

**M. A. PHILOSOPHY
(MAPY)**

**Term-End Examination
June, 2020**

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 Question No. 1 and 2 should
be in about 500 words each.*

1. Explain categorical proposition and square of opposition in detail. 20

Or

Give example for all the kinds of compound proposition and construct truth-tables showing the equivalent forms.

2. State the rules of inference and rules of replacement. 20

Or

What is definition ? Illustrate various types of definitions with suitable examples.

3. Answer any *two* of the following questions in about 250 words each : 10 each

(a) Explain the fallacies and valid moods of mixed hypothetical syllogism.

(b) Explain how symbolic logic is related to, and yet different from classical logic.

(c) Use C. P. to prove the validity of the following arguments :

$$(i) \quad A \Rightarrow (B \Rightarrow C)$$

$$B \Rightarrow (C \Rightarrow D) / \therefore A \Rightarrow (B \Rightarrow D)$$

$$(ii) \quad (C \vee D) \Rightarrow (E \Rightarrow F)$$

$$\{E \Rightarrow (E \wedge F)\} \Rightarrow G$$

$$G \Rightarrow \{ \neg H \vee H \} \Rightarrow (C \wedge H) / \therefore C \equiv G$$

- (d) What is figure and mood ? Explain all four types of figures with suitable examples.

4. Answer any *four* of the following questions in about 150 words each : 5 each

(a) Use Venn diagram technique to test the following :

AAA in IVth Figure.

(b) Construct formal proof of validity for the following arguments :

(i) $\neg B$

(ii) $\neg D$

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

(iv) $K / \therefore \neg C \wedge (K \wedge \neg A)$

(c) What is the scope of logic ? Explain.

(d) Explain two kinds of fallacy of accident.

(e) What is De Morgan's law ? Describe.

(f) Describe conversion and obversion.

5. Write short notes on any *five* of the following in about 100 words each : 4 each

(a) Denotation and Connotation

(b) Weakened and Strengthened Moods

- (c) Material implication
- (d) Argumentum and Baculum
- (e) Assumptions and advantages of proving invalidity
- (f) Existential Generalization
- (g) Multiply General Proposition
- (h) Fuzzy Logic