2019

(April)

PHILOSOPHY

(Elective/Honours)

(Logic)

(PHIL : 11)

Marks : 75

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer *any* **five** questions

1. What is logic? Is logic a science or an art, or both? Discuss. 5+10=15

2. Examine briefly the five kinds of definitions. 15

3. What are the fundamental laws of thought in logic? Examine the different laws of thought. 5+10=15

4. Examine and explain the fallacies of presumption with examples. 15

5. What do you mean by categorial syllogism? Explain different rules of categorical syllogism. 6+9=15

6. How is the truth of a proposition related to the validity of an argument? Discuss in detail with the help of illustration. 10+5=15

7. Write short notes on any *three* of the following : 5×3=15

   (a) Soundness of an argument

   (b) Dictum de omni et nullo as the first principle

   (c) Fallacy of ambiguity

   (d) Concept of Denotation and Connotation

   (e) Classification of propositions

8. Explain the functioning of the logical constants and variables. Describe logical connectives with examples. 10+5=15

9. Symbolize any *five* of the following : 3×5=15

   (a) Moon and stars both will rise in the sky only if it is not day.

   (b) Either Mary or Lilly will win the race but they will not both win the race.

(Continued)

   (c) Ed wins first prize unless Fred does not win second prize.

   (d) It will rain only if the sky is cloudy and the weather is not windy.

   (e) If Alice is elected President then it is not the case that neither Betty is elected vice-President nor Carol is elected treasurer.

   (f) If weather is warm and the sky is clear then either we go swimming or we go boating. It is not the case that if we do not go swimming then the sky is not clear. Therefore, either the weather is warm or we go boating.

   (g) If the cost of living rises or government revenues increase, then salary increase will be granted. No salary increase will be granted. Therefore, government revenue will not increase.

10. Construct truth tables for any *three* of the following and find out whether they are tautologous, contradictory or contingent : 5×3=15

   (a) $\sim p \supset \sim q$
   $\sim q \; / \therefore p$

   (b) $p \supset (q \cdot r)$
   $\sim q \; / \therefore r \supset \sim p$

(Turn Over)

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

(d) $p \supset (p \cdot q)$

(e) $\sim(p \vee q) \equiv (\sim p \cdot \sim q)$

(f) $\sim p\,(p \supset q) \supset p$

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