats) which could not be accepted.

(b) Though some good answers were produced, there were quite a few who simply pointed out that transport was made easier and was cheaper and presented an occasion for social integration.

8. One building legacy from each of the following periods in Maltese history:

- (a) the Roman period**
- (b) the Medieval period**
- (c) the British period**

Answers given for the respective historical periods showed that the majority of respondents were unable to indicate the historical difference of the times indicated when they failed to give the right matches between the respective historical periods and the relevant building legacy. There were also many candidates, especially from Option B, who did not know what 'building legacy' ('wirt mibni') means. Though there were quite a few good answers, there were many candidates who mixed up (a) the Roman period with Ancient times, (b) the mediaeval period with the Baroque, and (c) the British with the period of the Knights. Moreover, there were candidates who wrote names of villages or generic words like fortifications, hospitals, barracks, and churches. The most often correct answers were (a) the Domus Romana at Rabat, (b) Palazzo Falzon in Mdina, and (c) Fort Rinella.

9. The name the two Greek remains from the four below.

- (a) Alhambra**
- (b) Parthenon**
- (c) Delphi**
- (d) Sabratha**
- (e) Granada**

Many candidates gave the correct answers – Parthenon and Delphi – but there were many others who simply made wrong guesses.

10. The meaning of

(i) Eco-tourism

(ii) Agro-tourism

Most respondents showed basic knowledge of what 'ecotourism' and 'agro-tourism' mean, but their answers were very superficial and too distant from what the mark scheme expected. Besides, they hardly mentioned, let alone explained, the link to the tourism industry of either eco-tourism or agro-tourism.. There were even candidates who mixed up eco-tourism with mass tourism and agro-tourism with farmer-markets and stays in farm houses. However, there was quite a good number of candidates who produced a fairly good definition of (b) agro-tourism.

(2)

11. The meaning of green jobs.

The great number of respondents answered this question correctly and gave a good reference to the need of conserving and promoting the natural environment. A few referred also to the issue of sustainability by adequately explaining the balance between development and environmental priorities. However, many simply related green jobs with environmental care through the collection of refuse, the 3Rs or simply environment friendly jobs without giving any further explanation. Many simply stated that they are jobs which help the environment.

12. The difference between the four mentioned constitutional stages in Malta's democratic history.

(i) Self-government

(ii) Independence

(iii) The Republic

(iv) E.U. Membership

What the question was mainly after was the political and constitutional implications of each stage of development. However, there were a few candidates who explained the four constitutional stages correctly giving a good explanation of the term, correct related date and prominent political personality. One cannot say that candidates' answers, at least in their majority, lacked basic knowledge of the four constitutional stages asked in the question. However, very superficial material emerged, with answers describing 'self-government' as simply 'government of a country' or 'governing on one's own'. Again, the republic was described as simply 'government by a president' or 'government by a prime minister and a president'. Then, there were many candidates who lumped their answer in one long sentence without underlining the difference between self-government, independence, republic and EU membership. They did not give any acceptable explanation. Indeed there were candidates who gave the impression that they do not even know what the different terms mean. Many gave related dates correctly but did not define the constitutional stages correctly. Other produced vague answers and indicated that they still do not know what the terms imply

13. Comparisons and contrasts in the role of a political party with the role of a voluntary organisation in a democracy

Few candidates produced explanations to indicate similarities and differences between political parties and voluntary organisations. There were candidates who indicated that they do not have the barest idea of the different *raison d'être* of political parties and voluntary organisations. Some equated party with

parliament and voluntary organisations with individuals seeking personal interests. Many candidates produced a one sentence answer stating that political parties seek to be elected in parliament and work for money, while voluntary organisations work for free and seek to support or oppose political parties but all work in the interest of the country. Few wrote about ideologies, membership and structures, targets, funding, commitment to service in the community. A few explained what pressure groups and non-government organisations are.

Section B

1. Text comprehension about the disruptions caused by volcanic activity

- (a) The difference between an active and a dormant volcano. An example of each type. (2+2)
Overall most candidates provided a correct explanation of a dormant and an active volcano. Nevertheless, some candidates mistakenly confused the two when it came to give an example of them. A small amount of candidates incorrectly gave Campi Flegrei as an example of either of the two.
- (b) The tectonic boundary that exists at the border of the Eurasian and African plates.
Most of the candidates found it difficult to state which type of plate boundary exists at the border of the Eurasian and African plates.
- (c) Reasons why people live dangerously close to volcanoes and this in relation to social and/or economic realities for those people.
Overall attainment for this question was of an average level. Most answers concentrated on the facts that volcanoes are a tourist attraction, can increase soil fertility in the area and can be a source of renewable energy. On the other hand, it was evident that some candidates found it difficult to explain this in the context of the economic and social realities of those living in these areas. (1+4)
- (d) Dangers associated with volcanoes such as Vesuvius and Campi Flegrei. (3)
Overall, most candidates provided good examples of dangers associated with volcanic regions.
- (e) How governments are investing to minimise or mitigate the dangers associated with living next to a volcano. (4)
Most candidates succeeded in providing a good explanation of how governments are investing to minimize the dangers associated with living next to a volcano. On the other hand, there were some candidates who gave unrealistic examples and consequently failed to attain any marks at all.
- (f) Reasons why volcanoes are essential to the planet's environments. (3)
A high amount of students provided straight-forward examples why volcanoes are essential to the planet's environment, by simply stating that it increases soil fertility. This gained minimal points. Other examples such as being a source of renewable energy, a tourist attraction etc did not gain any points since they do not relate to the planet's environment, rather to the socio-economic context or human environmental benefits.. Very few candidates elaborated further that it is a way through which energy from the interior of the earth is released. Very few candidates attained full marks.
- (g) Alternative energy produced in Iceland because of the existence of volcanoes in that region.
The application or not of this alternative to Malta. (2+2)

This question was divided into two. The majority of those candidates who answered correctly geothermal energy in part i of the question, provided the correct answers in part ii as well. Nevertheless, there were some candidates who erroneously gave heat energy as the type of energy generated out of volcanoes in Iceland. Some candidates also stated that it is a good energy source for Malta.

2. Text comprehension about Malta in the EU and its role to defend and promote the environment

2(a) The meaning of EC referred to in the passage.

Only few candidates indicated correctly that EC refers to the European Community. Perhaps, many candidates found this question rather misleading by the initials for E.C. and K.E.. (European Community/ Komunita` Ewropea). A significant number of candidates interpreted the initials E.C. (in the English version) and K.E. (in the Maltese version) as European Commission and Kummissjoni Ewropea respectively, when the answer should have been European Community and Komunita' Ewropea.

2(b) re: The Avis which was issued by the European Commission on Malta's application. (2)

The Avis: many gave a good answer to this question. However, there were quite a few who pointed out that the Maltese government had to introduce a number of reforms without explaining why or that the Avis was issued so that the European states would decide upon Malta's application to join the EU. However, a number of respondents answered this question by taking a verbatim a relevant sentence from the passage given.

2(c) The text said that 'The proposal of accession was put to the electorate in a referendum'.

(i) re: two main arguments that were put forth in favour of Malta's accession. (4)

(ii) re: two main arguments that were put forth against accession. (4)

The referendum on the proposal of accession:

(i) Arguments for: many answers were vague, generic or irrelevant. A number of candidates included gaining benefits from funds, having a say in EU discussions and ensuring environmental development. Only just a few pointed to greater emphasis on individual rights, forming part of a bigger market or free movement in the EU. Many mentioned that Malta would join the euro zone.

(ii) Arguments against: many candidates mentioned negative effects on local culture, loss of local currency, loss of sovereignty and an increase of European immigrants that would create problems for Maltese workers regarding employment opportunities. Quite a few others mentioned the imposition of laws on hunting and more taxes.

2(d) re: The year in which the referendum and subsequent general election mentioned in the text were held (2000, 2001, 2002, 2003, 2005). (1)

The referendum and the subsequent general election were held in 2003: many candidates answered this question correctly. There were candidates, however, who produced wrong answers even stating that the referendum and the election were held in different years.

2(e) re: Two countries which became full members of the EU at the same time as Malta. (2)

Many candidates named correctly at least one country that became full member of the EU at the same time as Malta. There were many others who failed to give a correct answers and gave definitely in correct answers such Australia or the USA as other countries which were suppose to have joined the E.U. together with Malta.

2(f) (i) re: The meaning of cultural heritage. (2)

(ii) re: Two cultural sites of historic importance in Malta. (2)

Cultural heritage and cultural sites:

By and large, the phrase ‘cultural heritage’ was explained satisfactorily by the majority of respondents. However, SEC level of performance expects a more elaborate explanation of such phrases which pervade the syllabus. Although essentially correct, the conciseness of the answers leaves the marker with a feeling that something is missing and that needs to be said. Examples of Maltese cultural sites were generally correct.

(i) Some candidates did indicate that cultural heritage refers to aspects or elements of a society’s culture that is passed on from one generation to another and illustrated their answer by referring to particular traditions, and cultural or historical sites. However, many candidates, as mentioned, produced vague or simplistic answers indicating that they do not know what ‘cultural’ implies. Many simply wrote that ‘it is that which we inherited from our forefathers’.

(ii) In naming cultural sites of historic importance, a variety of acceptable answers was produced. There were candidates, however, who give the impression that they do not know what ‘sites’ stand for and listed Heritage Malta, the Azure Window, Popeye Village and the names of some Maltese villages and towns in their answer.

2(g) re: How development can be ‘sustainable’ and ‘environmentally sound’. (3)

The sentences given to explain the phrase ‘environmentally sound’ indicated practical examples from candidates’ life experiences of how development can be more sustainable. On this count, responses were correct, oftentimes echoing explanations or descriptions given for ‘eco-tourism’ and ‘agro-tourism’ in question 10(a) of Section A.

Regarding ‘sustainable and environmentally sound development’, it seems that many candidates who answered the question in English, failed to understand what ‘sound’ implies. Moreover, candidates often ignored the question and did not even write three sentences to explain briefly how this is possible. Many wrote just one long sentence on what they considered an argument for their answer. Others simply jotted points. Some focused on development which considers the needs of the environment, construction regulations, restoration and embellishment and the promotion of less pollution through educational programmes. Many wrote on what should not be done rather than on what should be done.

2(h) re: Two reasons for which the protection of the environment is essential to the enjoyment of basic human rights. (4)

This proved to be a difficult question. The great majority of respondents did not understand the relation between protection of the environment and human rights. Candidates were expected to name and explain two reasons why the protection of the environment is essential to the enjoyment of basic human rights. Very few candidates answered this question correctly and many seem to be unaware of what ‘basic human rights’ stand for, such as health (food and water), shelter, air (clean air and noise),

clothing, and the importance of the natural aspects of the environment for man to be able to live. Instead, there were those who mentioned the issue of health hazards owing to pollution, harm to the ozone layer and the contamination of water; others then spoke about the imminent risk of hunger and poverty because of the depletion of natural resources especially scarcity of water and lack of vegetation due to de-forestation. Some other candidates wrote about the right to enjoy public parks and the countryside to have a good rest or for leisure. A few referred to the right of employment and many wrote about what should be done to ensure security against vandalism and the reduction of waste as this would cause the spread of disease. Others even linked the question with cultural heritage. Then, there were answers which generally wandered around the same cliché model of reuse, reduce and recycle for environmental protection.

5. Paper 2

PAPER II A: Each question carried 20 marks out of 200

Section A: The World – Our Home Management of Resources

1. Climate change, greenhouse gases, threats and measures by human beings.

This question was a common choice with students. Most students were able to properly define the greenhouse effect and mention one (usually CO₂) greenhouse gas. Nonetheless, a number of students were confusing greenhouse effect, global warming and ozone depletion. A number of students properly made the connection between fossil fuel utilisation and an increased greenhouse effect – some going into details regarding the onset of the industrial revolution. Some answers included good diagrams and detailed explanations, while other students just mentioned the process. The majority of students mentioned mitigation measures as an effective way to combat global warming. Very few mentioned any type of adaptation measures. Few students mentioned the Kyoto protocol (even less mentioned the United Nations Framework Convention on Climate Change), but did not describe any details or policies. Very few mentioned MEPA as the local authority which is responsible for the implementation of a number of climate change measures.

2. Environmental, economic and social factors of the challenges associated with arable farming in the Maltese Islands.

This question was a common choice with students, especially students that opted to answer in the Maltese language. The majority of the answers were generally valid but some students just limited themselves to farming as a job that is very hard and is perceived as being ‘low class’. Regarding environmental challenges a number of students mentioned the poor soil quality, the dry summer season and land speculation for construction. Fewer students mentioned that the plots are too small and that the land is very fragmented and use of heavy machinery is therefore almost impossible. Regarding economic challenges students mainly mentioned that agriculture is not a very well paid job, and that agricultural machinery is very expensive. Nonetheless, a few students mentioned the issues being raised by the importation of agricultural products and that fuel prices also affect the profits made by farmers. Nearly no student mentioned the prices of insecticides and fertilizers that have to be used in the local scenario. With regards to the social challenges, students mentioned that few young farmers are joining this activity and that full time farmers are declining. Fewer students mentioned that the work is now

mainly a part-timer domain. Students were moderately successful in mentioning a number of ways to overcome the above difficulties: through education and incentives. Nonetheless, very few students mentioned aspects such as land reform; land registration; research and innovation; organic farming and less bureaucracy.

Section B: Human Population and Human Communities

3. One old historic city of Malta and Gozo, its historic development and how this historic city is being preserved and catered for today.

Candidates had to choose one of the old historic cities of Malta or Gozo, explain its historic development and how it is being preserved and catered for today. Most candidates chose to deal with Valletta though there were a considerable number of candidates who chose to write about Mdina. Vittoriosa, the Cittadella in Gozo and Senglea were chosen by a smaller number of candidates in that order of importance.

Most of the candidates choosing to deal with Valletta concentrated mostly on its strategic position, its building by the Order of St John, significant historical buildings, architectural styles, and its importance today. Candidates were generally aware of the restoration projects being undertaken. They also dealt quite well with the environmental damage affecting it. However, only few of the candidates dealt with its contribution during the French blockade and the British period.

Candidates choosing Mdina generally gave a good overview of its history. They explained its importance during medieval times as the city where the nobility lived, its strategic location, its defences and fortifications, significant historical buildings such as Palazzo Falzon, its loss of importance during the rule of the Order of St John, its plight during the 1693 earthquake and the resultant restoration. However, few of them were able to explain well what is being done to preserve the city.

Those choosing to deal with Vittoriosa concentrated mostly on the strategic position of Vittoriosa, its choice by the Order of St John as their home during their earliest times in Malta, its importance to the Order's fleet and its contribution during the Second World War. Most of them however, were only able to name the Inquisitor's Palace as a significant historical building and provided rather weak points when dealing with what is being done by the Government, NGOs, private sponsors and the residents to reduce damage and help to restore this city to its former splendour.

Rather weaker answers were provided by those choosing to deal with Senglea and the Cittadella in Gozo. There were some candidates who erroneously chose to write about Hagar Qim. Overall, however, attainment by candidates in this question was good.

4. The development of the major British fortifications in 19th century Malta, their contribution to the national economy and cultural heritage

Candidates were expected to provide an overview of the development of the major British fortifications in 19th century Malta and explain their contribution to the national economy and our cultural heritage. A substantial number of candidates managed to explain how the British concentrated on improving existing fortifications during their earliest times. When dealing with the second phase namely their building of new fortifications most candidates managed to explain the importance of the building of the Victoria Lines and their strategic value. However, a good number of them failed to name all the forts which reinforced these Lines namely Fort Bingemma, Fort Mosta, Fort Madliena and Fort Pembroke.

Some also failed to mention the pill-boxes which were introduced to strengthen these Lines. Few candidates managed to explain how the introduction of the aeroplane led to a change in the structure and use of these fortifications. Attainment by candidates in this part of the question was rather average. Many candidates managed to argue how these fortifications became part of our national heritage. However only few candidates managed to explain adequately how various Governments contributed to their upkeep, restoration and refurbishment. Again only few candidates dealt with their use today as museums, government departments or the headquarters of historical associations. Overall attainment by candidates in this second part of the question was not so good.

Section C: Work and Leisure, and Managing a Nation

5. The level of Malta's democratic environment through multiculturalism.

Most candidates have a fairly good idea of what democracy entails. However, many were vague in describing the democratic environment as such. They also seem to have grasped the concept of multiculturalism. Other answers in this regard were however limited and mostly based on craft knowledge then on a true learning of the concept.

Candidates treated multiculturalism from the point of view that Malta hosts a good number of tourists and also that the island is experiencing a wave of immigration from the African continent. The candidates accept different religious beliefs and practically mention the mosque at Paola as an example of how the Maltese embrace different religious beliefs. Some candidates did mention protestant churches. Others have the wrong idea that the mosque was built in the last few years or even that the civil authorities built it for Muslims living in Malta. The candidates also acknowledge cultural diversity through inter marriages. The absolute majority of candidates do not consider East Europeans living in Malta as immigrants or as taking the jobs of the Maltese. They do however seem to think that African immigrants are to blame for some of unemployment problems in Malta. Although there were candidates, who admitted that these Africans do the jobs that the Maltese do not want to perform and that often they are exploited.

Some candidates also mentioned the introduction of divorce, the 'punk' sub culture, the attempt to remove crucifixes from classrooms and international cuisine served in restaurants as examples of cultural diversity.

6. The role of Voluntary Organisations in the development of the political Community.

Candidates showed that they know what voluntary organisations are but most of them equated them with pressure groups. Most of the answers in fact focused on the role of pressure groups within society. They defined voluntary organizations also as NGOs with no public funding. Din l-Art Helwa, Bird Life and Greenpeace featured as examples of voluntary organizations. Some candidates opted for such religious organisations as the Catholic lay society MUSEUM and ZAK as examples of NGOs. Others mentioned Puttinu cares and the work it does in the community.

In fact, candidates linked community development with the work done by these groups (e.g. historical restorations works, preservation of the natural habitat) and they linked pressure groups with political development with these groups making pressure for changes in the law.

Overall, the candidates did fairly well and seem to have prepared themselves well through the notes dictated by the teachers.

PAPER II B

Each question carried 20 marks out of 200

Section A: The World – Our Home Management of Resources

1.
 - (a) **The term ‘Greenhouse Effect’.**
 - (b) **The term ‘Climate Change’**
 - (c) **How greenhouse gases contribute to climate change.**
 - (d) **Specific human activities that contributed to climate change.**
 - (e) **Examples of how the international community is addressing the problem of climate change.**

This was a common choice for students, and the majority were at least able to define adequately the term greenhouse effect, although a good number of students confused the term with ozone depletion. . The diagrams varied from well-labelled ones, to a literal representation of a greenhouse surrounding our planet. The majority of students managed to achieve some marks in question (b) as they mentioned that climate change is a lasting change in weather patterns for at least decades. In question (c) some students mentioned that an increase in greenhouse gases (mainly CO₂), increases the greenhouse effect, but there were many wrong or blank answers in this question.

In question (d) some students mentioned the burning of fossil fuels that has contributed to the increase in carbon dioxide in the atmosphere. Very few mentioned deforestation. Few students obtained marks in question (e) when they mentioned intervention or climate change mitigation measures. Most mentioned renewable energy and electric cars. Very few mentioned planting more trees or increasing efficiency or insulation of buildings.

2.
 - (a) **The term ‘arable farming’.**
 - (b) **Why farmers use a system of crop rotation.**
 - (c) **Measures that are effective in reducing loss of soil.**
 - (d) **An advantage of using biological pest control rather than chemical.**
 - (e) **Why Malta is experiencing a general decline in the number of people employed in the farming industry**

This question was less popular than question 1. In question (a) most students mentioned that arable farming is the cultivation of plants for the production of food. Nonetheless, a good percentage included animal husbandry in the definition. Most students attempted question (b), and the majority did partly mention the principles of crop rotation correctly. Nonetheless, they focused on the improvements to soil, and few mentioned that it mitigates the build-up of disease and pests. Generally, the descriptions or explanations were not of a very good level. Nearly all students attempted question (c), and, in most cases, they mentioned rubble walls and afforestation. Few students mentioned legal measures. A number of students did not properly understand question (d) and either did not answer or their answer mixed up a number of concepts, rarely referring to the fact that biological control acts naturally without doing any damage, while chemicals destroy beneficial insects, bacteria and plants and therefore harm the biodiversity. In question (e) most students mentioned the fact that young people are now attracted

towards urban jobs which are considered less tough and have more 'status'. They also frequently mentioned the relatively poor income perceived to be earned by farmers.

Section B: **Human Population**
Human Communities

3. The historic and cultural importance of four of these

- (a) Valletta**
- (b) Mdina**
- (c) Senglea**
- (d) Vittoriosa**
- (e) the Gozo Citadel**

Candidates were expected to choose four cities and write a paragraph to explain their historic and cultural importance. When dealing with Valletta, candidates concentrated mostly on its strategic position, its building by the Order of St John, some significant historical buildings such as St John's Co-Cathedral and the Sacra Infermeria and its importance today as a commercial area. Candidates choosing Mdina, generally, explained its strategic location, mentioned some significant historical buildings such as Palazzo Falzon and explained its loss of importance during the rule of the Order of St John, its plight during the 1693 earthquake and the resultant restoration. When dealing with Vittoriosa, candidates concentrated mostly on its strategic position, its choice by the Order of St John as their home during their earliest times in Malta and its importance to the Order's fleet. Most of them only named the Inquisitor's Palace as a significant historical building. Candidates, choosing to write about the Gozo Citadel, based their arguments on how this provided the only shelter for Gozitans during the pirate raids and how its shelters were used during the bombing in the Second World War. Those writing about Senglea concentrated mostly on the contribution of Fort St Michael during the Great Siege. Overall, most of the answers were rather weak and lacking in detail though there were some candidates who did well.

- 4. (a) Why did the British build the Victoria Lines and which forts and batteries fortified these Lines**
- (b) Another fort not belonging to the Victoria Lines, why it was built, how it was used and what made it fall into disuse in the 20th century.**
- (c) What has been done to ensure the preservation of such fortifications for future generations.**

In the first part of the question, a good number of candidates managed to explain the building of the Victoria Lines in the light of the main principles of British defence policy in 19th century and their strategic importance on the Great Fault that geographically divided Malta. Only a few candidates however, managed to mention all the forts that fortified these Lines namely Fort Bingemma, Fort Mosta, Fort Madliena and Forti Pembroke.

In the second part of the question, some candidates chose another fort not belonging to the Victoria Lines such as the Rinella and Cambridge forts and explained their importance at that time and how these forts fell into disuse in the 20th century due to the advent of the aeroplane. However, some candidates chose fortifications which had been built by the Order of St John and were only reinforced by the British thus losing valuable marks. Overall attainment by candidates in this part of the question was not so good.

In the last part of the question, many candidates managed to explain why and how these fortifications became victims of neglect and vandalism and started to be used as dumping sites. However, only a few candidates managed to explain when and why these buildings started being restored. Only in a few instances were candidates able to give examples of how these fortifications started to be used in practical ways such as tourist attractions, historical sites or museums.

Section C: Work and Leisure, and Managing a Nation

5. (a) **What is occupational health and safety.**
(b) **Health and safety measures at the place of work .**
(c) **Why is there the need of health and safety measures in road construction works.**

Candidates explained the concept of health and safety in terms of mentioning items of clothing and equipment that workers had to use to safeguard their own safety. There were a few candidates who put the onus of health and safety on the workers, but most acknowledged that this is a right to be enjoyed by the employees and an obligation on the part of the employer. Consequently there were many candidates who in answering part b of the question repeated and elaborated on what they had written in answer to part a.

Part c of the question was misinterpreted by many candidates as referring to ‘construction’ and NOT to ‘road construction’. As such, they mentioned the need to be safe from falling objects from above.

Some candidates answered this part of the question from the point of view of drivers ensuring that roads had to be safe for driving. They completely ignored the dangers road construction workers face every day. Some did mention dangers from underground electricity connections, water pipes and drainage pits.

6. (a) **What is meant by civil society.**
(b) **Examples of civil society and its role.**
(c) **The meaning of consultation helps sustainable development.**
(d) **How political power can be decentralised.**

This was a question which most candidates found difficult to answer. Candidates have little knowledge of what a civil society consists of. They interpreted this in terms of having citizens who act in a civilized manner. Consequently most answers on two examples of civil society were wrong. They mentioned the Police and the government as examples of civil society.

Candidates also wrote in very general terms and from acquired craft knowledge in answering about consultation as a means of helping sustainable development. Some candidates explained sustainable development from the purely environmental point of view.

Decentralisation of political power proved to be a very difficult task for most candidates to tackle. Some explained decentralisation as meaning destabilization or making every effort to bring down the government. Most candidates spoke of politicians as having a lot of power and doing what they wanted with it. Some acknowledged local councils as a means of the decentralisation of political power.

Very few candidates answered this question, with Question 5 being much more popular.

Chairperson
SEC Environmental Studies, 2012