UG (CBCS) Odd Semester Exam., 2018

PHILOSOPHY

(1st Semester)

Course No. : PHIGEC-101T/PHPDSC-101T

(Logic)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer **all** questions

UNIT—I

1. Answer any *four* questions : 1×4=4

(a) The word 'Logic' is derived from which Greek word?

(b) What kind of science Logic is?

(c) "Logic is concerned with both formal truth and material truth." Is this statement true?

(d) Can validity or invalidity be predicated of proposition?

(e) What do you mean by the term 'validity'?

(Turn Over)

2. Answer any *one* question :

(a) What is an argument form?

(b) When an argument is invalid?

3. (a) Explain the nature and scope of Logic.

Or

(b) Explain the relation between truth and validity with examples.

UNIT—II

4. Answer any *four* questions :

(a) How many terms are there in a proposition?

(b) What is the symbol of universal negative proposition?

(c) Give a symbolic example of particular affirmative proposition.

(d) Which term is distributed in particular negative proposition?

(e) Illustrate class-membership proposition.

(3)

Answer any *one* question :

(a) How many kinds of oppositions are there in Aristotelian square of opposition? Name them. 2

(b) What is a general proposition?

(a) What is simple proposition? What are its different forms? Explain them with examples. 1+2+5=8

Or

(b) Explain traditional square of opposition with examples. 8

UNIT—III

Answer any *four* questions : 1×4=4

(a) What is immediate inference?

(b) State one rule of conversion.

(c) Convert the statement, "No men are perfect."

(d) How many valid moods are there in the Third Figure?

(e) Name one valid mood of First Figure.

(4)

Answer any one question :

(a) Obvert the following :

(i) All men are perfect.

(ii) Some men are wise.

(b) Contrapose the statement, "No reptiles are warm blooded animals."

9. (a) What is standard form categorical syllogism? State Copi's six rules of categorical syllogism and name the fallacies arising out of violation of these rules. 2+6=

Or

(b) Test the validity or invalidity of the following arguments by means of Venn diagram technique : 4+4=

(i) Some reformers are philosophers, so some idealists are philosophers, since all reformers are idealists.

(ii) No Indians are Greeks but some Indians are Aryans, therefore, some Greeks are not Aryans.

UNIT—IV (5)

Answer any *four* questions : 1×4=4

(a) What is the symbol for negation?

(b) What is ideogram?

(c) What is variable?

(d) What is the symbol of implication?

(e) If p is true, q is false, then what is the truth value of $p \cdot q$?

1. Answer any *one* question : 2

(a) Symbolize the following sentences :

(i) If papers are not easy, students will find it difficult.

(ii) Either India will win the match or Pakistan will.

What is truth function?

12. (a) Use truth table to characterize the following statement forms as tautologous, contradictory or contingent : 4+4

(i) $[(p \supset q) \cdot (q \supset r)] \supset (p \supset r)$

(ii) $p \supset [q \vee (p \equiv r)]$

Or

(b) Use truth table to determine the validity or invalidity of the following argument forms : 4+4

(i) $p \supset q$
$q \supset p$
$\therefore p \vee q$

(ii) $(p \vee q) \supset (p \cdot q)$
$p \vee q$
$\therefore p \cdot q$

UNIT—V

13. Answer any *four* questions : 1×4=

(a) How many rules of inference are there?

(b) State the rule of Modus Ponens.

(c) State the rule of disjunctive syllogism.

(d) State the rule of conjunction.

(e) State the rule of Modus Tollens.

Answer any one question :

State the rule of hypothetical syllogism.

State the rule of constructive dilemma.

(i) State the justification for each line that is not a premise for the following arguments : 3

1. $N \supset O$
2. $(N \cdot O) \supset P$
3. $\sim(N \cdot P) / \therefore \sim N$
4. $N \supset (N \cdot O)$
5. $N \supset P$
6. $N \supset (N \cdot P)$
7. $\sim N$

(ii) Construct formal proof of validity for the following argument : 5

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

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