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PHILOSOPHY

( Major )

Paper : 1.1

( Logic-I )

Full Marks : 80

Time : 3 hours

*The figures in the margin indicate full marks for the questions*

1. Answer the following : 1×10=10

(a) Is it true that 'Logos' means 'thought as expressed in language'?

(b) "Logicians are not interested in the actual process of reasoning, but rather with the correctness of the completed reasoning process." Do you consider it to be true?

(c) Is an argument a mere collection of propositions?

(d) State when a conditional statement is false.

- (e) Under what condition, an equivalence function is true?
- (f) Is truth-table method a decision procedure?
- (g) How many kinds of propositions are there according to the modern classification of propositions?
- (h) Give an example of subjectless proposition.
- (i) State the name of that kind of proposition which is about classes.
- (j) Is the statement— If  $A = B$  and  $B = C$ , then  $A = C$  —true for all sets  $A$ ,  $B$  and  $C$ ?

2. Answer very briefly :

2×5=10

- (a) Give an example of an argument form.
- (b) What is truth-value?
- (c) How do you define a simple proposition?
- (d) What is an empty or null set?
- (e) What do you mean by difference of sets?

3. Answer briefly (any four) :

5×4=20

- (a) Is there a connection between the validity or invalidity of an argument and the truth or falsehood of its premises and conclusion? Explain the relation between truth and validity.

- (b) What do you mean by logical constants?
- (c) What do you understand by propositional variables?
- (d) How do you explain the relation between sentence and proposition?
- (e) How do you distinguish between subject-predicate proposition and class-membership proposition?
- (f) What do you know about the universe of discourse?

4. Bring out fully the nature of logic. 10

*Or*

Explain the nature of argument. How do you distinguish between argument and argument form? 4+6=10

5. What do you mean by a truth-function? Explain the nature of conjunctive and disjunctive truth-functions with examples, giving truth-table for each of them. 2+4+4=10

*Or*

What is a truth-table? Find out which of the following are tautologies by using the truth-table method : 2+4+4=10

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

(b)  $\sim \{ (p \vee q) \equiv (\sim p \cdot \sim q) \}$

6. What is a compound proposition? Explain the nature of conjunctive and implicative propositions with suitable examples.  $2+4+4=10$

Or

Distinguish between the following :  $5+5=10$

- (a) Singular and General propositions
  - (b) Simple and Compound propositions with suitable examples
7. Define a set. Explain the following :  $2+4+4=10$

- (a) Set intersection
- (b) Set union

Or

What is a set? Symbolise the following propositions by means of set notations :  $2+8=10$

- (a) Aristotle is a logician.
- (b) All bananas are fruits.
- (c) No cows are horses.
- (d) Some students are sincere.

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PHILOSOPHY

( Major )

Paper : 1.2

( Epistemology and Metaphysics )

Full Marks : 80

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

1. Choose the correct answer : 1×10=10

(a) Epistemology studies the problem of  
\_\_\_\_\_.

( reality/knowledge/beauty )

(b) Axiology is concerned with \_\_\_\_\_ ultimate  
value(s) of life.

( one/two/three )

(c) "Philosophy is the science of the first  
principle." Whose view is this?

( Socrates/Plato/Aristotle )