

M.A. PHILOSOPHY (MAPY)**Term-End Examination****June, 2022****MPYE-001 : LOGIC***Time : 3 hours**Maximum Marks : 100***Note :**

- (i) Answer all the **five** questions.
- (ii) All questions carry equal marks.
- (iii) Answers to Questions no. 1 and 2 should be in about 500 words each.

1. Explain 9 rules of inference and construct the validity for the following argument using Indirect Proof : 20

$$A \Rightarrow (B \wedge C)$$

$$(B \vee D) \Rightarrow E$$

$$(D \vee A) / \therefore E$$

OR

- Explain the rules of replacement. Construct formal proof of validity for the following argument : 20

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

$$C \vee F \Rightarrow H$$

$$E \wedge \neg D$$

$$E \Rightarrow A / \therefore H \vee J$$

2. What are A, E, I and O propositions ? Explain each of these propositions and explain in detail the nature of contradictory, contrary, sub-contrary and subaltern relations. 20

OR

What is Fallacy ? Distinguish between formal and informal fallacies. Explain various fallacies of relevance. 20

3. Answer any **two** of the following questions in about 250 words each :

(a) Describe the structure of Pure Hypothetical Syllogism with an example. 10

(b) Construct conditional proof for the following argument : 10

$$(A \vee B) \Rightarrow (C \wedge D)$$

$$(D \vee E) \Rightarrow F / \therefore A \Rightarrow F$$

(c) Distinguish between deduction and induction with suitable examples. 10

(d) What is Dilemma ? What are the methods of avoiding Dilemma ? 10

4. Answer any **four** of the following questions in about 150 words each :

(a) In a syllogism, how do you relate the major, minor and middle terms ? 5

(b) Construct truth tables for negation, conjunction, disjunction and implication. 5

- (c) Distinguish between tautology and contradiction with examples. 5
- (d) Explain how truth is related to validity. 5
- (e) If p is true and q is false, then find out the values of the following statements : 5
- (i) $p \Rightarrow (q \Leftrightarrow p)$
- (ii) $\neg p \Leftrightarrow (p \Rightarrow p)$
- (iii) $(p \Rightarrow q) \Leftrightarrow (\neg p \vee q)$
- (f) Write down the assumptions of proving validity. 5

5. Write short notes on any *five* of the following in about 100 words each :

- (a) Figure of a Syllogism 4
- (b) Obversion 4
- (c) Enthymeme 4
- (d) Argumentum Ad Populum 4
- (e) Euler's Diagram 4
- (f) Fuzzy Logic 4
- (g) Bi-conditional 4
- (h) Connotation 4
