

UNIVERSITY OF MALTA

**SECONDARY EDUCATION CERTIFICATE
SEC**

**ENVIRONMENTAL STUDIES
MAY 2015**

EXAMINERS' REPORT

**MATRICULATION AND SECONDARY EDUCATION
CERTIFICATE EXAMINATIONS BOARD**

**SEC Environmental Studies
May 2015 Session
Examiners' Report**

Part 1: STATISTICAL INFORMATION

Table 1 shows the distribution of grades for the May 2015 session of the examination.

GRADE	1	2	3	4	5	6	7	U	ABS	TOTAL
PAPER A	48	151	185	202	147	-	-	193	4	930
PAPER B	-	-	-	27	76	65	68	152	19	407
TOTAL	48	151	185	229	223	65	68	345	23	1337
% OF TOTAL	3.6	11.3	13.8	17.1	16.7	4.9	5.1	25.8	1.7	100.0

Part 2: Comments regarding candidate's performance**2.1 GENERAL COMMENTS****The Projects: General remarks**

The examiners moderated over 272 projects in 8 state and church schools. In addition, 32 projects submitted by private candidates were corrected, and all private candidates were called for an interview.

The following remarks reflect the majority of projects moderated:

1. The title is not always indicated on the front page of the project.
2. Projects were generally well planned, providing a table of contents, bibliography, chapters and illustrations.
3. Many relied on websites and internet-based information only. This is not enough to present a top-quality project. Broader bibliographic reference is recommended.
4. Many projects still lack captions for pictures, references, graphs or charts to substantiate arguments.
5. Some candidates ignored the approximate length of 1500 to 2000 words.
6. Some school marks were inflated.
7. In schools where teachers provide guidelines and help students structure their work, one notes that candidates perform above average and produce an overall quality project.
8. Generally, more emphasis needs to be given to the skills of collecting and analysing data.
9. Several projects lacked evidence of fieldwork and they were generally weak when it comes to conclusions to indicate ideas, recommendations or ideas for consideration.
10. Providing data without analysis is still common.
11. Critical thinking is lacking in many projects.
12. The marks attained in the coursework contributed a lot to the candidates' overall grade. The average coursework mark (max 15 marks) attained expressed as a percentage is higher than the marks attained in the examination paper (max 85 marks) expressed as a percentage.

ENVIRONMENTAL STUDIES 2015

General Remarks

1. Some candidates do not have any knowledge of basic terms and seem to be unaware of specific topics referred to in the syllabus.
2. More accurate reference to current affairs and environmental and social realities is recommended.
3. Many are unable to express themselves coherently whether in English or in Maltese. Few could produce a well structured paragraph to answer questions.
4. There were quite a few candidates who answered one question in English and another in Maltese.
5. There is the tendency among candidates to sermonize in their explanation, often adopting the "We/They" syndrome.
6. Some candidates do not follow the rubrics and don't write the number of questions answered in the space provided on the front page of the scripts.
7. Many Option 2B candidates often produced one word answers or wrote incomplete sentences rendering their answers incomprehensible.

2.2 Paper 1

Section A

Average marks obtained per question, categorised for Options 2A & 2B, shown below.

In general, candidates' performance in this Section is similar to previous years, and Option 2B candidates were very poor in some questions. The Examination Panel does not feel that the questions set in this examination paper were more difficult than those set in 2014.

Question 1:

Option A: 2.9/4

Option B: 1/4

- a. Many Option 2A candidates answered correctly. The rock family which was most problematic was the metamorphic category. The majority of candidates answering this question in Maltese provided the wrong answer. Many of these listed the Maltese principal rock deposits and not the three rock families.
- b. Most of the candidates who provided a correct answer to question 'a' above answered this question correctly.

Question 2:

Option A: 2.6/3

Option B: 2.3/3

- a. Most candidates provided a correct answer to this question and most commonly indicated Turkey, Greece, Italy and Cyprus as the main countries in the Mediterranean region prone to earthquake and volcanic activity. However, some chose to produce examples from outside the Mediterranean region and hence gave wrong answers.
- b. Most of the candidates provided a correct answer to this question and successfully indicated a volcano as well as an indication of its location. Mt Etna was the most common answer.

Question 3:

Option A: 2.1/4

Option B: 1/4

- a. A surprising number of candidates of both Option 2A and 2B could not adequately define 'sustainable development'.
- b. Most Option 2A candidates obtained the full marks allotted to this question. The examples provided included carpooling, elimination of CO₂ emissions, renewable energy sources such as wind and solar power, as well as the preservation of outside development zone (ODZ) areas. A fairly high number of candidates confused sustainable lifestyle with healthy lifestyle and hence gave examples which had nothing to do with sustainable development.

Question 4:

Option A: 1.8/3

Option B: 1.2/3

- a. A substantial number of candidates were unable to point out the difference between a 'hard stone' and a 'soft stone' quarry.
- b. Most of the candidates obtained the full marks allotted to this question. Most of the answers provided included the mention of an engineered landfill, or similar land reutilisation. The main pitfall was that some candidates were too brief in their answers, sometimes limiting themselves to a one word reply.

Question 5:

Option A: 0.5/3

Option B: 0.2/3

- a. The majority of candidates of both Option 2A and 2B scored very poorly in this question and repeatedly indicated Fort St Angelo as a British period fort built to protect the entrance to the

Grand Harbour. Most candidates showed a lack of knowledge of British coastal forts that were used at that time to protect the Grand Harbour.

- b. In a fashion similar to 'a' above, only a small number of candidates successfully indicated Fort Delimara as the British period fortification built to protect the entrance to Marsaxlokk harbour. Some referred to forts and batteries located in the area of Marsaxlokk which however had different purposes from that being asked in the question.

Question 6:

Option A: 1/2
Option B: 0.5/2

It came quite as a surprise that the majority of candidates had very little knowledge of the Greek architectural orders. A significant number of answers included a reference to the Military Order of the Knights of St John.

Question 7:

Option A: 2.6/5
Option B: 1.6/5

Of all the five examples requested by this question, the majority of respondents gave a correct answer to (a), (d) and (e). A significant number of candidates was unable to identify St. Paul's Anglican Cathedral in Valletta and a medieval building in Mdina. Few candidates gave good examples of all the buildings indicated. There were candidates who just jotted down vague or random places.

Question 8:

Option A: 1.5/3
Option B: 0.6/3

A good number of candidates referred to strict quarantine laws and the lazzaretto as measures taken by the British authorities in 19th century Malta to protect the people from deadly infectious diseases. Just a few mentioned the Fawwara aqueducts. Others simply noted immediate action taken when plague or cholera epidemics appeared or referred to developments occurring during the 20th century or were very vague in their answers. Some mentioned the need of hygiene, the need of popular campaigns of health education, and resorting to clean water as preventive measures to contain the spread of disease.

Question 9:

Option A: 3/4
Option B: 1.8/4

Though quite a good number of Option 2A candidates managed to list the four sectors of the economy correctly, many in Option 2B did not. Moreover, though there were candidates who gave good examples

of economic activities related with each sector, there were quite a few who did not give any good answer regarding the Quaternary Sector. There was also a number of candidates who clearly have no idea what these economic sectors are. Some respondents failed to identify the quaternary sector as the fourth sector of the economy. Many of those who mentioned it failed to give the right corresponding example. Others included the general term 'scientists' or 'research and development' and not specifically the digital sector.

Question 10:

Option A: 1.4/3

Option B: 0.8/3

(a) Re: Occupational Health and Safety: many produced a tautological or vague explanation, e.g. the worker has a right to safety and health insurance at the place of work. Others explained the term by listing safety gear and precautions workers have to take while at work.

(b) Social Partners: Though there were some who indicated the employers, workers and government as the social partners, there were many candidates who failed to do so. At most many indicated the trade unions as representatives of workers. Many others referred to friendship and groups in society.

(c) Human resources: Though some candidates defined this term correctly, many others produced vague or bad definitions stating that such resources are produced by man or required by man.

Question 11:

Option A: 1.9/3

Option B: 1.2/3

(a) Social environment: For many candidates this term refers to 'the place or environment in which we live' or simply 'the people around us'. Some referred to factors such as work, school, shops, affecting the environment but many candidates give the impression that they have no idea of 'interactions between people in their various spheres of life'. Some candidates referred to aspects of the natural environment.

(b) Factors influencing social environment: A few candidates did manage to give good examples of such factors as the family, education system, culture, mass media, customs and political parties. Many candidates included tourism/migration, religion and consumerism but many give the impression that they have no knowledge of the term.

Question 12:

Option A: 2/3

Option B: 1.2/3

(a) The term 'pressure groups' was frequently interchanged with 'peer groups', so that respective answers given were out of point. A few managed to give an acceptable definition supported by examples of notable Maltese pressure groups.

- (b) The term 'political parties' was occasionally defined in a general way as voluntary organisations with the objective of giving a positive contribution to society. There were some answers which mentioned the goal of contesting general elections and seeking seats in parliament or even to be in government.
- (c) 'parliamentary system' was frequently explained as the 'government of the country' or 'groups of people meeting for the good of the country' or a 'meeting of the party in government and the party in Opposition. Rarely was representative democracy and law-making as the main functions of a parliamentary system mentioned.

Section B

1. Text about Climate Change

General comments

Option A: 13.2/25

Option B: 8.6/25

- a. The majority of candidates succeeded in pointing out that Global Warming is the observed and projected increase in the average temperature of the Earth's atmosphere. On the other hand, most failed to mention Oceans and their role in the absorption of CO₂ emissions.
- b. A substantial amount of candidates could not adequately point out in what ways 'global warming' is related to 'climate change'.
- c. Most Option 2A candidates obtained the full marks allotted to this question. Answers commonly included carpooling, the utilisation of more Eco-friendly means of transportation as well as the utilisation of renewable energy resource.
- d. A surprisingly large number of candidates failed to appropriately explain, or at least, contextualise the significance of the given statement.
- e. Most of the candidates answered this question correctly. Nonetheless, quite a few specifically indicated developed stretches of the Maltese and Gozitan coastline – for which answers no marks could be awarded.
- f. Most of the candidates provided a correct answer to this question. However, through the answers provided by a number of candidates, it clearly emerged that a few still have not acquired basic spatial/altitudinal skills expected of candidates sitting for this examination. These indicated settlements such as Dingli and Ba rija as being prone to a sea-level rise.
- g. Most of the candidates, especially in Option 2A, commonly provided a correct answer to this question. These mainly included the lack of availability of a suitable inland settlement site and the fact that modern settlements are recreational and tourist oriented and do not have to engage with coastal defense strategies and concerns, as in the past.
- h. Most of the candidates provided a correct answer to this question. Answers commonly included as reference to efficient bus transportation, a subterranean monorail, an increase in bicycle and motorbike usage, as well as efficient park and ride schemes.
- i. Most of the candidates provided a correct answer to this question. Common answers included the installation of photo voltaic panels and solar water heaters.

2. Text about 19th Century Malta – Social Lifestyle and Entertainment.

General comments

Option A: 12.1/25

Option B: 7.0/25

- (a) Nearly all candidates indicated Independence Day on 21 September 1964 as the end of British rule in Malta. Some candidates gave the 13 December 1974 as the answer.
- (b) Candidates could explain Malta's strategic importance in view of Malta's geographic position in the Mediterranean Sea. Several explained it in terms of Malta's fortifications as a defence system in times of war and her trade relations with foreign countries.
- (c) The majority of respondents mentioned greater work opportunities as the main pull factors to the Grand Harbour area for the Maltese population. Several others indicated factors like greater security, better commercial activities and more opportunities for entertainment.
- (d) It seems that candidates did not understand the question. This was evident from the fact that all places around Malta were given as the correct answer when what was expected from the question was to give two examples of places that grew as a result of the population overspill from the Grand Harbour area such as Sliema, Fgura, Sta Lucia, Paola, Marsa. Mentioning such places as Birkirkara, Haz-Zebbug and Rabat give the impression that students might have understood the question as referring to people finding refuge in villages away from the Great Harbour area during World War 2.
- (e) Generally speaking, answers focused on the widespread use by young people of modern-day gadgets of information and communication technologies, e.g. emails, internet, mobile phones, iPads, smart phones, . . . this was happening, however, at the expense of person-to-person social encounters. There was a positive point in many answers when respondents commented on the negative effects on processes of socialization. The majority of candidates got this question correct – an indication that the question has addressed an issue in the real-world of young people today who are greatly familiar with the use of the new information and communication technologies.
- (f) The latest introduction of legislation on Divorce (2011) and Civil Unions (2014) in Malta were the most popular secular changes mentioned with consequences on the decline of Church influence on the Maltese people. Very few, however, commented on these two changes within the general framework of the process of secularisation as the main sociological phenomenon.
- (g) There were relatively few correct answers which showed candidates' understanding of the process of globalisation and its effects on people's life. Indicators of globalisation like international communication, commercial and trade exchanges, the wider use of English language as a common language, increased inter-governmental relations at the international level, and the eventual marginalisation of less developed countries as a negative effect were rarely mentioned. The majority explained globalisation in terms of the use of the new information technologies and how these are impinging on people's life. Answers in this sense were largely repetition of responses to question (e) which centred on the influences of the new information and communication technologies. Such repetition and lack of critical thinking and commentary required by question (g) resulted in loss of marks.

2.3 PAPER 2A & 2B

General comments

The difference between the score of candidates sitting Paper 2A and Paper 2B has increased from the previous years. The general performance of all candidates is not very good, with average marks generally below 10/20.

A small but not negligible number of candidates answered all the six questions instead of choosing four. This severely affected negatively their performance, as they provided only very brief answers. The Examination Panel cannot emphasize more the importance of reading the instructions and understanding the rubric of the examination paper.

Section A

The World – Our Home Management of Resources

Question 1

(N.B. all marks are out of 20 marks)

Option A: 9.26

Option B: 5.28

In this question candidates were expected to provide a description of the formation of the mean-sea level aquifer and the process of how sea water is converted into pure water at desalination plants. A substantial amount of candidates gave the correct explanation and provided a description of the process, its advantages and disadvantages and elaborated further by giving actual example of location/s from the Maltese Islands. Unfortunately, erroneously some candidates opted to describe the formation of the two water tables leaving out the process of water desalination. Some other candidates opted to explain the process which takes place at sewage treatment plants. In both latter cases the answer was incorrect and marks were consequently lost.

Only few candidates provided realistic suggestions how each water production can be conserved for future generations. Conservation of these water resources was understood as water conservation at home rather than generally in the aquifer or acting against pollution of catchment area or the sea.

Many Option B candidates confused 'reverse osmosis' with sewage treatment. Other confused 'aquifer' with 'aqueduct'. Most details of production, advantages and disadvantages were omitted or not properly developed.

Question 2

Option A: 14.00

Option B: 9.25

This question was a very popular choice with the candidates and achievement by the candidates in this question was reasonably good. Most candidates gave a good explanation of soil formation and made a

Question 4

Option A: 11.05

Option B: 7.56

Most Option 2A and 2B candidates showed proficiency in describing farmhouses, rubble walls, corbelled huts and pigeon houses but were rather weak on their conservation and importance (with the exception of farmhouses). Option 2B candidates limited themselves to very basic information, i.e. reproducing definitions that they had memorised from teachers' notes.

Section C:

**Work and Leisure
Managing a Nation**

Question 5

Option A: 9.55

Option B: 4.69

The performance in this question was poor, especially in Paper 2B. Candidates failed to show critical thinking in tackling the positive and negative aspects of the manufacturing industry. They identified air pollution as the main hazard to the environment. Option 2B candidates were weak in mentioning examples of HR development limiting themselves to life long learning and a general education. No mention was made of courses for example.

Question 6

Option A: 9.44

Option B: 4.90

The performance in this question was also poor. Candidates were knowledgeable on such events as the Republic, the closure of the British military base and Malta's membership in the EU. However, they did not acknowledge this as the end of the colonial era and greater responsibility for the Maltese. Neither did they focus on such developments as the setting up of a number of authorities as required by the Constitution. Option 2B candidates were weak on constitutional development limiting themselves to changes taking place with the establishment of the republic. Candidates satisfactorily identified the main differences between Independent and Republican Malta. In general, they interpreted universal suffrage as giving the vote to women. Few mentioned that this occurred in 1947. They also referred to basic rights and freedoms of the individual. Very few opted to provide information on the free movement of people and goods in the EU.

Concluding comments

The statistics show a marked improvement in candidates' performance from previous years, especially in Option 2A candidates. A better understanding of Environmental Studies terminology, concepts and processes seems to be taking place. Consistent efforts in this respect by all stakeholders in the examination process will continue to give desired results which will better reflect the performance expectations of MATSEC.

Once again, the Examination Panel wishes to remind students to read the rubric well and take note of the marks allotted for each question. The marks are indicative of the breadth and depth of the answers required. Issues related to rubric are especially prevalent with Option 2B candidates.

As in previous years, the Examination Panel stresses that students must understand the basic principles of environmental studies and the content of the syllabus in a holistic manner. The subject is being taught in many schools, often in a fragmented way (geography, history and social studies), however students must keep in mind that the examination sees the syllabus content as one holistic subject. The candidates should be able to bring together the three subjects they learn at school, and look at the environment in a mature way, with respect and with an understanding of the basic facts about the physical and human environment of Malta and the world around us.

In conclusion, and to repeat that which was already stated in the previous reports, teachers must emphasise the need to replace superficial answers with critical and reflective comments on environmental facts, processes and issues.

**Chairperson,
Examiners' Panel 2015**