



UNIVERSITY OF PERADENIYA

CENTRE FOR DISTANCE AND CONTINUING EDUCATION

Bachelor of Arts (External –New Syllabus) Examination 100 Level – 2024

ශාස්ත්‍රවේදී උපාධි (බාහිර - නව නිර්දේශය) පරීක්ෂණය 100 මට්ටම - 2024

கலைத்தேர்வுப் பரீட்சை (வெளிவாரி-புதிய பாடத்திட்டம்) 100 வது தேர்ச்சி மட்டம் - 2024

(PHYE 102- LOGIC AND LOGICAL THEORY)

කාලය පැය (03) තුනයි.  
මුහුණත(03) මණිත්තියාලங்கள்.  
Time: (03) three Hours.

නොපැහැදිලි අත් අකුරුවලට ලකුණු කපනු ලැබේ.  
எழுத்து தெளிவில்லாதவிடத்து புள்ளிகள்  
குறைக்கப்படும்.  
Marks will be deducted for illegible hand writing.

මෙම ප්‍රශ්න පත්‍රයේ අඩංගු ප්‍රශ්න සංඛ්‍යාව 10 කි.  
There are 10 questions in the question paper.  
இந்த வினாப்பத்திரத்தில் 10 வினாக்கள் உள்ளன.

ප්‍රශ්න 05 කට පමණක් පිළිතුරු සපයන්න.  
Answer Five (05) Questions only  
05 வினாக்களுக்கு மாத்திரம் விடை தருக.

(01) a) Explain the following concepts of Aristotelian Logic.

- i. Terms ii. Propositions

(02x5=10 Marks)

b) What is critical thinking? Explain the salient features of critical thinking.

(10 Marks)

(02) a) Distinguish between sound arguments and unsound arguments.

(06 Marks)

b) Write the distribution of terms in four- fold categorical prepositions

(04 Marks)

c) Compare and contrast between Deductive and Inductive arguments.

(10 Marks)

P.T.O.

(03) a) What is immediate Inference? (05 Marks)

b) Write the four-fold oppositions of propositions with examples. (10 Marks)

(a) Explain the fallacy of existence with an example. (05 Marks)

(04) a) What is conversion? State the rules to be observed for a valid conversion. (08 Marks)

b) Write down the contraposition of the following propositions.

i. All crows are black.

ii. No man is a god.

iii. Some teachers are kind.

iv. Some dogs are not dangerous

(03x4=12 Marks)

(05) a) Determine whether the following syllogisms are valid or invalid. When the argument is invalid state the rule/rules and name the resulting fallacy/fallacies.

i) All boys are brave. Some brave boys are Sri Lankans. Therefore, some Sri Lankans are brave.

ii) Some books are novels. Some novels are interesting. Therefore, some interesting things are books.

iii) Only girls are innocent. No boy is innocent. Therefore, no boy is a girl.

iv) Some dark colored do not fly because all those who fly are birds and some birds are dark colored.

(04x4=16 Marks)

b) Explain in terms of major rules of syllogism, why it is not possible to draw a valid conclusion from a particular major premise and negative minor premise.

(04 Marks)

(06) a) Symbolize the following arguments giving your scheme of abbreviation and test them for their validity in terms of predicate calculus.

- i) All men are philosophers. Plato is a man. Therefore, he is a philosopher.
- ii) No teacher is a student. All professors are teachers. Therefore, no professor is a student.

(02x5=10 Marks)

b) Explain the following with examples.

- I. Universal Instantiation
- II. Existential Generalization.

(02x5=10 Marks)

(07) a) What is 'Catuskoti'?

b) Examine the nature of Syadvada in Jainism.

(02x10=20 Marks)

(08) a) Discuss the 'Pratyaksa' in Nyaya logic.

b) Compare and contrast between 'Swarthanumana' and 'Pararthanumana'.

(02x10=20 Marks)

(09) a) Distinguish between formal and non-formal fallacies.

(05 Marks)

b) Explain briefly the following non formal fallacies with examples.

- i) Fallacy of composition
- ii) Fallacy of Equivocation
- iii) Fallacy of Petitio principil

(03x5=15 Marks)

(10) Write short notes on **any four** of the followings.

- i) Truth and Validity
- ii) Complex Dilemma
- iii) Stylistic Variants
- iv) Empty set
- v) Reducto ad absurdum
- vi) Prepositions and Sentences

(05x4=20 Marks)

