

# Scientific Foundations of Philosophy

Philosophy And Science · Answer Key · 15 Questions

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**1. Which philosophical position asserts that all knowledge is derived from sensory experience, a concept that aligns with the empirical methods of modern science?**

- A) Rationalism
- B) Empiricism**
- C) Idealism
- D) Dualism

**2. Who is credited with introducing the 'cogito, ergo sum' argument, which marks a foundational shift toward subject-centered epistemology in Western philosophy?**

- A) John Locke
- B) David Hume
- C) René Descartes**
- D) Immanuel Kant

**3. In the philosophy of science, what is the term for the process of drawing general conclusions from specific observations?**

- A) Deduction
- B) Induction**
- C) Abduction
- D) Reductionism

**4. Which principle states that among competing hypotheses, the one with the fewest assumptions should be selected?**

- A) Occam's Razor**
- B) The Principle of Utility
- C) Categorical Imperative
- D) The Law of Non-Contradiction

**5. What is the primary focus of the 'Mind-Body Problem' in philosophy of mind?**

- A) The evolution of the nervous system
- B) The relationship between mental states and physical brain states**
- C) The social structure of human civilizations
- D) The ethics of biological experimentation

**6. What is the logical fallacy that involves attacking the character of the person making an argument rather than the argument itself?**

A) Post hoc ergo propter hoc

**B) Ad hominem**

C) Straw man

D) Circular reasoning

**7. According to the theory of physicalism, what is the fundamental nature of reality?**

A) Non-material spirits

B) Mathematical abstractions

**C) Physical matter and energy**

D) Subjective consciousness

**8. Which 20th-century movement argued that statements are only meaningful if they are either tautologies or empirically verifiable?**

A) Existentialism

**B) Logical Positivism**

C) Phenomenology

D) Stoicism

**9. In formal logic, which statement form is considered a logical contradiction?**

**A) P and not P**

B) If P then Q

C) P or not P

D) All P are Q

**10. Which scientific paradigm shift fundamentally challenged the Aristotelian view of a geocentric universe?**

A) Quantum Mechanics

**B) The Copernican Revolution**

C) Plate Tectonics

D) Cell Theory

**11. What is the core premise of 'Determinism' in the context of causality?**

A) Human free will is absolute

**B) Every event is necessitated by preceding events and natural laws**

C) Biological organisms have no genetic predisposition

D) Probability governs all subatomic interactions

**12. What field of philosophy specifically investigates the nature, sources, and limits of human knowledge?**

A) Ontology

**B) Epistemology**

C) Axiology

D) Teleology

**13. What is the name of the cognitive bias where individuals favor information that confirms their existing beliefs?**

A) Availability heuristic

**B) Confirmation bias**

C) Gambler's fallacy

D) Sunk cost fallacy

**14. Which philosopher proposed the 'falsifiability' criterion as a demarcation line between science and pseudoscience?**

**A) Karl Popper**

B) Bertrand Russell

C) Thomas Kuhn

D) Ludwig Wittgenstein

**15. In evolutionary biology and philosophy of science, what term describes the process where traits that increase survival are passed on to offspring?**

A) Teleological causation

**B) Natural selection**

C) Spontaneous generation

D) Lamarckian inheritance