

00341

M.A. PHILOSOPHY (MAPY)

Term-End Examination

June, 2015

MPYE-001 : LOGIC

Time : 3 hours

Maximum Marks : 100

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- Note :** (i) *Answer all five questions.*
(ii) *All questions carry equal marks.*
(iii) *Answers to questions 1 and 2 must be in about 500 words each.*
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1. What do you mean by Deductive and Inductive Inferences ? Explain in detail with examples. 20

OR

What is Fallacy ? Explain the fallacy of ambiguity with suitable examples. 20

2. Construct Formal Proof of Validity for the following Argument : 20

$A \Rightarrow B$

$C \Rightarrow B$

$\therefore (A \vee C) \Rightarrow B$

OR

Discuss 'propositions' in detail. Explain the symbolization of A, E, I and O propositions in Predicate Logic. 20

3. Answer **any two** of the following in **not** more than **250** words each :
- (a) Explain the Figure and Mood method of validating categorical syllogisms. **10**
 - (b) List the first nine rules of Inference. **10**
 - (c) Use the method of Indirect Proof to establish the validity of following argument. **10**

$$P \vee (Q \wedge R)$$

$$P \Rightarrow R / \therefore R$$
 - (d) Explain the rule of Existential Generalization. **10**
4. Answer **any four** of the following in **not** more than **150** words each :
- (a) Distinguish between conversion and obversion. **5**
 - (b) Explain Dilemma with an example. **5**
 - (c) Draw the venn diagram for EIO. 3rd figure and check its validity. **5**
 - (d) Use truth table to check the validity of the following argument. **5**

$$P \vee Q$$

$$P$$

$$\therefore \neg Q$$
 - (e) Describe Tautology with an example. **5**
 - (f) What are Logic Gates ? Draw the symbols for basic Logic Gates. **5**

5. Write short notes on **any five** of the following in **not more than 100** words each :
- (a) Square of opposition. 4
 - (b) Material Implication 4
 - (c) Material and Logical equivalences 4
 - (d) Disjunctive syllogism 4
 - (e) Distribution of Terms 4
 - (f) Conditional proof 4
 - (g) Inductive Fallacy 4
 - (h) Truth tables for AND and XOR gates 4
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