TDC (CBCS) Even Semester Exam., 2024

PHILOSOPHY

(4th Semester)

Course No. : PHIHCC–403T

(Logic—II)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

UNIT—I

1. Answer any *two* of the following questions : 2×2=4

(a) State the law of contradiction.

(b) What is the law of excluded middle?

(c) What is Hetvābhāsa?

2. Answer any *one* of the following questions :

(a) What is existential import? Explain its impact on traditional square of opposition. 2+8=10

(b) Name different kinds of Hetvābhāsa. Explain with example any two of them. 2+8=10

UNIT—II

3. Answer any *two* of the following questions : 2×2=4

(a) State the rule of commutation (Com).

(b) State the rule of Distribution (Dist).

(c) What is indirect proof?

4. Answer any *one* of the following questions :

(a) Construct formal proof of validity : 5×2=10

(i) $G \supset F$
$G \supset E \ / \therefore G \supset (F \cdot E)$

(ii) $Z \supset \sim Y$
$\sim (X \cdot \sim Z) \ / \therefore X \supset \sim Y$

(b) Construct indirect proof : 5×2=10

(i) $(A \vee B) \supset (C \cdot D)$
$C \supset \sim D \ / \therefore \sim A$

(ii) $(R \vee S) \supset T$
$(P \vee Q) \supset T$
$R \vee P \ / \therefore T$

UNIT—III

5. Answer any *two* of the following questions : 2×2=4

(a) In symbolising universal proposition, why do we use universal quantifier 'x'?

(b) What is existential quantifier?

(c) Mention any two strategies for constructing conditional proof.

6. Answer any *one* of the following questions :

(a) Symbolize the following (by quantifiers) : 2×5=10

(i) A snake is dangerous.

(ii) Few politicians are honest.

(iii) No dolphins are fish.

(iv) Tigers are both beautiful and dangerous.

(v) All politicians are either rich or foolish.

(b) Construct formal proof of validity : 5×2=10

(i) $(x)(Kx \supset Nx)$
$(x)(Nx \supset \sim Hx) \ / \therefore (x)(Hx \supset \sim Kx)$

(ii) $(x)(Nx \supset Kx)$
$(\exists x)(Nx \cdot Hx) \ / \therefore (\exists x)(Hx \cdot Kx)$

UNIT—IV

7. Answer any *two* of the following questions : 2×2=4

   (a) Give a concrete example of the method of concomitant variation.

   (b) State any two defects of the method of agreement.

   (c) Mention any two canons or principles of elimination.

8. Answer any *one* of the following questions :

   (a) Explain with examples the method of difference. State any two advantages of this method. 8+2=10

   (b) Write short notes on the following : 5+5=10

      (i) Fallacy of non-observation

      (ii) Fallacy of illicit generalization

UNIT—V

9. Answer any *two* of the following questions : 2×2=4

   (a) What is explanatory hypothesis?

   (b) What is working hypothesis?

   (c) Three coins are tossed together. What is the probability of getting at least one head?

10. Answer any *one* of the following questions :

   (a) Explain with examples proofs or conditions of a legitimate hypothesis. 10

   (b) Explain with examples different stages of scientific enquiry. 10

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