

Philosophy 120: Introductory Logic Summer 2007**Multiple Choice**

Identify the letter of the choice that best completes the statement or answers the question.

INSTRUCTIONS: The following selections relate to distinguishing arguments from nonarguments and identifying conclusions. Select the best answer for each.

- _____ 1. For a long time, Haydn's music was regarded as genial and lively, and much of its depth, wit, and brilliance went unnoticed. This was because only a few of his compositions were performed regularly at concerts. Nowadays, however, much more of Haydn's music is being performed, and the extraordinary range of his achievement is being recognized.
- Jeffrey Yudkin, *Understanding Music*, 4th edition
- Argument; conclusion: For a long time ... went unnoticed.
 - Argument; conclusion: Only a few of his compositions ... at concerts.
 - Argument; conclusion: Nowadays ... being performed.
 - Nonargument.
 - Argument; conclusion: The extraordinary range ... is being recognized.
- _____ 2. Economics is the study of choice under conditions of scarcity. As individuals, and as a society, we have unlimited desires for goods and services. Unfortunately, the resources needed to produce those goods and services are scarce. Therefore, we must choose which desires to satisfy and how to satisfy them. Economics provides the tools that explain those choices.
- Robert E. Hall and Marc Lieberman, *Economics: Principles and Applications*
- Argument; conclusion: Economics provides the tools ... explain those choices.
 - Argument; conclusion: We must choose which desires ... to satisfy them.
 - Argument; conclusion: Economics is the study ... conditions of scarcity.
 - Argument; conclusion: Unfortunately, the resources ... are scarce.
 - Nonargument.
- _____ 3. Marketing to consumers via the Internet has many advantages for marketers. It allows products and services to be offered 24 hours a day, 7 days a week. It allows products to be offered globally in an efficient manner. And it is cost efficient, saving the need for stores, paper catalogues, and sales people.
- J. Paul Peter and Jerry C. Olson, *Consumer Behavior and Marketing Strategy*
- Argument; conclusion: It allows products and services ... 7 days a week.
 - Argument; conclusion: It allows products to be offered ... an efficient manner.
 - Argument; conclusion: It is cost efficient ... and sales people.
 - Nonargument.
 - Argument; conclusion: Marketing to consumers ... for marketers.
- _____ 4. The ozone layer filters out harmful ultraviolet rays from sunlight before they can reach the surface of our planet and cause damage to humans and other life forms. Any substantial reduction in the amount of this ozone would threaten life as we know it. Consequently, the appearance of a large "hole" in the ozone layer over Antarctica represents a major environmental crisis.
- Colin Baird and Michael Cann, *Environmental Chemistry*, 3rd edition
- Argument; conclusion: Any substantial reduction ... life as we know it.
 - Argument; conclusion: The appearance of a large ... environmental crisis.
 - Argument; conclusion: The ozone layer ... surface of our planet.
 - Argument; conclusion: The ozone layer ... and other life forms.
 - Nonargument.

- _____ 5. The field of economics is divided into two major branches: microeconomics and macroeconomics. Microeconomics studies the behavior of individual economic agents and how they interact with each other in markets. Macroeconomics focuses on the overall level of economic activity in a society. It studies such topics as unemployment, inflation, and the rate of economic growth.
- Don E. Waldman, *Microeconomics*
- Argument; conclusion: Microeconomics studies ... with each other in markets.
 - Argument; conclusion: The field of economics ... macroeconomics.
 - Argument; conclusion: It studies such topics ... rate of economic growth.
 - Nonargument.
 - Argument; conclusion: Macroeconomics focuses ... in a society.
- _____ 6. The exchange of energy between an organism and its surroundings involves the transformation of one form of energy into another. For example, when a leaf produces sugar, it converts solar energy to chemical energy in sugar molecules. When an animal's muscle cells use sugar as fuel to power movements, they convert chemical energy into kinetic energy. All of the work of cells involves the transformation of chemical energy (which is ordered) into heat, which is the unordered energy of random molecular motion.
- Neil A. Campbell and Jane B. Reece, *Biology*, 6th edition
- Argument; conclusion: When an animal's muscle cells ... into kinetic energy.
 - Argument; conclusion: The exchange of energy ... form of energy into another.
 - Argument; conclusion: When a leaf produces sugar ... in sugar molecules.
 - Argument; conclusion: All of the work of cells ... random molecular motion.
 - Nonargument.

INSTRUCTIONS: The following problems relate to identifying and evaluating inductive and deductive arguments. Select the best answer for each.

- _____ 7. Scott Peterson was convicted by a jury of murdering his wife and unborn son. Therefore, he must have actually committed these crimes.
- Inductive, sound.
 - Inductive, strong.
 - Deductive, invalid.
 - Inductive, weak.
 - Deductive, valid.
- _____ 8. If stun guns are safe, then police officers will use them. Stun guns are not safe. Therefore, police officers will not use them.
- Inductive, strong.
 - Inductive, weak.
 - Deductive, valid.
 - Inductive, invalid.
 - Deductive, invalid.
- _____ 9. Figure A is a right triangle, and two of its sides have a length of 1 foot. Therefore, its third side is greater than 1 foot in length.
- Deductive, valid.
 - Deductive, invalid.
 - Inductive, strong.
 - Deductive, sound.
 - Inductive, weak.

- _____ 10. No nations that ignore poverty are morally developed nations. No nations that ignore poverty are models for the Third World. Therefore, all morally developed nations are models for the Third World.
- Inductive, weak.
 - Inductive, strong.
 - Deductive, invalid.
 - Deductive, sound.
 - Deductive, valid.
- _____ 11. If H.I.V. becomes drug resistant, then countless victims will perish. If H.I.V. becomes drug resistant, then a major health crisis will erupt. Therefore, if a major health crisis erupts, then countless victims will perish.
- Deductive, invalid.
 - Deductive, sound.
 - Inductive, strong.
 - Inductive, weak.
 - Deductive, valid.
- _____ 12. That bearded man in the park is carrying a sign that reads "Repent! The End is Near." We conclude that the world will come to an end in the near future.
- Deductive, valid.
 - Deductive, invalid.
 - Inductive, weak.
 - Inductive, cogent.
 - Inductive, strong.

INSTRUCTIONS: Select the correct answer for the following multiple choice questions.

- _____ 13. Which of the following are all premise indicators?
- Hence, thus, implies that.
 - Accordingly, seeing that, inasmuch as.
 - For, given that, because.
 - As, consequently, because.
 - For the reason that, in that, wherefore.
- _____ 14. An argument whose conclusion rests on the definition of a word used in the premises is:
- A deductive argument.
 - A valid argument.
 - A sound argument.
 - A cogent argument.
 - An inductive argument.
- _____ 15. In the expression "If North Korea has nuclear weapons, then it poses a threat to world peace," the statement "It poses a threat to world peace" is called the:
- Conditional.
 - Consequent.
 - Antecedent.
 - Explanandum.
 - Conclusion.
- _____ 16. If a deductive argument has false premises and a false conclusion, then we know:
- Nothing as such about the argument's validity.
 - The argument is invalid.
 - The argument is valid.
 - The argument is weak.
 - The argument is uncogent.

Categorical Proposition 1A

Given the categorical proposition,

"All email messages that are solicitations for private information are communications that are not entitled to responses."

- _____ 17. In Categorical Proposition 1A, the subject term is:
- Email messages.
 - Communications.
 - Communications that are not entitled to responses.
 - Email messages that are solicitations for private information.
 - Solicitations for private information.
- _____ 18. In Categorical Proposition 1A, the quantifier is:
- All.
 - Negative.
 - Universal.
 - Are.
 - Affirmative.
- _____ 19. In Categorical Proposition 1A, which terms are distributed?
- The predicate but not the subject.
 - Both the subject and the predicate.
 - Neither the subject nor the predicate.
 - The quantifier but not the copula.
 - The subject but not the predicate.
- _____ 20. The statement "No government bonds are securities that pay high interest" is an:
- E-proposition.
 - O-proposition.
 - S-proposition.
 - A-proposition.
 - I-proposition.

INSTRUCTIONS: In the questions below you are given a statement, its truth value in parentheses, and an operation/relation to be performed on that statement. You must identify the new statement and the truth value of the new statement. Adopt the Aristotelian standpoint and assume that A and B denote things that actually exist.

- _____ 21. Some non-A are B. (F) Contradictory
- All non-A are not B. (T)
 - Some non-A are not B. (T)
 - No non-A are B. (T)
 - Some non-A are non-B. (T)
 - No non-A are non-B. (F)

INSTRUCTIONS: In the following questions you are given a statement, its truth value in parentheses, and a new statement. You must determine how the new statement is related to the given statement and determine the truth value of the new statement. Adopt the Aristotelian standpoint and assume that A and B denote things that actually exist.

- _____ 22. No A are non-B. (T) No B are non-A.
 a. Contraposition. (T)
 b. Obversion. (T)
 c. Contraposition. (Und.)
 d. Conversion. (T)
 e. Conversion. (Und.)
- _____ 23. Some A are not non-B. (T) Some A are B.
 a. Subcontrary. (Und.)
 b. Obversion. (T)
 c. Conversion. (T)
 d. Contrary. (F)
 e. Contraposition. (T)
- _____ 24. Some non-A are B. (F) Some B are non-A.
 a. Subcontrary. (T)
 b. Conversion. (Und.)
 c. Contraposition. (Und.)
 d. Conversion. (F)
 e. Contraposition. (F)
- _____ 25. All A are non-B. (F) No A are non-B.
 a. Obversion. (F)
 b. Contradictory. (T)
 c. Contrary. (Und.)
 d. Subcontrary. (T)
 e. Subalternation. (Und.)
- _____ 26. Some B are non-A (F) All B are non-A.
 a. Subalternation. (F)
 b. Contradictory. (T)
 c. Subcontrary. (Und.)
 d. Subalternation. (Und.)
 e. Subcontrary. (T)

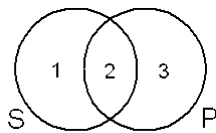
INSTRUCTIONS: Select the answer that best characterizes the following immediate inferences. Adopt the Aristotelian standpoint for these problems.

- _____ 27. No popular casinos are establishments without bright lights. Therefore, no establishments with bright lights are unpopular casinos.
 a. Valid.
 b. Invalid, illicit contraposition.
 c. Invalid, illicit obversion.
 d. Invalid, existential fallacy.
 e. Invalid, illicit conversion.

- ___ 28. It is false that some entrance exams are not occasions for panic. Therefore, some entrance exams are occasions for panic.
- Invalid, illicit subalternation.
 - Valid.
 - Invalid, illicit subcontrary.
 - Invalid, illicit contrary.
 - Invalid, illicit contraposition.
- ___ 29. It is false that all diets are programs that retard aging. Therefore, no diets are programs that retard aging.
- Invalid, illicit subalternation.
 - Invalid, illicit subcontrary.
 - Valid.
 - Invalid, existential fallacy.
 - Invalid, illicit contrary.
- ___ 30. No painkillers are drugs entirely without side effects. Therefore, it is false that all painkillers are drugs entirely without side effects.
- Valid.
 - Invalid, illicit contrary.
 - Invalid, illicit subcontrary.
 - Invalid, illicit subalternation.
 - Invalid, illicit conversion.
- ___ 31. It is false that all ballet performances are thrilling exhibitions. Therefore, it is false that some ballet performances are thrilling exhibitions.
- Invalid, illicit subcontrary.
 - Valid.
 - Invalid, illicit subalternation.
 - Invalid, illicit contrary.
 - Invalid, existential fallacy.

INSTRUCTIONS: Fill in the Venn diagrams for the following statements.

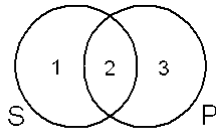
- ___ 32. Some S are not P. (Aristotelian standpoint)



After filling in the diagram,

- Area 1 is shaded.
- Area 2 is shaded, and there is a circled X in Area 1.
- There is an X in Area 1, and there are no other marks.
- Area 1 is shaded, and there is a circled X in Area 2.
- There is a circled X in Area 1, and there are no other marks.

___ 33. All S are P. (Boolean standpoint)



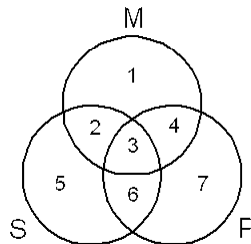
After filling in the diagram,

- Areas 1 and 3 are shaded.
- Area 2 is shaded, and there are no other marks.
- Area 1 is shaded, and there is a circled X in Area 2.
- There is an X in Area 2.
- Area 1 is shaded, and there are no other marks.

Venn Diagram 1A

Given the following syllogistic form,

- All P are M.
- No S are M.
- All S are P.



- ___ 34. Given Venn Diagram 1A, after filling in the Venn diagram,
- Areas 2, 3, 6, and 7 are shaded, and there are no other marks.
 - Areas 3, 4, 5, and 6 are shaded.
 - Areas 2 and 3 are shaded, and there is an X in Area 4.
 - Areas 2, 3, 5, 6, and 7 are shaded.
 - Areas 2, 3, 6, and 7 are shaded, and there is an X in Area 5.
- ___ 35. For the syllogistic form in Venn Diagram 1A, the answer from the Boolean standpoint is*:
- Valid, no fallacy.
 - Invalid, illicit minor.
 - Invalid, drawing an affirmative conclusion from a negative premise.
 - Invalid, undistributed middle.
 - Invalid, existential fallacy.

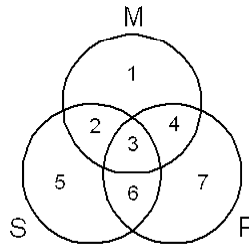
Venn Diagram 2A

Given the following syllogistic form,

Some M are not P.

Some S are M.

Some S are not P.



- _____ 36. Given the Venn Diagram 2A, after filling in the Venn diagram,
- There is an X on the line between Areas 1 and 4 and between Areas 2 and 3.
 - There is an X on the line between Areas 1 and 2 and between Areas 2 and 3.
 - There is an X in Area 1 and in Area 3.
 - There is an X on the line between Areas 1 and 2 and in Area 3.
 - There is an X on the line between Areas 1 and 4 and between Areas 2 and 5.
- _____ 37. For the syllogistic form in Venn Diagram 2A, the answer from the Boolean standpoint is*:
- Valid, no fallacy.
 - Invalid, illicit minor.
 - invalid, drawing a negative conclusion from affirmative premises.
 - Invalid, illicit major.
 - Invalid, undistributed middle.

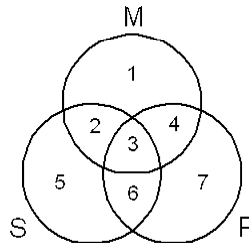
Venn Diagram 3A

Given the following syllogistic form,

All M are P.

Some M are S.

Some S are P.



- _____ 38. For the syllogistic form in Venn Diagram 3A, the answer from the Boolean standpoint is*:
- Invalid, undistributed middle.
 - Invalid, illicit minor.
 - Invalid, drawing an affirmative conclusion from a negative premise.
 - Valid, no fallacy.
 - Invalid, exclusive premises.

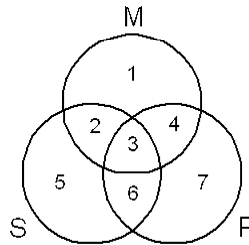
Venn Diagram 4A

Given the following syllogistic form,

All M are P.

No M are S.

No S are P.



- ___ 39. For the syllogistic form in Venn Diagram 4A, the mood and figure is:
- EAA-3.**
 - AII-2.**
 - AEE-3.**
 - AOO-3.**
 - AEE-2.**
- ___ 40. For the syllogistic form in Venn Diagram 4A, the answer from the Boolean standpoint is*:
- Invalid, drawing a negative conclusion from affirmative premises.
 - Invalid, illicit minor.
 - Invalid, illicit major.
 - Valid, no fallacy.
 - Invalid, existential fallacy.

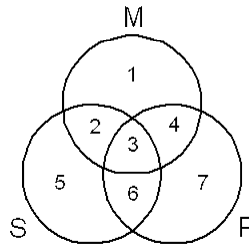
Venn Diagram 5A

Given the following syllogistic form,

No M are P.

All S are M.

Some S are not P.



- ___ 41. Given the Venn Diagram 5A, after filling in the Venn diagram,
- Areas 3, 4, 5 and 6 are shaded, and there are no other marks.
 - Areas 3 and 4 are shaded, and there is an X on the line between Areas 2 and 5.
 - Areas 1, 2, and 3 are shaded.
 - Areas 3, 4, 5, and 6 are shaded, and there is an X in Area 2.
 - Areas 3, 4, 5, and 6 are shaded, and there is an X in Area 6.
- ___ 42. For the syllogistic form in Venn Diagram 5A, the mood and figure is:
- EAI-1.**
 - AEI-4.**
 - AEO-1.**
 - EAO-4.**
 - EAO-1.**

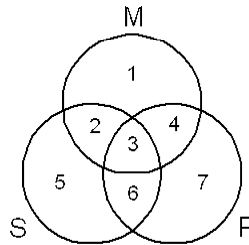
Venn Diagram 6A

Given the following syllogistic form,

All P are M.

All M are S.

All S are P.



- _____ 43. Given the Venn Diagram 6A, after filling in the Venn diagram,
- Areas 1, 4, 6, and 7 are shaded, and there are no other marks.
 - Areas 2, 3, and 4 are shaded, and there are no other marks.
 - Areas 2, 3, 4, and 6 are shaded.
 - Areas 1, 4, 6, and 7 are shaded, and there is an X in Area 3.
 - Areas 1, 2, 4, 5, 6, and 7 are shaded.
- _____ 44. For the syllogistic form in Venn Diagram 6A, the answer from the Boolean standpoint is*:
- Invalid, illicit major.
 - Valid, no fallacy.
 - Invalid, existential fallacy.
 - Invalid, exclusive premises.
 - Invalid, illicit minor.
- _____ 45. Given the following syllogism*:

No unicorns are mules.

All unicorns are animals.

Some animals are not mules.

This syllogism:

- Is valid from both the Boolean and Aristotelian standpoints.
- Is valid from the Boolean standpoint only.
- Commits the existential fallacy from the Boolean standpoint only.
- Commits the existential fallacy from both standpoints.
- Commits the existential fallacy from the Aristotelian standpoint only.

**Philosophy 120: Introductory Logic Summer 2007
Answer Section****MULTIPLE CHOICE**

1. ANS: D PTS: 1
2. ANS: B PTS: 1
3. ANS: E PTS: 1
4. ANS: B PTS: 1
5. ANS: D PTS: 1
6. ANS: B PTS: 1
7. ANS: B PTS: 1
8. ANS: E PTS: 1
9. ANS: A PTS: 1
10. ANS: C PTS: 1
11. ANS: A PTS: 1
12. ANS: C PTS: 1
13. ANS: C PTS: 1
14. ANS: A PTS: 1
15. ANS: B PTS: 1
16. ANS: A PTS: 1
17. ANS: D PTS: 1
18. ANS: A PTS: 1
19. ANS: E PTS: 1
20. ANS: A PTS: 1
21. ANS: C PTS: 1
22. ANS: C PTS: 1
23. ANS: B PTS: 1
24. ANS: D PTS: 1
25. ANS: C PTS: 1
26. ANS: A PTS: 1
27. ANS: B PTS: 1
28. ANS: B PTS: 1
29. ANS: E PTS: 1
30. ANS: A PTS: 1
31. ANS: C PTS: 1
32. ANS: C PTS: 1
33. ANS: E PTS: 1
34. ANS: A PTS: 1
35. ANS: C PTS: 1
36. ANS: B PTS: 1
37. ANS: E PTS: 1
38. ANS: D PTS: 1
39. ANS: C PTS: 1
40. ANS: C PTS: 1

- 41. ANS: A PTS: 1
- 42. ANS: E PTS: 1
- 43. ANS: A PTS: 1
- 44. ANS: E PTS: 1
- 45. ANS: D PTS: 1

D 5.

 C 10.

 D 1.

 B 6.

 A 11.

 D 17.

 C 22.

 B 2.

 C 12.

 A 18.

 B 23.

 E 19.

 D 24.

 B 7.

 C 13.

 A 20.

 C 25.

 E 3.

 A 14.

 A 26.

 E 8.

 B 15.

 C 21.

 B 4.

 A 9.

 B 27.

 A 16.

B 28.

E 33.

E 29.

A 30.

B 36.

C 39.

A 43.

E 37.

C 40.

E 44.

C 31.

A 34.

D 45.

C 32.

C 35.

D 38.

A 41.

E 42.