MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD

UNIVERSITY OF MALTA, MSIDA

MATRICULATION CERTIFICATE EXAMINATION
INTERMEDIATE LEVEL
MAY 2012

SUBJECT:	PHILOSOPHY
DATE:	22nd May 2012
TIME:	4.00 p.m. to 7.00 p.m.

Directions to Candidates

Answer **THREE** questions in all, **ONE** from **EACH** section. Each question carries equal marks.

Section A: Logic

1. (a) Explain in not more than 10 lines and by means of an example how it is possible for one to assert $\neg (a \wedge b)$ without being able to assert at least one of $\neg a$ and $\neg b$.

(b) (i) Show by means of a truth-table that $a \vee b >< a \sqcup b$ is invalid.

(ii) Is any one of the implications involved in (b)(i) above (i.e. $a \vee b < a \sqcup b$ and $a \sqcup b < a \vee b$) valid? If so which?

(c) Translate symbolically the following propositions:
- (i) It is not the case that Lara likes philosophy or sociology.
- (ii) Lara likes neither philosophy nor sociology.
- (iii) If Lara likes philosophy, she will like sociology.
- (iv) Unless Lara likes philosophy, she will not like sociology.

(d) (i) By means of truth-tables or otherwise find out which two of the four propositions in (c) above are equivalent.

(ii) What change must be made to one of the propositions of the remaining pair in (c) above so that these too become equivalent?

(e) (i) Which, if any, of the following implications are valid?
- (1) $A \rightarrow B,, A < B$
- (2) $A \rightarrow B,, B < A$
- (3) $A \rightarrow B,, \neg A < \neg B$
- (4) $A \rightarrow B,, \neg B < \neg A$

(ii) If any of the implications in (e)(i) above are valid, can you give their names?

(f) (i) Translate symbolically the following argument and check by means of truth-tables or otherwise whether the implication involved is valid:
If Maria went to the cinema, John or Ruth went too. Therefore if Maria went to the cinema and John did not go then Ruth went.

(ii) Which standard implication is involved in (f)(i) above?

(iii) Write down another possible conclusion that can be obtained using the premise in (f)(i) above and the name of the standard implication involved.

2. (a) Explain in not more than 10 lines and with the help of an example what is meant by the term ‘virtual bi-temporation’.

(b) Translate symbolically the following argument and check whether the implication involved is valid:
Today is Monday or Tuesday. If today is Monday, we have a singing lesson. We do not have a singing lesson. Therefore today is Tuesday.

(c) Write down the truth-tables of the formulae X and Y which correspond to:
(i) Formula X: a is false, b is true and c is false
(ii) Formula Y: a and b are true and c is false
(iii) Formula Z is equivalent to "Formula X or Formula Y". Write down formula Z and its truth-table.

(d) (i) A formula which implies 'if a then b' has one of 8 truth-tables. Write down these 8 truth-tables.
(ii) A formula which is implied by 'if a then b' has one of 2 truth-tables. Write down these 2 truth-tables.

(e) For any proposition $\mathfrak{M} \rightarrow \mathfrak{B}$, the inverse is $\neg\mathfrak{M} \rightarrow \neg\,\mathfrak{B}$, the converse is $\mathfrak{B} \rightarrow \mathfrak{M}$ and the contrapositive is $\neg\,\mathfrak{B} \rightarrow \neg\,\mathfrak{M}$.
(i) Translate symbolically the following proposition:
If it is sunny then Fiona will go for a swim.
(ii) Give in words (1) the inverse (2) the converse and (3) the contrapositive of the proposition in (e)(i) above.
(iii) Using the four propositions involved in (e)(ii) above, find out by truth-tables or otherwise the two pairs of equivalent propositions.

(f) (i) Translate symbolically the following argument:
It is not the case that neither Alex nor Roberta went for a holiday abroad. Therefore Alex or Roberta went for a holiday abroad.
(ii) The implication involved in (f)(i) above is valid as it is a standard implication; what is it called?
(iii) State the duality principle.
(iv) Dualise the implication in (f)(i) above.
(v) Is the resulting implication in (f)(iv) valid? Why?

Section B: Ethics

3. With today's application of biotechnological techniques to alleviate infertility, the ethical issues associated with the beginning of human life have assumed a new dimension. Discuss.

4. Is human life an absolute or a relative value? Discuss in the context of end-of-life decision-making.

Section C: History of Philosophy

5. Outline the novel characteristics of the discipline that was born with the pre-Socratics. Illustrate with reference to different philosophers.

Iddiskuti l-karatteristiċi l-ġodda tad-dixxiplina li twieldet mal-pre-Sokratiċi. Agħmel referenza għal filosfi differenti.

6. Explain the ethical theory of the Stoics.

Spjega t-teorija tal-etika li kienu jsostnu l-Istojċi.