

(b) P v Q

P.R / $\therefore \sim Q$

[This question paper contains 8 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 7430

I

Unique Paper Code : 62101135

Name of the Paper : Introduction to Logic (In lieu
of Language)

Name of the Course : B.A. (Prog.) Philosophy

Semester : I

Duration : 3 Hours

Maximum Marks : 75

Instructions for Candidates1. Write your Roll. No. on the top immediately on receipt
of this question paper.2. Attempt **All** questions.1. Attempt **any two** of the following: (2x5=10)(a) Explain the fundamental difference between
deductive and inductive arguments with
examples.

(b) Explain the relationship between truth and validity.

(c) State the difference between a sentence and a proposition.

2. Do any one of the following: (5)

(a) What is meant by distribution of terms? Explain which terms are distributed in A, E, I and O propositions.

(b) Explain and illustrate all logical relationships between categorical propositions through traditional square of opposition.

3. If "All men are thinkers." is true, then what can be inferred about the truth or falsity of its opposite propositions. (6)

4. Reduce the following sentences into their standard categorical form: (any four) (4x1.5=6)

11. Use truth table method to test the validity or invalidity of any one of the following arguments: (5)

$$(a) (P \supset Q) \cdot R \\ \sim R / \therefore Q$$

$$(b) P \supset Q \\ Q \supset R / \therefore P \vee R$$

12. Test the validity or invalidity of the following arguments form using shorter truth table **Method. (any one)** (5)

$$(a) (p \vee q) \cdot (p \cdot q) \\ p \cdot q \\ \therefore p \vee q$$

- (e) Ravi is talented but he is humble. (T, H)
- (f) You will improve if you practice regularly.
(I, P)
9. If A, B and C are true and X, Y and Z are false then what will be truth value of following: (any two)

(3x2=6)

- (a) $(\sim A \vee B) \supset Z$
- (b) $(A \supset \sim B) \supset X$
- (c) $(A \vee B) \cdot (Y \cdot \sim C)$
10. Determine the logical status (tautology etc.) of the following through truth table method: (any one) (5)

- (a) $q \supset [r \cdot (q \vee p)]$
- (b) $p \supset (q \vee r)$

- (a) Only brave people join the army.
- (b) Not all fruits are edible.
- (c) Most devices are battery-operated.
- (d) Every child is not obedient.
- (e) Few players are healthy.
- (f) Soldiers are never coward.
5. Do the Conversion, Obversion and Contraposition of any two of the following: (8)
- (a) No wolves are herbivores.
- (b) Some insects are pollinators.
- (c) All farmers are workers.

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6. Arrange the following arguments in the Standard Form Categorical Syllogism and also mention its Figure and Mood: (any two) (2×3=6)

(a) All birds are vertebrates; hence, all sparrows are birds, as all sparrows are vertebrates.

(b) Some cars are electric vehicles, and all electric vehicles are eco-friendly; therefore, some cars are eco-friendly.

(c) Some reformers are fanatics. So some idealists are fanatics, since all reformers are idealists.

7. Test the validity/invalidity of the following by method of Six Syllogistic Rules: (any two) (2×4=8)

(a) AAI-3

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(b) EEO-1

(c) AOO-2

(d) AAA-4

8. Symbolize the following: (any five) (5)

(a) You will achieve your goals only if you stay focused. (A, F)

(b) We cannot pass the exam unless we study well. (E, S)

(c) Neither Arjun nor Karan will participate. (A, K)

(d) Either Mike or John will attend the meeting. (M, J)

P.T.O.