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

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| 1. Earth's distance from the sun has little to do with the seasons. The seasons are caused by the tilt of the Earth on its axis as it revolves around the sun. This tilt causes some parts of the Earth to get slanting rays of sunlight some of the year and vertical rays of sunlight at other times. When a hemisphere of the Earth is tilted toward the sun, it is summer in that hemisphere.  Gary S. Moore, *Living with the Earth*, 3rd ed.   |  |  |  | | --- | --- | --- | |  | a. | Nonargument. | |  | b. | Argument; conclusion: The seasons are caused ... as it revolves around the sun. | |  | c. | Argument; conclusion: This tilt causes some parts ... sunlight at other times. | |  | d. | Argument; conclusion: When a hemisphere of the Earth ... in that hemisphere. | |  | e. | Argument; conclusion: Earth's distance from the sun ... the seasons. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 2. The colors of all glowing objects have the same origin: They come from atoms and molecules that have been excited to states of high energy. Atoms in burning fireworks and stars become excited by absorbing energy as heat. They then throw off their excess energy as light. The colors emitted by an atom depend on how its electrons are arranged. So by investigating the colors an atom emits, we can determine its internal structure.  Loretta Jones and Peter Atkins, *Chemistry*, 4th ed.   |  |  |  | | --- | --- | --- | |  | a. | Argument, conclusion: The colors emitted by an atom ... electrons are arranged. | |  | b. | Argument, conclusion: The colors of all glowing objects have the same origin. | |  | c. | Nonargument. | |  | d. | Argument, conclusion: They come from atoms ... states of high energy. | |  | e. | Argument; conclusion: By investigating the colors ... its internal structure. |  |  |  | | --- | --- | | *ANSWER:* | e | |

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| 3. A rainbow sometimes occurs after a storm because the droplets of water in the air refract and reflect rays of light from the sun. The angle of refraction is different for different wavelengths of light, and this accounts for the separation of colors in the rainbow.   |  |  |  | | --- | --- | --- | |  | a. | Argument, conclusion: The droplets of water in the air ... light from the sun. | |  | b. | Argument, conclusion: The angle of refraction ... wavelengths of light. | |  | c. | Nonargument. | |  | d. | Argument, conclusion: A rainbow sometimes occurs after a storm. | |  | e. | Argument, conclusion: This accounts for the separation of colors in the rainbow. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 4. Cows' milk is hardly the perfect food, as the American Dairy Association would have us believe. Whole milk consumed in large quantities can raise blood cholesterol levels and contribute to heart disease. Studies have indicated a connection between the sugars in milk and ovarian cancer. The proteins in cows' milk can cause the body to develop antibodies that can lead to diabetes, and in a fourth of the population milk causes bloating, flatulence, and sometimes diarrhea.  Jane Brody, "Debate over Milk: Time to Look at the Facts"   |  |  |  | | --- | --- | --- | |  | a. | Argument, conclusion: The proteins in cows' milk ... sometimes diarrhea. | |  | b. | Argument, conclusion: Whole milk consumed ... contribute to heart disease. | |  | c. | Argument, conclusion: Studies have indicated ... ovarian cancer. | |  | d. | Argument; conclusion: Cows' milk is hardly ... would have us believe. | |  | e. | Nonargument. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 5. Although accounting has made its most dramatic progress in the field of business, the accounting function is vital to every unit of our society. An individual must account for his or her income and must file income tax returns. Often an individual must supply personal accounting information in order to buy a car or home, to qualify for a college scholarship, to secure a credit card or to obtain a bank loan. The federal government, the states, the cities, the school district: all must use accounting as a basis for controlling their resources and measuring their accomplishments.  Walter B. Meigs and Robert F. Meigs, *Accounting*, 6th ed.   |  |  |  | | --- | --- | --- | |  | a. | Nonargument. | |  | b. | Argument; conclusion: The accounting function ... every unit of our society. | |  | c. | Argument, conclusion: The federal government ... their accomplishments. | |  | d. | Argument, conclusion: Often an individual ... obtain a bank loan. | |  | e. | Argument, conclusion: Although accounting ... every unit of our society. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 6. If wind turbines are extensively deployed, solar power systems are installed, bioenergy technologies are exploited, electric cars are perfected and mass produced, and a high-speed rail network is constructed, then the nation will be weaned off its addiction to oil, climate change will be slowed, and billions of dollars in oil money will be redirected from nations that hate us to improving our own standard of living.   |  |  |  | | --- | --- | --- | |  | a. | Argument, conclusion: Billions of dollars in oil money ... standard of living. | |  | b. | Argument, conclusion: The nation will be weaned off its addiction to oil. | |  | c. | Argument, conclusion: Wind turbines are extensively deployed. | |  | d. | Nonargument. | |  | e. | Argument, conclusion: Electric cars are perfected and mass produced. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 7. Social psychologists conduct research into areas such as bystander intervention, prejudice, conformity, aggression, and obedience to authority. However, in order to gain insight into such critical issues, researchers must create vivid events that are involving for their participants. Some of these events, by their very nature, are likely to produce a degree of discomfort in the participants, such as witnessing someone having a seizure. Thus, what is required for good science and what is required for ethical science can be contradictory.  Elliot Aronson, *et al*., *Social Psychology*   |  |  |  | | --- | --- | --- | |  | a. | Argument, conclusion: Some of these events ... someone having a seizure. | |  | b. | Argument, conclusion: Social psychologists conduct ... obedience to authority. | |  | c. | Nonargument. | |  | d. | Argument, conclusion: In order to gain insight ... involving for their participants. | |  | e. | Argument; conclusion: What is required for good science ... contradictory. |  |  |  | | --- | --- | | *ANSWER:* | e | |

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| 8. Each element and compound is a pure substance. However, most materials are neither single elements nor single compounds. Instead, they are mixtures of these simple substances, with one substance mingled with another. Thus, gasoline is a mixture of hydrocarbons and additives blended together to achieve efficient combustion.  Loretta Jones and Peter Atkins, *Chemistry: Molecules, Matter, and Change*, 4th ed.   |  |  |  | | --- | --- | --- | |  | a. | Nonargument. | |  | b. | Argument, conclusion: They are mixtures ... one substance mingled with another. | |  | c. | Argument, conclusion: Most materials are neither ... nor single compounds. | |  | d. | Argument, conclusion: Each element and compound is a pure substance. | |  | e. | Argument, conclusion: Gasoline is a mixture ... achieve efficient combustion. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 9. Musical instruments are classed into groups: voices, strings, woodwinds, brass and percussion. Although they can be classified as wind, string, or percussion instruments, keyboard instruments are often considered separately. Operated by air under pressure, the human voice is technically a wind instrument. In recent times the computer and other electronic media have emerged as new means of producing music.  Robert Hickok, *Exploring Music*   |  |  |  | | --- | --- | --- | |  | a. | Argument, conclusion: Although they can be classified ... considered separately. | |  | b. | Argument, conclusion: Musical instruments ... brass and percussion. | |  | c. | Nonargument. | |  | d. | Argument, conclusion: In recent times ... new means of producing music. | |  | e. | Argument, conclusion: Operated by air under pressure ... wind instrument. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 10. Alloys in which copper is the chief constituent are used more widely than pure copper and have more desirable properties. Bronze, an alloy of copper and tin, is easier to cast, harder, and less malleable than pure copper. Bronze dominated early technology before iron came into use. Brass is an alloy of copper and zinc with multitudinous uses. Alloys of copper, nickel, and zinc, called nickel silver, have high resistance to corrosion and wear and are used as bases for silver plating and in costume jewelry.  Robert Boikess and Edward Edelson, *Chemical Principles*   |  |  |  | | --- | --- | --- | |  | a. | Argument, conclusion: Bronze dominated early technology ... came into use. | |  | b. | Argument; conclusion: Alloys in which copper ... more desirable properties. | |  | c. | Argument, conclusion: Alloys of copper, nickel, and zinc ... costume jewelry. | |  | d. | Argument, conclusion: Brass is an alloy of copper and zinc ... multitudinous uses. | |  | e. | Nonargument. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 11. Developing accounting information in conformity with generally accepted accounting principles is called *financial accounting*, because this information is designed to summarize the financial position and operating results of a business entity. Financial accounting concepts apply to all types and sizes of business organizations. These concepts are useful to decision makers in both business and government in evaluating a wide range of economic issues.  Walter B. Meigs and Robert F. Meigs, *Accounting*, 6th ed.   |  |  |  | | --- | --- | --- | |  | a. | Nonargument. | |  | b. | Argument, conclusion: Financial accounting concepts ... business organizations. | |  | c. | Argument, conclusion: These concepts are useful ... economic issues. | |  | d. | Argument, conclusion: Developing accounting ... *financial accounting*. | |  | e. | Argument, conclusion: This information is designed ... business entity. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 12. We can distinguish three aspects of any sound. First, there must be a *source* for a sound; and as with any source, the source of a sound wave is a vibrating object. Second, the energy is transferred from the source in the form of longitudinal sound *waves*. And third, the sound is *detected* by an ear or an instrument.  Douglas C. Giancoli, *Physics: Principles with Applications*, 5th ed.   |  |  |  | | --- | --- | --- | |  | a. | Argument, conclusion: Second, the energy ... longitudinal sound *waves*. | |  | b. | Argument, conclusion: Third, the sound is *detected* by an ear or an instrument. | |  | c. | Argument, conclusion: First, there must be a *source* ... vibrating object. | |  | d. | Nonargument. | |  | e. | Argument, conclusion: We can distinguish three aspects of any sound. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 13. Nearly all philosophers and neuroscientists reject mind-body dualism. The primary objection is that that it conflicts with the law of conservation of matter and energy in physics. The only way to accelerate matter or transform energy, including the matter and energy in your body, is to act upon it with other matter or energy. For these reasons, if your mind is going to influence the matter or energy of your brain or any other part of your body, your mind must itself be composed of matter or energy.  James W. Kalat, *Biological Psychology*, 7th ed.   |  |  |  | | --- | --- | --- | |  | a. | Argument, conclusion: The only way to accelerate ... other matter or energy. | |  | b. | Argument, conclusion: If your mind is going to influence ... matter or energy. | |  | c. | Argument, conclusion: The primary objection ... matter and energy in physics. | |  | d. | Nonargument. | |  | e. | Argument, conclusion: Nearly all philosophers ... mind-body dualism. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 14. Whistleblowing is a morally ambiguous activity on a complex concatenation of grounds: It necessarily involves a betrayal of trust on behalf of a public interest which itself is on some occasions morally ambiguous. It indicts otherwise morally competent individuals and organizations concerned with being perceived as legitimate. Sometimes it arouses public opinion, a frequently contaminated process.  Natalie Dandekar, "Can Whistleblowing Be Fully Legitimated?"   |  |  |  | | --- | --- | --- | |  | a. | Argument, conclusion: It necessarily involves ... occasions morally ambiguous. | |  | b. | Argument, conclusion: Sometimes it arouses ... contaminated process. | |  | c. | Argument; conclusion: Whistleblowing is a morally ambiguous activity. | |  | d. | Argument, conclusion: It indicts otherwise morally competent ... as legitimate. | |  | e. | Nonargument. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 15. A mineral is a naturally occurring inorganic solid. It possesses a definite chemical structure, which gives it a unique set of physical properties. When the term *mineral* is used by geologists, only those substances that fulfill these precise conditions are considered minerals. Consequently, synthetic diamonds, although chemically the same as natural diamonds, are not considered minerals.  Frederick K. Lutgens, *et al*., *Foundations of Earth Science*, 6th ed.   |  |  |  | | --- | --- | --- | |  | a. | Argument, conclusion: When the term *mineral* is used ... considered minerals. | |  | b. | Argument, conclusion: A mineral is a naturally occurring inorganic solid. | |  | c. | Argument; conclusion: Synthetic diamonds ... are not considered minerals. | |  | d. | Argument, conclusion: It possesses a definite chemical structure ... properties. | |  | e. | Nonargument. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 16. I was appalled to read that many communities are accommodating—or pandering to—the owners of sport utility vehicles by increasing the size of parking spaces. Apparently, officials in these cities just want to go with the flow, when they could be using parking-space politics to encourage the use of smaller, more fuel-efficient cars. When will Americans come to their senses and see the S.U.V. for what it is? It's an outsized extension of egotistical consumerism. I'm sick of being pushed around by the egotists in their Tahoes and Excursions who think nothing of misusing nonrenewable oil and gas reserves, as well as increasing pollution.  Jane F. Carlson, Letter to the Editor   |  |  |  | | --- | --- | --- | |  | a. | Argument, conclusion: It's an outsized extension of egotistical consumerism. | |  | b. | Argument, conclusion: I was appalled to read ... the size of parking spaces. | |  | c. | Argument, conclusion: I'm sick of being pushed ... increasing pollution. | |  | d. | Nonargument. | |  | e. | Argument, conclusion: Apparently, officials ... more fuel-efficient cars. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 17. Our attitudes and values inevitably affect how we act, and it is the same with politics. The functioning of political institutions at least partly reflects the attitudes, norms, and expectations of the citizenry. Thus the English use their constitutional institutions to sustain their liberty, while the same institutions were turned into instruments of repression in South Africa and Northern Ireland.  Gabriel Almond, *et al*., *Comparative Politics Today*, 7th ed.   |  |  |  | | --- | --- | --- | |  | a. | Argument, conclusion: The same institutions were turned ... Northern Ireland. | |  | b. | Argument, conclusion: Our attitudes and values ... same with politics. | |  | c. | Argument, conclusion: The English use ... South Africa and Northern Ireland. | |  | d. | Argument, conclusion: The functioning of political institutions ... the citizenry. | |  | e. | Nonargument. |  |  |  | | --- | --- | | *ANSWER:* | e | |

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

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| 18. Given that *n* is an integer, it follows that 2*n* is an even integer.   |  |  |  | | --- | --- | --- | |  | a. | Inductive, strong. | |  | b. | Deductive, valid. | |  | c. | Deductive, sound. | |  | d. | Inductive, weak. | |  | e. | Deductive, invalid. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 19. In professional boxing it is appropriate to throw knock-out punches. Since professional wrestling is similar in many ways to boxing, it is appropriate for professional wrestlers to throw knock-out punches.   |  |  |  | | --- | --- | --- | |  | a. | Inductive, weak. | |  | b. | Deductive, valid. | |  | c. | Deductive, cogent. | |  | d. | Inductive, strong. | |  | e. | Deductive, invalid. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 20. Most Hollywood stars have a criminal dark side. Look at Robert Blake. He killed his wife. And Winona Ryder ripped off stuff worth thousands of dollars from Saks Fifth Avenue.   |  |  |  | | --- | --- | --- | |  | a. | Inductive, cogent. | |  | b. | Deductive, invalid. | |  | c. | Inductive, strong. | |  | d. | Inductive, weak. | |  | e. | Deductive, valid. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 21. Mrs. Stevenson is a philanthropist. Therefore, she must give away a lot of money or property to what she considers worthy causes.   |  |  |  | | --- | --- | --- | |  | a. | Inductive, weak. | |  | b. | Deductive, sound. | |  | c. | Deductive, valid. | |  | d. | Deductive, invalid. | |  | e. | Inductive, strong. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 22. If people are not informed about the workings of government, then they cannot vote intelligently. People cannot vote intelligently. Therefore, people are not informed about the workings of government.   |  |  |  | | --- | --- | --- | |  | a. | Inductive, strong. | |  | b. | Deductive, invalid. | |  | c. | Inductive, sound. | |  | d. | Deductive, valid. | |  | e. | Inductive, weak. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 23. Each of the codefendants testified that the other defendant killed the victim. Therefore, we can only conclude that both defendants killed the victim.   |  |  |  | | --- | --- | --- | |  | a. | Deductive, unsound. | |  | b. | Deductive, invalid. | |  | c. | Deductive, valid. | |  | d. | Inductive, weak. | |  | e. | Inductive, strong. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 24. No supporters of abortion rights are fundamentalist Christians. Therefore, no fundamentalist Christians are supporters of abortion rights.   |  |  |  | | --- | --- | --- | |  | a. | Deductive, valid. | |  | b. | Inductive, strong. | |  | c. | Inductive, uncogent. | |  | d. | Inductive, weak. | |  | e. | Deductive, invalid. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 25. The highway sign says that the risk of forest fires in this area is extremely high right now. Therefore, we must conclude that the risk of forest fires is indeed high right now.   |  |  |  | | --- | --- | --- | |  | a. | Deductive, valid. | |  | b. | Deductive, invalid. | |  | c. | Inductive, cogent. | |  | d. | Inductive, weak. | |  | e. | Inductive, strong. |  |  |  | | --- | --- | | *ANSWER:* | e | |

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| 26. Less than one percent of 38-year-old expectant mothers give birth to a Down syndrome baby. Therefore, since Pamela is a 38-year-old expectant mother, it is unlikely that she will give birth to a Down syndrome baby.   |  |  |  | | --- | --- | --- | |  | a. | Deductive, invalid. | |  | b. | Inductive, weak. | |  | c. | Deductive, valid. | |  | d. | Deductive, sound. | |  | e. | Inductive, strong. |  |  |  | | --- | --- | | *ANSWER:* | e | |

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| 27. All credit cards are invitations to overspend, and some invitations to overspent are precursors of bankruptcy. Therefore, some credit cards are precursors of bankruptcy.   |  |  |  | | --- | --- | --- | |  | a. | Deductive, invalid. | |  | b. | Deductive, sound. | |  | c. | Inductive, strong. | |  | d. | Deductive, valid. | |  | e. | Inductive, weak. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 28. DNA tests of blood found at the crime scene indicate a match with the defendant's blood. Therefore, the defendant must have been present at the crime scene.   |  |  |  | | --- | --- | --- | |  | a. | Inductive, weak. | |  | b. | Inductive, strong. | |  | c. | Deductive, valid. | |  | d. | Deductive, invalid. | |  | e. | Inductive, cogent. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 29. Sandra is older than Florence, and Florence is younger than Carl. Therefore, it necessarily follows that Sandra is older than Carl.   |  |  |  | | --- | --- | --- | |  | a. | Inductive, strong. | |  | b. | Inductive, weak. | |  | c. | Deductive, invalid. | |  | d. | Inductive, uncogent. | |  | e. | Deductive, valid. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 30. Given that *x - y* = 13 and *x* = 18. It follows that y = 4.   |  |  |  | | --- | --- | --- | |  | a. | Inductive, strong. | |  | b. | Deductive, invalid. | |  | c. | Deductive, uncogent. | |  | d. | Inductive, weak. | |  | e. | Deductive, valid. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 31. Today's edition of the *New York Times* ran a long article on the terrorist bombing in Israel. Therefore, probably the *Los Angeles Times*, which covers international news about as well as the *New York Times*, also has an article on that bombing.   |  |  |  | | --- | --- | --- | |  | a. | Inductive, weak. | |  | b. | Deductive, valid. | |  | c. | Inductive, strong. | |  | d. | Inductive, cogent. | |  | e. | Deductive, invalid. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 32. Either the painting is a forgery, or it's worth a small fortune. Therefore, the painting is worth a small fortune, since it's not a forgery.   |  |  |  | | --- | --- | --- | |  | a. | Deductive, valid. | |  | b. | Deductive, invalid. | |  | c. | Deductive, sound. | |  | d. | Inductive, weak. | |  | e. | Inductive, strong. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 33. The Director of the National Park Service stated in an interview that vegetation in the parks is seriously threatened by air pollution. Therefore, it must be the case that park vegetation is indeed threatened by air pollution, just as the Director says.   |  |  |  | | --- | --- | --- | |  | a. | Deductive, valid. | |  | b. | Deductive, invalid. | |  | c. | Inductive, weak. | |  | d. | Inductive, uncogent. | |  | e. | Inductive, strong. |  |  |  | | --- | --- | | *ANSWER:* | e | |

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| 34. The bumper sticker says "Vote for Frank Jordan for Sheriff." The obvious conclusion is that Jordan is the best man for the job.   |  |  |  | | --- | --- | --- | |  | a. | Deductive, valid. | |  | b. | Inductive, strong. | |  | c. | Deductive, sound. | |  | d. | Inductive, weak. | |  | e. | Deductive, invalid. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| **INSTRUCTIONS:** Select the correct answer for each multiple choice question. |

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| 35. Which of the following is a premise indicator?   |  |  |  | | --- | --- | --- | |  | a. | Whence. | |  | b. | We may infer that. | |  | c. | Implies that. | |  | d. | Because | |  | e. | Accordingly. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 36. Which of the following is a conclusion indicator?   |  |  |  | | --- | --- | --- | |  | a. | Given that. | |  | b. | As. | |  | c. | For the reason that. | |  | d. | Owing to the fact that. | |  | e. | As a result. |  |  |  | | --- | --- | | *ANSWER:* | e | |

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| 37. Which of the following sentences is a statement?   |  |  |  | | --- | --- | --- | |  | a. | What is the density of gold? | |  | b. | Look! | |  | c. | You failed the last test. | |  | d. | Stop playing and come in for dinner. | |  | e. | I recommend that you change the oil in your car. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 38. Which of the following is a deductive argument?   |  |  |  | | --- | --- | --- | |  | a. | An expository passage. | |  | b. | An argument from authority. | |  | c. | A causal inference. | |  | d. | A disjunctive syllogism. | |  | e. | A command. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 39. Which of the following is an inductive argument?   |  |  |  | | --- | --- | --- | |  | a. | An argument from analogy. | |  | b. | A categorical syllogism. | |  | c. | A consequent. | |  | d. | A piece of advice. | |  | e. | An argument from definition. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 40. Which of the following is a necessary condition for cooking an egg?   |  |  |  | | --- | --- | --- | |  | a. | Boiling it. | |  | b. | Raising its temperature. | |  | c. | Frying it. | |  | d. | Poaching it. | |  | e. | Breaking its shell. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 41. Which of the following is a sufficient condition for being a bird?   |  |  |  | | --- | --- | --- | |  | a. | Having a tail. | |  | b. | Being a canary. | |  | c. | Laying eggs. | |  | d. | Being able to fly. | |  | e. | Having a brain. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 42. If a deductive argument has a false premise and a true conclusion, then we know:   |  |  |  | | --- | --- | --- | |  | a. | It is sound. | |  | b. | It is strong. | |  | c. | It is valid. | |  | d. | It is invalid. | |  | e. | Nothing as such about its validity. |  |  |  | | --- | --- | | *ANSWER:* | e | |

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| 43. If a deductive argument has all true premises and a false conclusion, then we know:   |  |  |  | | --- | --- | --- | |  | a. | It is invalid. | |  | b. | It is cogent. | |  | c. | It is valid. | |  | d. | It is sound. | |  | e. | It is weak. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 44. In an explanation, the statement or statements that purport to do the explaining are called:   |  |  |  | | --- | --- | --- | |  | a. | The explanandum. | |  | b. | The antecedent. | |  | c. | The explanans. | |  | d. | The consequent. | |  | e. | The premises. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| **INSTRUCTIONS:** The following problems relate to the counterexample method. |

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| 45. **PART A** Some fettuccines are not taste sensations, for no low fat recipes are taste sensations, and some fettuccines are not low fat recipes.  The form of this argument is:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | a. | No L are T. | b. | Some F are not T. | c. | Some F are not T. | |  | Some F are not T. |  | No L are T. |  | Some F are not L. | |  | Some F are not L. |  | Some F are not L. |  | No L are T. | |  |  |  |  |  |  | | d. | No L are T. | e. | Some F are not L. |  |  | |  | Some F are not L. |  | Some F are not T. |  |  | |  | Some F are not T. |  | No L are T. |  |  |   **PART B** Which of the following substitutions proves the argument invalid?   |  |  | | --- | --- | | a. | F = animals, L = dogs, T = cats. | | b. | L = fish, T = mammals, F = cats. | | c. | T = fish, L = mammals, F = cats. | | d. | F = dogs, T = mammals, L = animals. | | e. | L = dogs, F = animals, T = fish. |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  | | --- | --- | | Part A: | d | | Part B: | b | | |

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| 46. **PART A** If champagne contains alcohol, then minors should avoid it, so champagne contains alcohol, because minors should avoid it.  The form of this argument is:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | a. | If C then M. | b. | If C then M. | c. | M. | |  | M |  | C |  | C | |  | C |  | M |  | If C then M. | |  |  |  |  |  |  | | d. | All C are M. | e. | C are M. |  |  | |  | All A are M. |  | M |  |  | |  | All C are A. |  | C |  |  |   **PART B** Which of the following substitutions proves the argument invalid?   |  |  | | --- | --- | | a. | C = Napoleon was killed in a plane crash, M = Napoleon is alive. | | b. | C = cats, M = mammals. | | c. | C = Albert was killed in a car accident; M = Albert is dead. | | d. | C = cats, A = dogs, M = mammals. | | e. | C = Benjamin Franklin was killed in a plane crash; M = Benjamin Franklin is dead. |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  | | --- | --- | | Part A: | a | | Part B: | e | | |

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| 47. **PART A** If auditors botch their job, then investors are misled. Hence, if investors are misled, then public confidence is eroded, because if auditors botch their job, then public confidence is eroded.  The form of this argument is:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | a. | If I then P. | b. | If A then I. | c. | If A then I. | |  | If A then P. |  | If I then P. |  | If A then P. | |  | If A then I. |  | If A then P. |  | If I then P. | |  |  |  |  |  |  | | d. | All A are P. | e. | No A are I. |  |  | |  | All A are I. |  | No I are P. |  |  | |  | All I are P. |  | No A are P. |  |  |   **PART B** Which of the following substitutions proves the argument invalid?   |  |  | | --- | --- | | a. | A = Scarlett Johansson is a lawyer; I = Scarlett Johansson is a human; P = Scarlett Johansson can represent clients in court. | | b. | A = Ben Affleck is an actor, I = Ben Affleck is well known, P = Ben Affleck is a human. | | c. | A = cats, P = mammals, I = animals. | | d. | A = dogs, I = fish, P = mammals. | | e. | A = candy is sweet, I = lemons are sour, P = sea water is salty. |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  | | --- | --- | | Part A: | c | | Part B: | a | | |