



**2022/TDC (CBCS)/EVEN/SEM/
PHIHCC-403T/047**

TDC (CBCS) Even Semester Exam., 2022

PHILOSOPHY

(Honours)

(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*

SECTION—A

Answer any *ten* of the following questions :

2×10=20

1. What is the Law of Excluded Middle?
2. What are the laws of thought?
3. How many laws are formulated by Aristotle?

Illustrate the Law of Identity.

1+1=2

(2)



4. State the rules of transposition and exportation.
5. What is indirect proof? What do we assume in this method?
6. What is formal proof of validity?
7. What is Universal Quantifier?
8. In symbolization of particular proposition, why do we use Existential Quantifier?
9. Mention any two strategies that we adopt for constructing conditional proof.
10. Name Mill's five Experimental Methods.
11. Why are Mill's Experimental Methods called Methods of Elimination?
12. What is the Fallacy of Non-observation?
13. Mention different forms of hypothesis.
14. State any two uses of hypothesis.
15. "Two coins are tossed." What is the probability of getting at least one head?

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(Continued)

(3)

SECTION—B

Answer any five of the following questions : $10 \times 5 = 50$

16. Briefly explain existential import. Explain its impact on traditional square of opposition. $5+5=10$
17. What is Hetvābhāsa? Explain briefly any two kinds of Hetvābhāsa (fallacies). $2+8=10$
18. Construct formal proof of validity (any two) : $5 \times 2 = 10$
 - (a) $(Q \vee P) \supset \sim O$
 $O / \therefore \sim Q$
 - (b) $A \supset Z$
 $A \vee Z / \therefore Z$
 - (c) $T \supset \sim S$
 $\sim (T \cdot S) / \therefore R \vee \sim S$
19. For each of the following arguments, construct an indirect proof : $5+5=10$
 - (a) $(A \vee B) \supset (C \cdot D)$
 $C \supset \sim D / \therefore \sim A$
 - (b) $(R \vee S) \supset T$
 $(P \vee Q) \supset T$
 $R \vee P / \therefore T$

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(Turn Over)

(4)



20. Symbolize the following (by quantifiers) : $2 \times 5 = 10$

- (a) Nothing is permanent.
- (b) Only teachers are invited.
- (c) None but citizens are eligible to vote.
- (d) All bananas and mangoes are sweet.
- (e) Not all dogs are mammals.

21. Use conditional proof to prove the validity of the following arguments : $5 + 5 = 10$

- (a) $A \supset (B \cdot C)$
 $(B \vee C) \supset I / \therefore A \supset I$
- (b) $F \supset E$
 $(F \cdot E) \supset R / \therefore F \supset R$

22. Explain Mill's Method of Difference with examples. Is it a method of proof? $8 + 2 = 10$

23. Point out the fallacies involved in the following arguments : $2 \times 5 = 10$

- (a) A magician moves his stick whenever he shows magic. So the moving of the stick is the cause of the magic.

(5)

- (b) By observing one after another some white horses, I infer that 'All horses are white'.
- (c) Gunpowder is the cause of explosion.
- (d) Winter is the invariable antecedent to spring so the former is the cause of the latter.
- (e) Ram appeared at the examination by wearing an amulet and passed. So the wearing of the amulet is the cause of his success.

24. What are the criteria for evaluating hypothesis? Explain each of them with examples. 10
25. Discuss briefly the role of hypothesis in scientific enquiry. 10
