G – 4369

Reg. No. : ....

Name : ....

Second Semester M.A. (Philosophy) Degree Examination, July 2019

PY 223 : SYMBOLIC LOGIC

(2017 Admn onwards)

Time : 3 Hours

Max. Marks : 75

SECTION – A

Answer any **five** questions. Each question carries **6** marks. Answer should be not less than **400** words :

1. Explain the features of classical logic and symbolical logic.

2. What is Material implication? Analyse paradox of Material implication.

3. Write a note on conjunction, disjunction and material equivalence along with their truth tables.

4. Write a note on Argument and Argument form.

5. What is Truth and validity?

6. Describe the method of Indirect proof with example.

7. Test the validity of the given argument by Shorter truth table technique.

$[S \lor (Q \lor R) \supset Q$

$\sim Q$

$\sim R$

$\therefore S$

8. State the Nine rules of inference and discuss their role in method of deduction.

(5 × 6 = 30 Marks)

SECTION – B

Answer any **three** questions. Each question carries **15** marks. Answers should not be less than 1000 words.

9. Analyse the preliminary rules of Quantification and examine how they can apply in the method of formal proof of validity.

10. Describe the method of Conditional proof and examine its significance in formal proof of validity along with example.

11. Define statement form and explain the nature of different statement forms along with their examples and respective truth tables.

12. Construct formal proof of validity of the following arguments

(a) $T \lor S$
     $\sim T$
     $(S \lor S) \supset (\sim P \lor R)$
     $\therefore \sim R \supset \sim P$

(b) $S \supset (T \supset U)$
     $T \supset (U \supset V)$
     $\therefore S \supset (T \supset V)$

13. Check the validity of following arguments by Truth Table method :

(a) $A \supset (B \vee C)$

 B

 $\therefore C \vee A$

(b) $(P \supset Q) \cdot (P \supset R)$

 P

 $\therefore Q \vee R$

(3 × 15 = 45 Marks)

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