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(December)

FYUP : 3rd Semester Examination

MAJOR

PHILOSOPHY

(Logic)

PHI–200

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 in detail the different laws of thought.   5+10=15

4. What are formal fallacies? Explain three of the formal fallacies briefly. 5+10=15

5. State and explain different rules of categorical syllogism. 15

6. What is a proposition? Distinguish it from sentence and judgement. 5+10=15

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

8. Discuss the relation between truth and validity. Can there be valid argument with false premise? 10+5=15

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

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

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

   (c) Either Mary or Lily will win the race but they will not both win the race.

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

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

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

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

   (b) $p \supset q$
   $\sim q$
   $\therefore \sim p$

   (c) $p \supset q$
   $\sim p$
   $\therefore \sim q$

   (d) $\sim p \supset \sim q$
   $\sim q$
   $\therefore p$

   (e) $p \vee q$
   p
   $\therefore q$

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