2 0 1 7

(April)

PHILOSOPHY

(Elective/Honours)

(Logic)

(PHIL : 21)

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. What do you understand by denotation and connotation of terms? How do they vary inversely? Discuss.   5+10=15

3. Explain and examine the rules for definition by genus and difference.   15

(Turn Over)

4. What is a proposition? Explain the distinction among sentence, judgement and proposition. 5+10=15

5. What is categorical syllogism? Explain briefly the rules of categorical syllogism. 5+10=15

6. What are the fundamental laws of thought in logic? Why are they called fundamental? Discuss. 10+5=10

7. Explain briefly each of the following *five* types of fallacies with examples : 3×5=15

(a) Argumentum ad ignoration

(b) Argumentum ad hominem

(c) Petitio principii

(d) Fallacy of accent

(e) Argumentum ad populam

8. Write short notes on any *two* of the following : 7½×2=15

(a) Classification of propositions

(b) Logical constants and variables

(c) Kinds of definition

(d) Truth and validity

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

(a) A State will develop only if there is peace.

(b) It is not the case that neither John nor David wins their conference championship.

(c) If George and David both do not win their elections, then Mary and Sita both do not win their elections.

(d) If all men are mortal and Socrates is a man, then Socrates is mortal.

(e) If Alice is elected Class President, then if Betty is elected Vice-President, then Carol is elected Treasurer.

(f) If you work hard, then you will gain and live happily.

(g) If John joins the tournament, then either he will win or lose.

(h) You will definitely achieve success if and only if you work hard.

10. Construct the truth tables for any *three* of the following statement forms, and determine those as tautologous, contradictory or contingent : 5×3=15

(a) $\{[(p \cdot q) \vee r] \cdot \sim r\} \supset (p \cdot q)$

(b) $[p \supset (p \supset q)] \supset q$

(c) $[(p \supset q) \cdot (\sim p \vee r)] \supset (p \supset r)$

(d) $(\sim p \cdot \sim q) \supset (r \vee p)$

(e) $\{[(p \supset q) \vee \sim r] \cdot (\sim p \vee \sim r)\} \supset (q \cdot r)$

★ ★ ★