



QP CODE: 24027356



24027356

Reg No :

Name :

**B.A DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE
EXAMINATIONS, OCTOBER 2024**

Third Semester

B.A Philosophy Model I

Core Course - PL3CRT03 - SYMBOLIC LOGIC

2017 Admission Onwards

37F5D6B6

Time: 3 Hours

Max. Marks : 80

Instructions to Private candidates only: This question paper contains two sections. Answer SECTION I questions in the answer-book provided. SECTION II, Internal examination questions must be answered in the question paper itself. Follow the detailed instructions given under SECTION II

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. What is inference?
2. Distinguish between Truth and Validity.
3. What is meant by artificial language?
4. Disjunction.
5. State the rule of Material Implication.
6. If A, B and C are True Statements and X, Y and Z are False statements, state whether the following statement is true or false .

$$\sim \{ \sim [\sim (A \bullet \sim X) \bullet \sim A] \bullet \sim X \}$$

7. Draw the Truth table of a Contradictory statement.
8. What is meant by Contingent Statement form?
9. What is meant by Logical Equivalence?
10. Define Formal Proof of Validity.
11. State the Rule of Inference by which the Conclusion is deduced from the Premises.





$$A \bullet C$$

$$\therefore (A \bullet C) \vee D$$

12. Write a short note on Disjunctive syllogism.

(10×2=20)

Part B

Answer any **six** questions.

Each question carries **5** marks.

13. Give a short account on the relation between logic and language.
14. Explain briefly three basic functions of language.
15. Examine the difference between Truth Function and Truth Value.
16. Write short account on Material Equivalence .
17. Write short essay on Arguments .
18. What is meant by Truth Table? How can we construct truth table for a 3 variable statement form.
19. Use truth tables to determine the validity or invalidity of the following argument forms.

$$(p \supset q) \bullet (r \supset s)$$

$$P \vee r$$

$$\therefore q \vee s$$

20. Elucidate structure of Formal Proof of Validity.
21. Write 'Justification of each statement which is not a given on.

$$1. A \bullet B$$

$$2. (A \vee E) \supset F / \therefore A \bullet F$$

$$3. A$$

$$4. A \vee E$$

$$5. F$$

$$6. A \bullet F$$

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **15** marks.

22. Explain the development of Symbolic logic from traditional logic. State the advantages of Symbolization.
23. Explain determination of Truth values in Truth functionally Compound Statements





24. Write an essay on different types of Statement forms

25. 1. Prove the Invalidity of the following argument using Shorter Truth table Method

$$1. T \equiv U$$

$$U \equiv (V \bullet W)$$

$$V \equiv (T \vee X)$$

$$T \vee X$$

$$\therefore T \bullet X$$

$$1. \quad 2. (O \vee P) \supset Q$$

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

$$Q \supset O \sim S \supset P)$$

$$(S \supset O) \supset \sim R$$

$$\therefore P \equiv Q$$

$$1. \quad 3. X \equiv (Y \supset Z)$$

$$Y \equiv (\sim X \bullet \sim Z)$$

$$Z \equiv (X \vee \sim Y)$$

$$Y$$

$$\therefore X \vee Z$$

(2×15=30)

