00314

M.A. PHILOSOPHY (MAPY)

Term-End Examination

June, 2018

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. Write an essay on the distribution of terms. 20

OR

Explain the salient features of Aristotelian logic 20
and symbolic logic.

2. State the Rules of Inference and the Rules of 20
Replacement.

OR

Explain the Rules of Quantification in detail. 20

3. Answer **any two** of the following in **not** more than
250 words each :

(a) Distinguish between truth and validity. 10
Give examples to show that truth and
validity are independent.

(b) Construct truth tables for all kinds of 10
truth-functionally compound proposition.

(c) Represent traditional square of opposition   **10**
in terms of quantifiers. Give an example for
each opposition.

(d) Define logic gate. Write the graphic symbols   **10**
and truth-tables for the gates.

4. Answer **any four** of the following in **not** more than
150 words each :

(a) Test the logical status of the following   **5**
argument through Venn diagram.
All scientific theories are empirical.
All scientific theories are provable.
∴ Some provable are empirical.

(b) Test the logical status of the following   **5**
argument using reduction method and
Boolean analysis. All planetary orbits are
elliptic. All elliptic figures are geometric.
∴ Some geometric figures are planetary
orbits.

(c) Construct proof for the following arguments.   **5**
(i) $\neg B$
(ii) $\neg D$
(iii) $(A \Rightarrow B) \wedge (C \Rightarrow D)$
(iv) $k / \therefore \neg C \wedge (K \wedge \neg A)$
(v) $A \Rightarrow B$
(vi) $\neg A$
(vii) $C \Rightarrow D$
(viii) $\neg C$
(ix) $(K \wedge \neg A)$
(x) $\therefore \neg C \wedge (K \wedge \neg A)$

(d) What do you mean by Figure and Mood ?   **5**

(e) Describe disjuctive syllogism with an   **5**
example.

(f) Distinguish between 'Proposition' and   **5**
'Sentence' with examples.

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

   (a) Contrary and Contradictory   4

   (b) Immediate Inference   4

   (c) Conditional and Biconditional   4

   (d) Argumentum ad Populum   4

   (e) Hypothetical Proposition   4

   (f) Argumentum ad Ignorantiam   4

   (g) Meaning of I.P.   4

   (h) Multi-value logic   4

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