Reg. No. : ....

Name : ....

II Semester M.A. Degree (C.B.S.S. – Reg./Supple./Imp.)
Examination, April 2023
(2019 Admission Onwards)
PHILOSOPHY
PHI2C05 : Symbolic Logic

Time : 3 Hours

Max. Marks : 60

PART – A

Answer **any one** question. Answers should **not** exceed **800** words. **Each** answer carries **15** marks :

1. Elaborate the Preliminary quantification rules.

2. Write an essay on Attributes of Formal Deductive system.

(1×15=15)

PART – B

Answer **any three** questions. Answers should **not** exceed **400** words. **Each** answer carries **10** marks :

3. Briefly explain material equivalence and logical equivalence.

4. Construct formal proof of validity for following arguments :

   a) $(Q \vee \sim R) \vee S$
     $\sim Q \vee (R \cdot \sim Q)$
     $\therefore R \supset S$

   b) $A \supset \sim (B \supset C)$
     $(D \cdot B) \supset C$
     D
     $\therefore \sim A$

P.T.O.

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5. Analyze shorter truth table technique and evaluate advantage of this method.

6. Distinguish between Singular and General proposition.

7. Describe the nature of binary relations. Elaborate the classification of binary relations regarding their characteristics.

(3×10=30)

PART – C

Answer **any three** questions. Answers should **not** exceed **200** words. **Each** answer carries **5** marks :

8. Bring out the advantages of Symbolization.

9. Demonstrate the rule of indirect proof.

10. Define statement form and bring out different kinds of statement forms.

11. Write note on De-Morgan's theorems.

12. Construct truth table for the following arguments and check the validity of them :

   a) $A \vee B$
     A
     $\therefore \sim B$

   b) $(A \vee B) \supset (A \cdot B)$
     $A \vee B$
     $\therefore A \cdot B$

(3×5=15)