K26P 1314

Reg. No. : .....

Name : .....

Second Semester M.A. Degree (C.B.S.S. – Supplementary) Examination, April 2026
(2022 Admission)
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. Write an essay on the attributes of formal deductive systems.
2. Bring to light the preliminary quantification rules. **(1×15=15)**

PART – B

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

3. Explain truth functional compound statments and give the truth tables for truth functional connectives and modifier.
4. Give the rules of inference and replacement.
5. Use truth tables to determine the validity or invalidity of the following argument :

   If Alice is elected class President, then either Betty is elected Vice-President or Carol is elected Treasurer. Betty is elected Vice-President. Therefore, if Alice is elected class President, then Carol is not elected Treasurer.
6. Give the formal proof of validity for the following arguments :

   a) (A.B)⊃[A⊃(D.E)]

   (A.B).C

   DvE

P.T.O.

   b) A⊃B

   C⊃D

   ~Bv~D

   ~~A

   (E.F)⊃C

   ~(E.F)
7. Distinguish between tautologous, contradictory and contingent statement forms with suitable examples. **(3×10=30)**

PART – C

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

8. Explain the paradoxes of material implication.
9. Bring out the advantages of symbolization.
10. Explain the shorter truth table technique with an example.
11. Bring out the characteristics of multiply general propositions.
12. Apply indirect proof to arrive at the formal proof of validity of the following argument :

    A⊃(B.C)

    (BvD)⊃E

    DvA

    E **(3×5=15)**
