Philosophy - PHYE 102
Logic and Logical Theory

Answer FIVE (05) Questions only
Time allowed: Three (03) Hours
The total number of questions in this paper is 10

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(01)   (a)   Give an account of the nature and subject matter of Logic.

(07 Marks)

(b)   Discuss the relation between Logic and other subjects.

(08 Marks)

(c)   State briefly the practical value of Logic

(05 Marks)

(02)   Discuss the concept of critical thinking under the following titles:

(a)   Definiting of critical thinking.

(b)   Characteristics of critical thinking.

(c)   Methods of critical thinking.

(d)   Utility of critical thinking in social institutions.

(04x05 =20 Marks)

P.T.O.

(03) (a) Define clearly what is mean by the opposition of propositions

(04 Marks)

(b) · Explain the following opposition giving an example for each.

   (i)   Opposition of contrary.
   (ii)   Opposition of sub contrary.
   (iii) Opposition of Contradictory.
   (iv)   Opposition of sub alternation.

(04x03 =12 Marks)

(c) State whether the following are correct or incorrect?

   (i)   The copula determined the quality of a proposition.
   (ii)   'A' is brother is 'B' is a symmetrical relation
   (iii) Only particular propositions could be obverted
   (iv)   Contrary propositions can be true, but not false, at the same time.

(01x04 =04 Marks)

(04) (a) Explain obversion, the inference of education, illustrating it by obverting the A.E.I.O from the 'A' proposition, "All students are active".

(b) (i) Define clearly, what is meant by conversion and Indicate, in term of the rules of conversion, why an 'O' proposition cannot be converted.

(05 Marks)

   (ii) Define clearly, what is meant by contraposition and Indicate in terms of the rules of contraposition, why an 'I 'proposition cannot be contraposed.

(05 Marks)

P.T.O.

(05) (a) Determine the validity of following syllogisms. When a syllogism is invalid write down the rule/rules violated and name the fallacy/fallacies that results.

    (i) Since Machiavelli is both philosopher and diplomatic a philosopher is a diplomatic.

    (ii) All Philosophers are Sophists

        Some Grecians are Philosophers.

        Therefore some Grecians are Sophists.

(02x03=06 Marks)

(b) I. Explain the following fallacies in syllogistic arguments giving an example each.

    (i) Fallacy of four terms.

    (ii) Fallacy of illicit major.

    (iii) Fallacy of negative conclusion

(03x03=09 Marks)

II. Explain the valid moods of the second fissure giving a symbolic example for each.

(05 Marks)

(06) (a) Distinguish between the nature of Indian logic and Aristotelian logic

(05 marks for each)

(b) Compare and contrast the logical features of catuskoti with Jaina syadvada.

(10 Marks)

(07) (a) (a) Would it be correct to say that Dinnaga's Logic is epistemological? Discuss.

(10 Marks)

(b) State and examine the contribution of Dinnaga to Indian Syllogistic reasoning.

(10 marks for each)

(08) (a) Symbolize the following arguments, using predicate calculus and giving your schemes of abbreviation and show them to be valid by derivation.

(i) All swans are white. There is a swan. Therefore, some are white.

(ii) Rose flowers are red.

All rose ones are beautiful. Therefore,

rose flowers are beautiful.

(2 x 05=10 Marks)

(b) Prove the following theorems

(i) $\wedge xFx \leftrightarrow \wedge yFy$

(ii) $(\wedge xFx \wedge \wedge xGx) \rightarrow \wedge x (Fx \wedge Gx)$

(02x05=10 Marks)

(09) Explain four of the following:

i. Mutually exclusive and together exhaustive systems

ii. The importance of different laws of thought

iii. Difference between truth and validity.

iv. Principle of sufficient reason.

v. Svarthanumana and pararthanuman

vi. Four forms of propositions

(04x05=20 Marks)

P.T.O.

(10)   (a)   Identify the fallacies in the following passage and explain briefly how the respective fallacies lave occurred.

(i)   Every member of St. Mary's Catholic Church is wealthy. Therefore, that church must have a lot of money.

(ii)   Dear voters! You should vote for the ruling party. If the opposition party win we are sure to go to war with china.

(iii)   Your honor, how could you possibly find my client guilty of stealing? He is the father of six hungry children and his wife needs an operation!

(3x4=12 Marks)

(b)   Explain briefly the following informal fallacies giving an example for each.

(i)   The fallacy of the complex question.

(ii)   Petition principal

(2x4=08 Marks)