

Answer Key: Logic & Critical Thinking

Midterm Examination (Chapters 1 & 2)

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Part I: Multiple Choice Questions (60 pts)

No.	Ans	Explanation	Reference
1	B	Philosophy is constructive because it attempts to formulate rationally defensible answers to fundamental questions.	Page 14
2	B	"Since" is listed as a typical premise indicator word.	Page 46
3	C	Raising fundamental questions about existence characterizes the Socratic sense of wonder/wisdom.	Page 12-13
4	B	A valid argument is defined by the impossibility of having true premises and a false conclusion.	Page 74
5	C	Applied Ethics deals with specific moral problems like capital punishment or abortion.	Page 29
6	B	Predictions about the future based on past events are inductive arguments.	Page 71
7	B	Empiricism is the view that knowledge is obtained through the senses.	Page 23
8	A	"Because" and "furthermore" indicate the reasons; "You should avoid..." is the main point (conclusion).	Page 45
9	C	Philosophy is dynamic and critical, not a set of static, authoritative, or final beliefs.	Page 16
10	B	Even if premises are true, the conclusion (cats are dogs) is false; this combination makes it Invalid.	Page 76
11	B	Socrates emphasized critical self-examination of one's life and values.	Page 31
12	B	Strength means it is improbable (not impossible) for the conclusion to be false if premises are true.	Page 79
13	A	Ontology studies the nature of existence (matter vs spirit, reality vs appearance).	Page 22
14	B	Non-argumentative passages (like advice or reports) lack an inferential claim (reasoning process).	Page 52
15	A	Philosophy helps develop one's own beliefs/worldview, leading to intellectual independence.	Page 32
16	A	A sound argument must be valid AND have all true premises.	Page 78
17	B	Philosophical wisdom is a critical habit and vigilance, not just technical expertise.	Page 13
18	B	The argument applies a general rule (categorical) to a specific case; Categorical Syllogisms are deductive.	Page 69
19	B	Meta-ethics investigates the meaning of ethical terms and sources of ethical principles.	Page 28

No.	Ans	Explanation	Reference
20	B	A statement must be a declarative sentence capable of being true or false.	Page 42
21	C	Free will vs. determinism is a core question of the Anthropological aspect of Metaphysics.	Page 21
22	A	Arguments based on pure arithmetic or geometric computation are deductive.	Page 69
23	B	Russell stated the value of philosophy lies in its uncertainty, freeing us from dogmatism.	Page 33
24	B	The form is valid, but since the premises are false, it is Valid but Unsound.	Page 78
25	C	Skepticism claims people cannot acquire reliable knowledge and the search for truth is in vain.	Page 23
26	D	Arguments from analogy (comparing similarities) are probabilistic and thus Inductive.	Page 71
27	C	An argument requires a group of statements with at least one premise and one conclusion.	Page 43
28	C	Intuition is direct apprehension not derived from conscious reasoning or sense perception.	Page 25
29	B	A cogent argument must be Strong AND have all true premises.	Page 83
30	C	"Doing" philosophy involves reflecting on and criticizing deeply held conceptions.	Page 15
31	A	Arguments based on signs (visual cues) are Inductive.	Page 71
32	C	Questions about government belong to Social/Political Philosophy, not Aesthetics.	Page 30
33	A	In "If... then...", the first part is the Antecedent (if-clause).	Page 59
34	B	The premise (Most people) provides probabilistic support, but the link is weak given the context.	Page 81
35	B	Metaphysics asks "What is reality?" vs "What is appearance?".	Page 20
36	B	Unlike validity (all or nothing), strength admits degrees (more or less probable).	Page 81
37	B	A is the Antecedent, B is the Consequent.	Page 59
38	C	A valid argument CAN have false premises (Unsound). It cannot have T premises and F conclusion.	Page 77
39	B	Logic studies the principles of right reasoning/arguments, not the psychological process.	Page 40
40	B	To be Cogent, it must be Strong. If it is Weak, it is automatically Uncogent.	Page 83
41	C	An argument can exist without indicator words (implied inference); other options are mandatory.	Page 47
42	A	Obligations to the State and laws are central to Social/Political Philosophy.	Page 30
43	C	Statistical arguments (99%) are inductive, and 99% is very high probability, making it Strong.	Page 71
44	B	"Necessarily" indicates the arguer claims the conclusion follows with certainty (Deduction).	Page 67
45	C	Having T premises and T conclusion implies nothing about the link. It could be valid or invalid.	Page 76
46	B	Explanations assume the event happened (fact) and give reasons *why*; Arguments try to prove *that* it is true.	Page 57

No.	Ans	Explanation	Reference
47	B	Philosophy intensifies self-awareness by examining the intellectual grounds of our lives.	Page 32
48	C	Cogency requires the "Total Evidence Requirement" (not suppressing important facts).	Page 83
49	B	Deductive arguments claim the conclusion follows with necessity (impossibility of falsehood).	Page 64
50	D	Uncogent = Weak OR Strong with False Premises. So both B and C make it Uncogent.	Page 83
51	B	Relying on the testimony of an expert/authority is an Inductive argument.	Page 71
52	B	Inductive strength relies on the probabilistic support (content), not just structure.	Page 81
53	A	The form is Valid and the premises are actually True. Thus, it is Sound.	Page 78
54	A	Drawing a conclusion about the next instance based on past samples is Generalization (Inductive).	Page 71
55	B	Soundness requires Validity. If it is Invalid, it cannot be Sound.	Page 79
56	B	While not explicitly in the text, Apologetics historically defends religious doctrine (Theological aspect).	Page 21
57	B	Necessary reasoning (certainty) is the hallmark of Deduction.	Page 64
58	A	Comparing Calculus to Physics based on similarity (Math requirement) is Analogy.	Page 71
59	B	Validity deals with the link. If premises are false, it fails the truth condition for Soundness.	Page 79
60	B	Logic is the science that evaluates arguments (good vs bad reasoning).	Page 39

Part II: Fill in the Blank (15 pts)

1. **Wisdom** (Page 13)
2. **Epistemology** (Page 22)
3. **Statement** (or Proposition) (Page 42)
4. **Conclusion** (Page 43)
5. **Logic** (Page 37)
6. **Deductive** (Page 64)
7. **Inductive** (Page 65)
8. **Sound** (Page 78)
9. **Cogent** (Page 83)
10. **Conclusion** (Page 45)
11. **Premise** (Page 46)
12. **Axiology** (Page 27)
13. **Consequent** (Page 59)

14. **Analogy** (Page 71)
15. **Inferential** (Page 49)

Part III: Short Answer (15 pts)

1. **Metaphysics vs. Axiology:** Metaphysics studies ultimate reality and existence (God, mind, matter), while Axiology studies values (ethics/goodness and aesthetics/beauty). (Page 19/27)
2. **Benefits of Logic:** 1) Skills to evaluate arguments, 2) Defense against propaganda/prejudice, 3) Distinguishing good from bad reasoning. (Page 41)
3. **Conditional Statement:** It is not an argument because it does not assert that the antecedent is true; it only claims a relationship ("If X, then Y"), lacking a factual claim. (Page 60)
4. **Valid vs. Sound:** A Valid argument has a correct structure (conclusion follows from premises), whereas a Sound argument is Valid AND has actually true premises. (Page 78)
5. **Argument vs. Illustration:** An argument tries to prove *that* something is true; an illustration provides examples to show *how* something is done or what it means. (Page 56)
6. **Deduction vs. Induction:** Deductive arguments claim the conclusion follows with *necessity* (certainty); Inductive arguments claim the conclusion follows with *probability*. (Page 64/65)
7. **Valid Deductive Ex:** All humans are mortal. Sumeya is human. Therefore, Sumeya is mortal. (Page 65)
8. **Strong Inductive Ex:** Most university students are hard workers. Sumeya is a university student. Therefore, Sumeya is probably a hard worker. (Page 66)
9. **True Premises/Conclusion but Invalid:** Validity depends on the *link*. If the premises are true and conclusion is true, but the premises don't *cause* the conclusion (e.g., "Grass is green. Sugar is sweet."), it is invalid. (Page 76)
10. **Explanandum vs. Explanans:** Explanandum is the event being explained (the fact); Explanans is the statement doing the explaining (the reason). (Page 57)
11. **Skepticism:** The epistemological position claiming that people cannot acquire reliable knowledge and that the search for truth is in vain. (Page 23)
12. **Inferential Claim:** The claim that the passage expresses a reasoning process—that the premises support or imply the conclusion. (Page 50)
13. **Empiricism vs. Rationalism:** Empiricism claims knowledge comes from sense experience; Rationalism claims knowledge comes from reason/thought. (Page 23/24)
14. **Reports:** They convey information about a topic but do not claim that the statements support or imply a conclusion (no inferential claim). (Page 54)
15. **Weak Argument:** It implies that even if the premises are assumed to be true, they do not make the conclusion probable (the support is insufficient). (Page 81)