

UNIVERSITY OF MALTA

THE MATRICULATION EXAMINATION

SEC LEVEL

ENVIRONMENTAL STUDIES

MAY 2013

EXAMINERS' REPORT

**MATRICULATION AND SECONDARY EDUCATION
CERTIFICATE EXAMINATIONS BOARD**

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Part 1: Statistics

Table 1: Distribution of the candidates' grades for Sec Environmental Studies May 2013.

GRADE	1	2	3	4	5	6	7	U	ABS	TOTAL
PAPER A	47	158	228	194	177			285	6	1095
PAPER B				54	91	97	121	201	30	594
TOTAL	48	160	231	198	182	6	121	486	36	1689
% OF TOTAL	2.8	9.5	13.7	11.7	10.8	0.4	7.2	28.8	2.1	100.0

The Projects: General remarks

The examiners moderated 286 projects spread out over 21 private, state and church schools. In addition, 13 projects submitted by private candidates were corrected, and 19 candidates were called for interviews (including the private candidates).

1. Some marks in various schools were inflated but there were also some projects which were under-marked. The harmonisation process has helped to improve the standard of marking in schools. Projects seen were moderated where required.
2. Candidates need to be instructed to indicate the Topic Number, Title and Candidate's Name on the Title Page.
3. 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.
4. 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.
5. Some projects were not of the required standard and this indicates that the process in the development of such projects needs to be monitored more closely.
6. Many relied on websites and internet-based information. This is not enough to present a top-quality project.
7. Some candidates inserted the questionnaires in projects (which is good) but more focus on the analysis would have produced better results.
8. Generally, more emphasis needs to be given in the skills of collecting and analysis of data and in more critical suggestions in meaningful conclusions.
9. Some candidates inserted teacher's notes in their work and these, in many cases, lacked acknowledgement.
10. Several 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.
11. Some candidates ignored the approximate length of 1500 to 2000 words.

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General Remarks

1. There is a general tendency among candidates not to write the numbers of the questions on the front cover of the script.
2. A good number of candidates answered the questions in English. But the language is often mediocre.
3. Many Option 2B candidates often produced one word answers or wrote incomplete sentences rendering their answers incomprehensible.
4. There are candidates who do not read the rubric and exam instructions.
5. Candidates must note the marks allotted for any question and provide a reply that justifies the marks that are to be awarded.

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6. Some candidates, especially in Option 2B, are not familiar with basic terms.
7. Many candidates cannot express themselves in a coherent and logical manner. Many jot down points without adding an explanation.
8. Candidates 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.
9. Answers given by some candidates give the impression that only some aspects of the Syllabus were adequately studied.

Paper 1

Section A

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

Question 1:

Option A: 1.7/3

Option B: 0.8/3

This question was about the greenhouse effect. Candidates often failed to explain the process of the greenhouse effect and focused more on the outcome of it or described only parts of the process. Most answers concentrated on the fact that the greenhouse effect is caused by a number of human activities and that it has a wide range of consequences and most of the time candidates made reference to one or two of these. On the other hand it was evident that some candidates found it difficult to mention and explain the ability of greenhouse gases to absorb infra-red radiation which leads to global warming. Consequently, these candidates failed to attain full marks in this question. Erroneously, there was also a substantial amount of candidates who confused the greenhouse effect with the depletion of the ozone layer.

Question 2:

Option A: 2.75/4

Option B: 2.02/4

This question was about flooding. Generally the answers provided were good. This question asked for two natural and two man-made causes of flooding for which a large percentage of the candidates provided correct examples. On the other hand, some candidates mistakenly gave earthquakes as an example of natural causes of flooding obviously confusing tsunamis with earthquakes.

Question 3:

Option A: 1.49/4

Option B: 0.57/4

This question was divided into two parts. In the first part, candidates were asked to list the three factors of sustainable development. Unfortunately, a large percentage of candidates failed to answer correctly, most of who made reference to the three Rs (reduce, reuse and recycle) as the three factors of sustainable development. On the other hand in part b, most candidates succeeded in providing an example of an action towards a sustainable lifestyle, most answers concentrating on the use of solar energy and waste management techniques. Overall many candidates were aware of one example of an action towards a sustainable lifestyle.

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Question 4:

Option A: 2.54/3

Option B: 2.12/3

This question consisted of two parts. The first part asked the candidates to explain why the opening of the Suez Canal in 1869 marked an increased importance of Malta's global position, for which most candidates provided an adequate explanation. Malta's strategic position for economic purposes was mostly highlighted in the candidates' answers. However at times they confused the period during which the Suez Canal was opened and mentioned aspects that were only made available relatively recently e.g. the Freeport and Cruise Liners. .

In the second part, correctly most candidates underlined the social and economic benefits such as the creation of jobs and improved economic conditions from the opening of the Suez Canal. Unfortunately, some candidates mentioned that this brought a boost to cruise tourism to Malta, erroneously not realizing that this type of industry did not exist at those times.

Question 5:

Option A: 1.46/3

Option B: 0.77/3

This question was about the contribution of George Cornwall Lewis, Paolo Pullicino and Patrick Keenan to the development of education and schooling in Malta in the 19th century. Evidently many candidates found this question difficult. They often either confused personalities, provided a generic answer or did not answer at all.

Unfortunately, the overall outcome was quite negative as a number of candidates made reference to the Education Compulsory Acts, others mentioned that primary, secondary and tertiary education was introduced by these personalities respectively and other candidates mentioned that state, non-state and church schools were introduced by these personalities respectively. This was clear evidence, that the majority of the candidates had no idea of the roles of these personalities in the development of Malta's educational system.

Question 6:

Option A: 1.9/4

Option B: 0.9/4

This question was divided into three parts. Part a asked for the natural geographic feature along which the Victoria Lines were built. A substantial amount of candidates chose not to answer this question. Very few were able to correctly mention that this was built along the Great Fault. Answers varied from 'cart ruts', 'aqueducts', 'near the sea' to 'gothic'.

Most Option 2A candidates knew why they were built. However, most Option 2B candidates do not know where the Victoria Lines are situated as a large amount of answers stated that these were built in order to protect the Grand Harbour from the eventuality of an attack. In the case where candidates answered this part satisfactory, that is to protect Malta from an attack from the northern low lying beaches, answers to part c were also satisfactory. In other words they managed to name two forts as examples that were built along these lines.

In general, candidates confused the time during which these were built and referred to the Knights' Period rather than the British period. Unfortunately, answers to part c also included examples of fortifications which can be found all over the Islands and which were built during the Knights and British reigns respectively.

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Question 7:

Option A: 1.26/3

Option B: 0.82/3

A relatively small number of candidates could identify examples of sections of the Maltese farmhouse. Examples in the rest of the answers included the well, the roof or the garden, which are not habitable sections as was required by the question. No marks were awarded for the latter examples.

Question 8:

Option A: 2.05/3

Option B: 1.48/3

Candidates fared rather well in this question. Many were successful in mentioning examples of major architectural sites in the Mediterranean. There were a few who gave wrong answers either by mentioning a site that cannot be considered 'major' such as small churches or forts, or sites that not in the Mediterranean region like the Tower of London or Eiffel Tower. When it came to the explanation of the use of the respective architecture mentioned, some answers were superficial or generally irrelevant.

Question 9:

Option A: 2.01/3

Option B: 1.50/3

A significant number of candidates could relate the production of goods to the manufacturing sector of the economy and the rendering of service to the tertiary sector. However, there were a few candidates who merely gave a one-word example of a product or a service to show their understanding of the terms. Regarding the second part of the question dealing with agents of air pollution, the majority of exemplar agents given were 'factories', 'cars', 'the car industry' or 'transport'. Few mentioned the gases or poisonous emissions as required.

Question 10:

Option A: 1.04/2

Option B: 0.59/2

While many candidates showed they understood the meaning of 'natural resources', a few others, especially in Option 2B, had no idea of what the term 'human resources' means, or otherwise only had a shady idea. Answers to this second part of the question largely explained 'human resources' as 'man-made products', 'things made by man', or 'things from the earth or produced by nature worked upon by man'.

Question 11:

Option A: 1.96/4

Option B: 1.43/4

This question assessed candidates' understanding of the 'social or human' environment as a component of the Environmental Studies syllabus. A significant number of candidates wrote of different aspects of the physical/natural environment with suggestions such as to stop the littering of streets with rubbish after the feast days, not throwing empty bottles in the wayside or reducing fireworks. At any rate, answers given showed the common superficial understanding of the environment in terms of street cleanliness or reducing waste products. Comments or reflections on the human values of the environment pointing towards feasts as occasions of social cohesion, family reunions, consolidation of culture or religious occasions were relatively infrequent and rare.

Question 12:

Option A: 2.94/4
Option B: 1.78/4

The term 'freedom of expression' was answered correctly by the great majority of candidates. The same cannot be said of the term 'freedom of association' which was explained by many as being free to encounter the people you like or to be free to meet others irrespective of their religious belief or ethnicity. However, there were a few who were successful in explaining the latter term as the right to form groups, to be part of an association or to participate in the activities of any group of one's choice.

Section B

1. Text about transport, particularly the train, in Malta and related questions

General comments

Option A: 18.1/25
Option B: 14.9/25

Candidates did well in this question. Most questions did not require an analysis and candidates seem to have generally gone over the topic of transport well. A few candidates referred to the period during which the train was operational as the Knights' Period, which of course threw them off course. At times candidates also referred to the train as the bus, clearly indicating that some candidates were not familiar with Malta's historic transport systems. However, the examiners' impression is that transport is being given its due importance by candidates.

Question (a)

Often candidates either did not provide a good answer to or else only mentioned one reason why the link between Valletta and Notabile was of great importance at the time. Many failed to highlight the economic and social reasons/benefits behind this route.

Question (b)

There were instances where candidates did not read the passage carefully and provided the wrong answers. In addition the candidates did not always provide three ways in which the train provided benefits to the five main localities through which it passed. Some Option B candidates did not answer the second part of the question.

Question (c)

Overall the answers were satisfactory earning candidates valuable marks.

Question (d)

Part d was often answered wrongly, with candidates referring to the Cottonera, Mdina, Knights' fortifications or only stating 'swar'. Others made reference to the Victoria Lines. In such cases it was clear that the candidates had no idea of the sites from where the train used to pass.

Question (e)

A variety of means of transport was listed in candidates' answers, generally both or one of them were good but there were instances where the candidates did not answer correctly. At times the answers also referred to marine transport when the question required specifically land transport. Generally part e(ii) was answered correctly.

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Question (f)

The answers to part f were usually good. There were a very few instances where the answers varied from 'choo-choo train', to 'tren'.

Question (g)

Generally the answers to part g were good. Wrong answers varied from fossil fuels, to steam and water.

Question (h)

Overall the answers were correct. Sometimes the answers to (i) referred to the car only, when the answer should have been the bus. Although a good amount of candidates correctly explained that the tram stopped operating because of the public buses which were introduced in the same year, a few candidates erroneously explained that it stopped operating because of the Second World War.

2. Text about social institutions and related questions

General comments

Option A: 11.5/25

Option B: 7.06/25

Candidates found this question more difficult than the previous one about transport. Although most recall questions were answered correctly (a, b, c and d) especially by Option 2A candidates, the questions that required basic analysis and explanations were found to be very hard. Students must understand the different types of social groups and institutions that exist in a democracy and should be able to explain them with use of real examples from Malta.

Question (a)

Candidates did rather well in this question. The explanation of a people's way of life as a people's culture showed that candidates understood the meaning of the phrase.

Question (b)

Many candidates knew that Hagar Qim and Mnajdra stood for the remains of Neolithic temples, but only a small number described them as megalithic temples, which was the correct answer. However, again many could not relate these megalithic temples with their proper pre-historic era, with answers as varied as the Bronze Age, simply the Neolithic period and, strangely enough, as the medieval period.

Question (c)

Most of the candidates' examples of baroque architecture built by the Knights of St John were relevant, with the majority referring to the Auberges, St. John's co-Cathedral and the Grandmasters' Palace (occasionally given either as the Palace or the President's Palace). Other examples included the Inquisitor's Palace and the Public Library at Valletta.

Question (d)

The term 'trade union' was explained correctly by almost candidates. Though there were candidates who explained the term as referring to trade between countries or as organizations set up to oppose the government. The phrase 'devolution of power' was generally not well explained, some simply defining it as 'power shared by all people'. A few mentioned the sharing of power between the central government and local councils. There were also sporadic references to the concept of 'subsidiarity'.

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Question (e)

This question was found to be the hardest. Several candidates mentioned the same social institutions found in the text as examples, instead of giving other instances as required by the question. Some candidates listed correctly religion, parliament or the legislature, education and the family as social institutions. However, candidates often failed to explain or describe their functions adequately

Question (f)

Many respondents explained the term 'non-governmental organisations' by simply taking the cue from the question itself, that is, as 'organisations which have nothing to do with the government' – this was not sufficient to gain marks. Several examples of NGOs requested by part (ii) were associations which are government entities such as SEDQA, APPOGG, commercial banks or the Malta International Airport. These cases were not awarded marks.

Question (g)

A common feature of answers to this question was that candidates mentioned voting as the only way of citizens' participation in the three elections held in Malta, that is, local council elections, general elections and European Parliament elections. Other examples like canvassing for election candidates, distributing posters and attending mass meetings were occasionally mentioned. The majority of answers, however, lacked the kind of civic participation and active political literacy/citizenship like following political debates of issues of national interest, taking part in public or online discussions, being familiar with political manifestos, or seeking redress from the law courts or the Ombudsman Office for political injustices. Answers which mentioned voting for the three levels of elections were awarded only 1 out of the 3 marks for the question.

PAPER 2A & 2B

General comments

One notices a general difference in performance between Paper 2A and Paper 2B candidates in questions 1, 2 and 3. The disparity between the average marks for these questions is significant. These are the more geo-historical related questions. However, the difference in performance between the two categories of candidates becomes less pronounced in questions 4, 5 and 6 that relate to the socio-economic aspect of environmental studies.

In addition to the above observation, one can state that the general performance of Option 2A candidates was strongest in questions 1, 3 and 4. Option 2B candidates fared best in questions 3, 4 and 6. Questions 2 (quarrying) and 5 (eco-tourism) proved difficult for all candidates.

Overall, it is clear that students are generally weak when it comes to answering analytical questions, or when a discussion of a number of factors is requested. Although most candidates can give a satisfactory reply to a simple recall question, such as term definition, they struggle to discuss, compare and contrast, and evaluate more complex concepts and/or situations.

Section A

**The World – Our Home
Management of Resources**

Question 1

Option A: 11.7

Option B: 7.34

This question was a common choice with candidates. The answers were generally valid and well presented. The majority were able to properly draw the erosional process. Not many were able to properly describe this erosion of a headland, and mention that it takes place at weak areas where wave action takes place. Quite a few candidates did not recognise the feature as arch/arkata/hnejja. Very few candidates seem to understand the different types of wave action. Most commonly the answer was a simple description of general wave action. The diagrams, when provided, were usually of a good standard. The process which sees the formation of arches which start collapsing and turn into stacks, and eventually into stumps was usually well described, albeit as stated already lacking a good description of processes that led to their formation. In some cases terms were even confused. It is surprising that some Option 2A candidates could not describe the processes of coastal erosion. For the great majority, the salty environment is the major factor for erosion, which is incorrect. Most Option 2B candidates were able to correctly label the features illustrated in the diagram. The main difficulty was that candidates either do not know the terms 'stack' and 'stump' or confuse them. A number of candidates had difficulty properly explaining how each feature mentioned forms. Nonetheless, some successfully mentioned that hydraulic action is the predominant process. They were able to describe in simple terms how caves are formed. Very few mentioned details of different types of wave action. The last processes that involve the formation of stacks and stumps were the most difficult for candidates, where some also mentioned unrelated issues that may cause such formations such as earthquakes. Most candidates answered part (c) correctly. In part (d) few were able to mention that when the arch collapses it leaves the headland on one side and a stack on the other, which eventually through wave action forms a stump.

Question 2

Option A: 10.2

Option B: 6.11

Many Option 2A candidates gave a very restricted response and only mentioned one or two negative effects of quarries on the environment. Candidates appear to understand some of the environmental impacts caused by the activity, especially the impacts on habitat destruction. Fewer were able to show an understanding that due to their location in ODZ areas the activity may result in the loss of indigenous and/or endemic flora and fauna. In addition, although fairly noticeable, very few mentioned the increased negative visual impact resulting from destruction of land. Many candidates only mentioned landfilling for possible future use of abandoned quarries. However, there were candidates who came up with original feasible alternatives that were awarded good marks. Many Option 2B candidates confused the type of quarry (hardstone and softstone) with the type of rock (Coralline Limestone and Globigerina), or even with work processes (chain saw or explosives). Few knew about two places for each type of quarry. Some concluded that the landfill process is to conclude with a park or playing field concept after their reclamation. Some produced interesting alternatives which shows that there are some candidates even in Option 2B that have done a good deal of preparation for the examination.

Section B:

**Human Population
Human Communities**

Question 3

Option A: 10.7

Option B: 7.81

A common confused idea in both Option 2A and 2B candidates relates to the Malta Government and the Imperial Malta Government until 1961 when diarchy (two governments system) ended. Schools, civil hospitals and social housing were not built by the British but by the Maltese Governments. Another common mix up is between the British and the Order's heritage especially regarding the Lazaretto and Wignacourt Aqueduct. Quarantine was not introduced by the British. It had been in place since the Middle Ages. Some Option 2A candidates mentioned the problem but failed to mention when, how and by whom it was solved. Only a handful of Option 2A candidates were aware that the age of compulsory education from 1946 to 1974 was 6 to 14 (not 11), although secondary education for all was only introduced in 1970. Those students who failed to pass the 11+ entrance exam into the Lyceum (later also the Technical Schools) would still have to attend the then Standards 5, 6, and 7 of primary. In 1970 then the students who failed to enter Lyceum or Technical Schools were admitted to the newly instituted Area Secondary Schools. In addition, many candidates got carried away to elaborate at length on the Language Question as it developed after the visit of the Royal Commission of 1977, rather than what was concretely done to further education of the people. Most problems and solutions mentioned by Option 2B candidates were too generic. They lacked detail as to who did what and when. In general, more attention should be given to the topic, and details therein, set in this question.

Question 4

Option A: 10.5/20

Option B: 9.33/20

Most Option 2A candidates mentioned the major prehistoric remains referring mostly to Ġgantija, Haġar Qim, Mnajdra, Tarxien, Tas-Silġ and the Hypogeum. In their discussion, they mentioned the period when these were built and their building characteristics and features. They also dealt quite extensively with their use in prehistoric times. Surprisingly many Option 2B candidates failed to mention six prehistoric remains, sometimes only mentioning one or two relevant sites. Many of these candidates mentioned remains that do not date to prehistoric times. In general candidates failed to explain what happened to these remains, how they fell into disuse for many centuries and were re-excavated relatively recently. Candidates were also generally weak in explaining the restoration of these sites to its present state and their importance today. In addition, few candidates managed to adequately describe the characteristics and features of the prehistoric site chosen and the institution responsible for it. Candidates were also very weak in putting forth suggestions for further improvement and assessing the benefits of restoration undertaken to our national culture heritage. They just mentioned the importance for the tourism industry.

Section C:

**Work and Leisure
Managing a Nation**

Question 5

Option A: 9.13/20

Option B: 7.42/20

Only a few candidates managed to define sustainable tourism as that form of tourism which meets the needs of present tourists while protecting and enhancing opportunities for the future. Generally candidates did quite well when dealing with the negative impacts of tourism mentioning mostly air and sea pollution, the unsustainable consumption of water and electricity and the negative effects on local flora and fauna. However, they were rather poor in explaining more fully these points. Again candidates were rather poor in suggesting ways of sustainable development and explaining their advantages. They just concentrated on the importance of more education on the three Rs (reduce, recycle, and reuse) at school level or on focusing on cultural tourism instead of tourism of consumption. Practically nobody dealt with environmental planning, the development of environmental impact assessment (EIA) before embarking on construction projects, the reduction in the use of chemicals, toxic emissions, waste and unsustainable noise and the introduction of energy-saving devices such as the government funded schemes for solar panels, photo-voltaic devices, electric cars, energy-saving bulbs. Many Option 2B candidates did not really tackle the argument at all and just wrote about the advantages and disadvantages of tourism without concentrating on the positive impact of eco-tourism or green tourism. These candidates obviously lost valuable marks since a good number of them were completely out of point and showed that they had not understood the question. However, some Option 2B candidates did quite well bringing forth key arguments of its impact such as the protection of the natural environment, the reduction of waste, the advertising of organic farming with tourists, the protection of the cleanliness of the sea and air, the encouragement of countryside walks and local heritage trails, the protection of rare species of flora and fauna, the advertisement of local culture, history and heritage and the development and promotion of nature reserves.

Question 6

Option A: 9.38/20

Option B: 8.69/20

Though most Option 2A candidates generally understood the difference between central and local governance there were still some candidates who mixed them up completely. Even those who gave the right interpretation were very superficial in their definitions. In the second part of the question dealing with the functions and powers of local governance in Malta many candidates supplied rather superficial answers. They generally mentioned the re-surfacing of roads, waste management, the organization of social activities and the maintenance of playgrounds and parks. Few candidates mentioned other important aspects such as cultural and educational activities, the running of local public libraries, traffic management, the opening of day-care centres and residential homes for the elderly, the bulky refuse service, the Public-Private Partnership (PPP) schemes developed with the government in the construction of new roads, the coordination with the local Police authorities in the maintenance of public order and urban security and the participation in national and European bodies such as the Malta Association of Local Councils (AKS) and the Committee of Local and Regional Governance of the Council of Europe. A large number of Option 2B candidates tended to dwell on a very closed definition of politics interpreting this as the governing body of society. Only a few dealt also with the legitimate exercise of citizens' rights and obligations, the Church as an institution and other non-governmental organisations making up civil society. Some candidates also failed to make good references to young people's involvement thus losing valuable marks. However there were other candidates who did quite well and mentioned the consultation between the government and citizens on decisions of public interest, the people's right to give feedback on legal provisions that concern the common good, the opportunities to form pressure groups and the contribution to national discussions and

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debates on the media. In the last part of the question both Option A and B candidates did better, generally mentioning an understanding of the particular needs of residents, a better liaison between public entities resulting in better services for residents, more opportunities for social activities, the greater importance given to the locality's environmental, historical and cultural dimensions and a greater sense of solidarity and pride among local residents. When referring to young people's involvement they mentioned the opportunities for young people to give their own ideas on local and national policies, legislation and projects, the education in the right use of the vote in elections, the involvement of young people in Young People's Local Councils, Young Peoples' Parliament, Students' Representative Councils and Students' Councils and the formulation of the National Youth Policy.

Concluding comments

Students need to be advised 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/

Students are not really grasping the meaning of basic environmental concepts contained in Sections 5 and 6 of the SEC Environmental Studies Syllabus. This requirement is fundamental for a sound environmental education, more so in view of the fact that environmental education is a key learning area in the new National Curriculum framework. Superficial and populist answers need to be substituted by more critical and reflective comments on environmental facts, processes and issues. The section of the Paper on Work and Leisure and Political Citizenship, which includes the social aspect of the environment, and hence environmental human values, need to be better addressed.

Students need more training on environmental studies skills, such as critical and investigative, discussion and explaining, on environmental facts and processes, which are usually assessed by various questions in the Paper.

Chairperson
2013 Examination Panel