(B) Construct formal proof of validity for each of the following (any **TWO**) :

(i) $(X)\ (B_x \supset \sim C_x)$

$(\exists_x)\ (C_x \cdot D_x)$

$\therefore\ (\exists_x)\ (D_x \cdot \sim B_x)$

(ii) $(\exists_x)\ (P_x \cdot \sim Q_x)$

$(X)\ (P_x \supset R_x)$

$\therefore\ (\exists_x)\ (R_x \cdot \sim Q_x)$

(iii) $(X)\ (F_x \supset G_x)$

$(\exists_x)\ (F_x \cdot \sim G_x)$

$\therefore\ (\exists_x)\ (G_x \cdot \sim F_x)$. 8

11. Explain the types of definition with suitable examples. 14

12. Explain rules for definition. 14

AP–1304

LL.B. Semester–II (Five Year Degree Course) Examination

PHILOSOPHY—II

(Pattern—2009)

Paper—V

Time—Three Hours] [Maximum Marks—100

Note :—(1) Solve in all **SEVEN** questions including Question No. **1** which is compulsory and carries **16** marks.
(2) All other questions carry **14** marks each.
(3) Figures to right indicate marks.

1. (A) Complete the following :

(i) A statement form that has only true substitution instances is said to be _____.

(ii) (X) is a _____ quantifier.

(iii) '⊃' is a symbol for _____.

(iv) A, B, C, D are called _____. 4

(B) State whether following are true or false :

(i) Statement constant and statement variables are different.

(ii) Antecedent and consequent are parts of implicative statement.

(iii) Validity of an argument depends on its truth-values.

(iv) The principle of excluded middle asserts that every statement is either true or false. 4

(C) Define following terms (any **FOUR**) :

(i) Simple predicate

(ii) Truth functional connectives

(iii) Statement variable

(iv) Argument form

(v) Universal quantifier

(vi) Tautology 8

2. (A) Explain paradoxes of material implication with suitable examples. 10

(B) Argument and argument form. 4

3. Write short notes on :

(i) Quantification method

(ii) Valid argument forms. 14

4. (A) Explain three laws of thoughts with examples. 10

(B) Inconsistency. 4

then our problem is a practical one. The laws are good. Therefore our problem is a practical one. (G, S, D, P).

(ii) If the victim had money in his pockets, then robbery wasn't the motive for the crime. But robbery or vengeance was the motive for the crime. The victim had money in his pockets. Therefore vengeance must have been the motive for the crime. (N, R, V).

(iii) If the litmus paper turns red, then the solution is acid. Hence if the litmus paper turns red, then either the solution is acid or something is wrong somewhere. (R, A ,W). 8

9. (A) Explain quantification rules of EI, UI, UG and EG. 10

(B) Using appropriate quantifier and propositional function, symbolize the following (any **TWO**) :

(i) All that glitters is not gold (G_x, A_x)

(ii) Snake bites re sometimes fatal (S_x, F_x)

(iii) Ambassadors are always dignified (A_x, D_x)

(iv) Reporters are present (R_x, P_x). 4

10. (A) Explain the propositional function. 6

5. (A) Define implicative statement. Explain its truth table. 6

(B) Symbolize the following by using the abbreviations suggested (any **TWO**) :

(i) If Argentina does not mobilize then either Brazil will not protest to the UN or Chile will not call for a meeting of all the Latin American States (A,B,C).

(ii) If Argentina mobilizes then Brazil protest to the UN, then both Chile and the Dominican Republic will call for a meeting of all the Latin American States (A, B, C, D).

(iii) It is not the case that Argentina mobilizes then Brazil will not protest to the UN, and Chile will call for a meeting of all the Latin American States (A, B, C). 8

6. (A) Explain the shorter truth table method of proving invalidity of argument. 6

(B) Use longer truth table method to determine the validity or invalidity of the following arguments (any **TWO**) :

(i) $A \supset B$

$B \supset C$

$\therefore C \supset A$

(ii) $(R \vee S) \supset T$

$T \supset (R \cdot S) / \therefore (R \cdot S) \supset (R \vee S)$

(iii) $(A \vee B) \supset (A \cdot B)$

$\sim (A \vee B) / \therefore \sim (A \cdot B)$. 8

7. (A) Elaborate rules of inference (any **THREE**). 6

(B) Construct a formal proof of validity for the following arguments (any **TWO**).

(i) $(A \vee B) \supset \sim C$

$C \vee D$

$A / \therefore D$

(ii) $Q \supset (R \vee S)$

$(T \cdot U) \supset R$

$(R \vee S) \supset (T \cdot U) / \therefore Q \supset R$

(iii) $W \supset X$

$(W \cdot X) \supset Y$

$(W \cdot X) \supset Z / \therefore W \supset Z$. 8

8. (A) Explain rules of replacement (any **THREE**). 6

(B) Symbolize the following arguments, and construct a formal proof of validity (any **TWO**) :

(i) If the laws are good and their enforcement is strict, then crime will diminish. If strict enforcement of laws will make crime diminish,