MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD

UNIVERSITY OF MALTA, MSIDA

MATRICULATION EXAMINATION
INTERMEDIATE LEVEL
MAY 2016

SUBJECT:	INFORMATION TECHNOLOGY
DATE:	11th May 2016
TIME:	4:00 p.m. to 7:05 p.m.

Directions to Candidates

Note that marks will be awarded for neatness and accuracy. Workings are considered as part of the answer and must be shown.

Section A: COMPUTING PRINCIPLES

Answer Question A1 and any **FOUR** *other questions from this section.*

Question A1
This question is compulsory.

Sports for All is a start-up company that sells sports clothing and equipment online. The company sells its goods through an e-commerce website. Customers can browse the company's inventory and place their order from the comfort of their homes.

a) Mention ***four*** security issues owners might encounter when designing and managing the website.

[4 marks]

b) Explain ***two*** ways to prevent such issues.

[2 marks]

c) Differentiate between *external* and *internal hyperlinks* and provide an example where each can be used in this website.

[3 marks]

The website stores information in a database.

d) Briefly explain the function of a *switchboard*.

[2 marks]

e) Explain ***two*** ways how queries can help analyse customer behaviour when using the website.

[4 marks]

f) What is a *report*?

[1 mark]

g) What type of analysis could be performed on the data generated through a pivot table?

[2 marks]

Answer ANY FOUR of questions A2, A3, A4, A5, A6 and A7

QUESTION A2

This question is about *Data Validation*

    a) Why is *Data Validation* important?

                                                         [2 marks]

    b) Briefly list and explain any ***three*** types of validation checks.

                                                         [6 marks]

QUESTION A3

This question is about *Operating Systems*

    a) Why is an *Operating System* important for the computer?

                                                         [2 marks]

    b) Give ***two*** examples of an *Operating System*.

                                                          [2 marks]

    c) Explain the function of ***two*** components of an *Operating System*.

                                                         [2 marks]

    d) Why is it important to have a good interface between the *hardware* and the *user*?

                                                        [2 marks]

QUESTION A4

This question is about *Networks*

    a) Define the following:
        i.   server-based;
        ii.   peer-to-peer.

                                                          [4 marks]

    b) Explain the difference between the *HTTP* and *HTTPS Protocol*.

                                                         [2 marks]

    c) Briefly explain what is *cloud computing*.

                                                        [2 marks]

QUESTION A5

This question is about *System Development*

a) Describe any ***three*** stages of the *System Development Life Cycle* apart from the planning stage.

[6 marks]

b) Give any ***two*** reasons why planning is important during system development.

[2 marks]

QUESTION A6

This question is about *Internet*

a) Define and explain the following terms:
    i.   TLD;
    ii.   Javascript;
    iii. IMAP;
    iv. Video Conferencing.

[8 marks]

QUESTION A7

This question is about *Databases*

a) Describe ***three*** issues to be considered when designing a database.

[6 marks]

b) Define and explain the term *Data Manipulation Language (DML)*.

[2 marks]

Please turn the page.

Section B: HUMAN COMMUNICATION & BUSINESS ORGANISATION

Answer question B1 and ONE other question from this section

QUESTION B1

This question is compulsory.

   a) Define the term *Business Organisation*. Explain any **two** concepts related to the formation of organisations.

[3 marks]
   b) List and explain any **three** types of *Business Organisations*.

[3 marks]
   c) Briefly discuss the significance of an organisation's functional area. List and explain any **three** functional areas.

[4 marks]

Answer ONE question from B2 and B3

QUESTION B2

Explain why the Internet is used as a medium for information exchange in organisations. Discuss any **five** advantages or disadvantages of this.

[10 marks]

QUESTION B3

List and explain any **five** methods or technologies that organisations can use to communicate with the external world.

[10 marks]