

UNIVERSITY OF MALTA

**THE MATRICULATION CERTIFICATE EXAMINATION
INTERMEDIATE LEVEL**

SYSTEMS OF KNOWLEDGE

May 2008

EXAMINERS' REPORT

**MATRICULATION AND SECONDARY EDUCATION
CERTIFICATE EXAMINATIONS BOARD**

**IM SYSTEMS OF KNOWLEDGE
MAY 2008 SESSION
EXAMINERS' REPORT**

The following is a short report on the Systems of Knowledge Examination held in May 2008. The report is divided into two sections:

Part A deals with statistical information, outlining the performance of students in this examination. **Part B** is the Examiners' report. Each section of the paper is corrected by two examiners. The examiners are asked to meet and to write a report, outlining suggestions for both students and teachers.

Part A – Statistical Information

Table 1 shows the distribution of grades for the May 2008 session, while Table 2 shows the distribution of grades for May 2007. The tables indicate that the distribution of grades has not significantly changed.

Table 1: Distribution of grades for IM level Systems of Knowledge – May 2008

Grade	A	B	C	D	E	F	Absent	Total
No. of Candidates	51	385	1200	116	33	541	32	2358
% of total	2.2	16.3	50.9	4.9	1.4	22.9	1.4	100.0

Table 2: Distribution of grades for IM level Systems of Knowledge – May 2007

Grade	A	B	C	D	E	F	Absent	Total
No. of Candidates	66	431	1295	172	14	528	26	2532
% of total	2.6	17.0	51.1	6.8	0.6	20.9	1.0	100.0

General Comments

The examination paper was divided into four sections, with two questions in each section. The reason was that this year the questions themselves were longer, setting the context and giving more information to the students. Students need time to read and analyse the questions before they attempt to answer – so it was felt that it is better to narrow the selection to one from two options. Questions were set in both Maltese and English. Most students prefer to answer in the English language.

The opinion of the chairperson is that with the new syllabus, great improvement has been made with regards to the projects. But, from my reading of the scripts, it seems that students' knowledge tends to be of a general nature, finding it difficult to engage deeply with the set questions.

Part B – Examiners' Report

The SOK papers were corrected by eight examiners, two for each section. The examiners were, following corrections, asked to write a report on their respective sections. The following are their comments:

The report of the Examiners for Section A and Section D

To a large extent the responses that the students gave in this year's examination (Sections A and D) followed the same pattern as in previous years with one or two very welcome positive points.

Most students are still in the habit of committing the lecture notes to memory and then regurgitating them onto the examination paper. This was evident in three of the four questions that covered Sections A and D. The vast majority of students chose to answer question A1 rather than A2. Question A1 fitted far more neatly with the lecture notes and in all cases students gave a general, basic overview of democracy. A good number of them followed this with what they believed to be other 'meanings' of democracy. Question A2 was

the more challenging and the most interesting. It was intended to make the students remember and **think, reflect on and apply what they had received during the lectures**. Surprisingly a very good number of students took up the challenge and provided very decent answers. They all gave a brief overview of democracy (from the lectures) and then used this to **argue** in favour or against the possibility of imposing democracy in a country. This was Systems of Knowledge as it was intended to be.

In Section D, question D1 focused on two common practices that may threaten our environment, vandalism and rampant land/building speculation. The students had to highlight the negative effect of these activities and then follow with ideas on how they singularly and collectively could tackle these issues. A good number of students did this well. However there were others who wrote an essay listing various ways in which our environment is being threatened and what to do about it without even referring to the two ways mentioned in the question. This was a clear case of students preparing an essay on the environment (some did the same with democracy), committing it to memory and then writing it since it was 'about the environment!' Question D2 had the tremendous increase in travel and its effect on the environment as the focus. There were the minority that zoomed in on the issues and did quite well. A lot of others lightened their task by introducing into the answer most of the ill effects of tourism besides the actual travel. Shades of a pre-prepared essay?

To conclude:

- a. It seems that students do not always recognise an issue, much less on how to discriminate between issues. This is crucial to decent thinking processes.
- b. Students find it very difficult to focus on an issue or two and construct an answer around them.
- c. Students need to be warned against preparing essays for the exam and then reproducing them on the exam paper because the question includes the word 'democracy' or 'environment'. In a lot of these cases students completely disregard the question.
- d. Students need to be familiar with argumentation skills and how to use these when 'constructing' an essay.
- e. The examination is intended to find out 'what they know'. This includes information, recognising an issue where it exists, distinguishing types of issues, reflection on them and skills in arguing for or against a position.
- f. Systems of Knowledge was created to balance out the excessive compartmentalisation of knowledge that students experience at secondary school helping them to construct as wide a framework as possible (a world view) that includes politics, history, science, environment, technology and art as parts of a web with each one influencing the others and being in turn influenced by them.

The report of the Examiners for Section B

A general comment about the essays in Module 2 is that a number of candidates clearly come to the examination with set answers that they write down without paying enough attention to the question itself. This was a more regular occurrence in Question 1 than in Question 2.

In their answers to the first question, which dealt with artists' relationship with reality during the Renaissance and the Modern period, some candidates merely wrote a general essay about art and artists during the Renaissance without focusing on the imitation of nature. Hence, various segments of their answers were irrelevant to the question. On the whole, candidates were also less knowledgeable about the Modern period, so discussions about the relationship between the two periods were occasionally unbalanced in favour of the Renaissance. Some candidates also lost some marks because they failed to give specific examples of works of art from both periods, as requested in the question.

Question 2 was answered by a smaller group of candidates. While some candidates made a good attempt to offer arguments about the nature of art and morality, many who attempted this question remained at a rather superficial level and showed only a limited knowledge of the issue and its relevance in art and culture.

The report of the Examiners for Section C

Systems of Knowledge, as the title implies, is about **SYSTEMS** (processes, methods, procedures, practices) of acquiring knowledge. The main target of the new syllabus and style of questioning was, indeed, to provide more opportunity for students to express more of themselves and less of their textbooks.

General Expectations

1. While genuine spelling mistakes are tolerated to a certain extent, any short hand mobile phone sms style of writing such as 'plz com asap' or 'cu' will definitely not be accepted and will also be penalized. Numerals will be accepted in their full word equivalent or symbolic form, such as thirty eight (38). Algebraic mathematical notation, equations, graphs, or other illustrations will also be accepted as long as they are accompanied by a describing paragraph and as long as the writer shows knowledge of standard accepted methods of communicating through these languages.
2. Students should not limit themselves to examples given in the question itself **only** (such as question C2 in April 2008 examination); the arguments presented should always be dealt with in a certain amount of detail. Students wishing to gain more marks, **must show the ability to go beyond the guiding examples given in the question itself as long as these remain relevant to what the question asks.**
3. The student is urged to read the question well before attempting to answer it. The student is also urged **NOT** to regurgitate all the knowledge possessed, especially that studied by rote, but to **ONLY** write the knowledge pertaining to what the question asks.

The flow of language was considered important. The inclusion of diagrams and/or equations was also noted as this reflected the student's awareness of the way science and technology are usually communicated. Unfortunately, out of around 2400 scripts, the examiners only found **two** scripts that used a simple sketch to explain their arguments better.

The new syllabus and style of questioning have had a number of effects on the essay questions this year. Most of these effects are considered positive. Indeed, the variety of responses that both questions triggered is to be celebrated.

Question C1

It seems that this question was slightly more chosen than the other. From the responses it was also evident that students understood this question quite clearly since, no major misinterpretations were encountered in the answers. Most students showed an awareness of moral and ethical issues related with certain contexts in the digital age. Most students were aware of the existence of the Data Protection Act. It was clear that many students are familiar with products and technical jargon related to information technology, and some even showed knowledge of the product's functions quite well.

Answers included the following:

1. Online shopping risks; products mentioned: play.com, ebay, Amazon, PayPal.
2. Social encounter software packages: Facebook, hi5, windows messenger, chat rooms.
3. Online video sharing: YouTube.
4. Online hotel bookings.
5. Online payment of bills.
6. Risks of disclosure of person's personal details when mobile phones are lost.
7. Removal of personal data from vehicle licences.
8. Awareness of the importance of consent forms given to parents by schools regarding activities where children are involved.
9. Employment issues/risks concerning medical or genetic records, criminal records.
10. Tapping of phone lines.
11. Theft of identity.
12. Private detectives.

13. File dissemination and invasion by the use of Bluetooth technology, and when taking PC for repair.
14. Personal information disclosed on talk shows on the radio or TV programs like 'Big Brother'.
15. Abuse of genetic screening in competitive sports.
16. Abuse of ATMs and credit cards – in shops seller does not check signature on back of card, or ask for ID card when shopping with cards.
17. Plagiarism.
18. Spyware, phishing, hacking, encryption, IP addresses, copyright, online betting, spam, cybersex, anti-viral programs, terms and conditions of use and firewalls.
19. Electronic voting systems.
20. MEPA permits online, e-government.
21. Surveillance cameras, satellites and aerial photography.
22. Bonus scheme cards at supermarkets.
23. The millennium bug.
24. Schengen zone and passport control.

As may be noted from the points above, responses to Question C1 were varied in nature and depth of argument. Most students showed an awareness of the risks involved in using certain technological services in today's modern lifestyles. They showed the ability to outline advantages and disadvantages of the technology for society. Students have generally appreciated that a trustworthy human element is always necessary as a foundation for the operation of even the most modern and secure of technologies. Some students have taken the opportunity to use a very creative style of writing and this was awarded accordingly. For example, the introduction to the essay was started by a centred command "*Please enter a password that has alphanumerical characters*"; while the concluding comment of the essay appeared as: "*Please log out*".

Question C2

This question seemed to be somewhat less popular than question C1. While some excellent answers were encountered, this question seems to have been heavily misinterpreted by many students. It is clear that when encountering a question they are not familiar with, students prefer to reproduce all the information they have, be it relevant or not.

Unfortunately, even when the question **does not** ask for them, traces of the 'old' DNA, Watson and Crick, Rosalind, James Watt, Marie Curie, Zen and many familiar names unknowingly made their way into the responses for this question. Students who responded to this question by regurgitating some history of science were penalized because it showed complete lack of understanding of the question. Those who responded in the '*historical small talk style*' rather than the 'active evaluative/reflective style' also showed that the scientific contexts they can cite are the age old ones of Isaac Newton and the falling apple, James Watt and steam, Galileo and the motion of the earth and the sun, etc. No originality at all was found in responses of this type and it is clear that students have not yet renounced the security of the old set of notes that accompanied the old syllabus.

On a more positive note, there were students who mentioned several interesting examples, some of which are listed below:

1. Birds and flight.
2. Moths and butterflies on trees and camouflage, tigers cheetahs and zebras in the savannah.
3. Shape of whale and sea lion compared to that of submarine, shape of fish and birds compared to shape of planes and ships due to streamlines.
4. Farming methods.
5. Ducks and buoyancy, pond skaters and capillary action plumbing systems and water distribution.
6. "Horse power".
7. Species of water snail exploited for the extraction of purple dye.
8. GPS and the heavens, navigation with stars, latitude, longitude for satellite positioning, calculus and celestial bodies.

9. Use of tools by animals such as cracking open food items.
10. Cave art, language, graphics and morse code.
11. Study of rocks by geologists so that houses keep cool and are strongly built.
12. Antibiotics from fungi, plants and medicinals.
13. The study of what makes humans 'happy' for the intelligent building of houses.
14. Laws of expansion and their effect on houses and roads.
15. Cotton clothes that are good perspirant absorbers and are soft to the touch, recycled clothes, study of light and dark colour properties to improve heat dissipation.
16. Study of storms and hurricanes to improve the design of our houses as shelter, study of winds for wind farms, study of lightning and electrical discharge.
17. Study of wave theory to produce home appliances such as the microwave, study of resonance to build better bridges.
18. Study of Newton's Laws of motion for vehicle safety features.
19. Study of chemicals to make new materials such as plastics that conduct electricity.
20. Study of social sciences and natural sciences.

Once again, the variety of responses was very encouraging. Indeed, some students displayed good potential for the acquisition of knowledge and its creative processing.

Only very few students showed highly developed observational powers; indeed most students answered this question in a very superficial way. Most answers were completely out of point, indicating that, either students did not understand the question, or they failed completely to put their knowledge in the context that the question required. It seems that many did not read the question well. Many answers adopted the 'historical small talk style' where **any information**, irrelevant as it may be, was simply regurgitated on the paper.

It was noted that this information was taken quite strictly from chapters of the Systems of Knowledge guidebook edited by Louis Lagana' and Louis Scerri. While this book provides a good guide for students, the examiners expect that students do not learn it by heart, but take the precious knowledge provided and **apply** it to other situations even if these seem unfamiliar. The students are expected to internalize that knowledge and **experience it** rather than simply state it by rote. It is evident that these students read the textbook or a standard set of notes and quoted from these. Students should adopt the scientific/technological method to answer questions like C2.

**The Chairperson
Board of Examiners
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