



M 27262

Reg. No. :

Name :

II Semester M.A./M.Sc./M.Com. Degree (Reg./Sup./Imp.)
Examination, March 2015
(2014 Admn. Onwards)
PHILOSOPHY
PHI 2C05 : 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. Explain symbolic logic. Bring out the advantages of symbolization.
2. Explore the attributes of relations. (1x15=15)

PART - B

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

3. Distinguish between simple and compound statements.
4. Write a short essay on conditional statements.
5. Determine the validity or invalidity of the following argument forms with the help of truth table method :

a) $p \vee q$	b) $(p \supset q) \cdot (p \supset v)$
p	p
$\therefore \sim q$	$\therefore q \vee r.$

6. Demonstrate universal instantiation and existential instantiation.
7. Prove the following argument is invalid.

$$(x) (\exists y) (Fx \equiv Gy)$$

$$\therefore (\exists y) (x) (Fx \equiv Gy).$$

(3x10=30)
P.T.O.



PART - C

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

8. Elucidate logistic systems.
9. Using truth table method determine the validity or invalidity of following arguments :
If the seed catalog is correct, then if the seeds are planted in April, then the flowers bloom in July; The flowers do not bloom in July. There for, if the seeds are planted in April, then the seed catalog is not correct.
10. Construct truth table for tautology.
11. Demonstrate commutation and association.
12. Give the 'justification' for the following formal proof of validity :

$$1) (G \supset H) \supset (I \equiv J)$$

$$2) K \vee \sim(L \supset M)$$

$$3) (G \supset H) \vee \sim K$$

$$4) N \supset (L \supset M)$$

$$5) \sim(I \equiv J) \mid \therefore \sim N$$

$$6) \sim(G \supset H)$$

$$7) \sim K$$

$$8) \sim(L \supset M)$$

$$9) \sim N.$$

(3x5=15)