MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

SECOND YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF ARTS IN PHILOSOPHY WITH INFORMATION TECHNOLOGY

MAIN CAMPUS

APH 202: SYMBOLIC LOGIC

Date: 16th June, 2017   Time: 12.00 - 3.00pm

INSTRUCTIONS:

- Answer ANY THREE Questions. All the questions carry 23 and 1/3 marks

1. Using 3 concrete examples, argue the value of special symbols and punctuation.

2. (a) Critically outline the meanings of and symbols for: (i) conjunction; (ii) negation; (iii) disjunction; and (iv) conditional statements and material implication.

   (b) What other words other than "and" and "or" can play conjunctive and disjunctive roles respectively?

3. (a)Use examples to identify 3 techniques used in proving the validity of arguments;

   (b) List the pros and cons of each of the 3 techniques identified in (a) above.

4. Explain the basis of the rule of replacement and illustrate at least 5 rules thereto with concrete examples.

5. Define the argument forms in (a), (b), and (c) below and then use both truth tables and the formal proof of validity to test their validity:

(a) $p \supset q$

            - q

therefore: - p

(b) $p \supset q$

            -p

therefore: - q

(c) $(p \supset q) \lor (r \supset s)$

      (pvr)

therefore: (qvs)

6. With concrete examples, critically explain the errors committed in: (a) the fallacy of affirming the consequent; (b) The fallacy of negating the antecedent.