

63/1 (SEM-5) DSE1/PHLHE5016

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(Held in 2023)

PHILOSOPHY

Paper : PHLHE5016

(**Philosophy of Logic**)

Full Marks : 80

Pass Marks : 32

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Choose the correct answer : 1×6=6
- (a) A deductive argument is concerned with
- (i) formal truth only
 - (ii) material truth only
 - (iii) Both formal and material truth
 - (iv) None of the above
- (b) Logically necessary statements are
- (i) synthetic statement
 - (ii) analytic statement
 - (iii) Both synthetic and analytic statement
 - (iv) Neither synthetic nor analytic statement

- (c) The book authored by P. F. Strawson is
- Introduction to Symbolic Logic*
 - Introduction to Logic*
 - Introduction to Logical Theory*
 - Introduction to Formal Logic*
- (d) An implicative truth function ($p \supset q$) is false under the condition of
- if both the variables are true
 - if both the variables are false
 - if the antecedent variable is true and the consequent variable is false
 - if the consequent variable is true and the antecedent variable is false
- (e) According to Strawson, the truth-functional statement is
- an interpreted system
 - an ideal system
 - a coherent system
 - None of the above
- (f) According to Strawson, the task of a formal logician is limited by
- generality
 - logical form
 - system
 - All of the above

2. Answer the following questions : $2 \times 5 = 10$
- What is 'Second Order Vocabulary'?
 - What are the variables?
 - Write the entailment of the statement 'X is a younger son'.
 - Define contradictory statement.
 - What does the word 'theorem' mean in logic?
3. Answer the following questions (any six) : $5 \times 6 = 30$
- Distinguish between inductive and deductive reasoning.
 - How many logical constants are there in propositional calculus? Write their names with symbols.
 - Briefly write about the nature of philosophy of logic.
 - Write a short note on 'generality'.
 - What is truth function? Explain the basic truth functions with their truth tables.
 - Explain the concept of 'system' in the light of Strawson.
 - Explain in brief about the nature of formal logic.

(4)

- (h) What are the three rules of derivation? Define each one of them.
- (i) Briefly write about the nature of reasoning.

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

10×2=20

- (a) Construct truth table of the following compound expressions and determine whether they are tautologies, contradictory and contingent :

5+5=10

(i) $(p \vee q) \cdot (p \equiv q)$

(ii) $\sim p \supset \sim (p \cdot q)$

- (b) What is deductive system of truth function? Explain in brief.

3+7=10

- (c) Explain interdefinability of logical constants with the help of truth table.

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

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- (a) How does P. F. Strawson refute the identification of logical constants with ordinary words? Discuss.

- (b) Explain truth table method as a method of testing the validity of argument.
