CRITICAL REASONIING

An example of a Critical Reasoning text:

A CEO of a major company noted a serious decline in worker productivity during the previous five years. According to a report done by an outside consultant, productivity dropped by 35% by the end of that period. The CEO has therefore initiated a plan to boost productivity by giving employees shares of the company as part of their pay package.

Find out the following four parts in the above text:

i. Conclusion/Main Idea

ii. Premise

iii. Assumption

iv. Supporting Information

Weaken the argument

1. Shelby industries manufactures and sells the same gauges as Jones Industries. Employee wages account for 40 percent of the cost of manufacturing gauge at both Shelby Industries and Jones Industries. Shelby Industries is seeking a competitive advantage over Jones Industries. Therefore, to promote this end, Shelby Industries should lower employee wages.

Which of the following, if true, would most weaken the argument above?

(a) Because they make a small number of precision instruments, gauge manufactures cannot receive volume discounts on raw materials.

(b) Lowering wages would reduce the quality of employee work, and this reduced quality would lead to lowered sales.

(c) Jones Industries has taken away 20 percent of Shelby Industries' business over the last year.

(d) Shelby Industries pays its employees, on average, 10 percent more than does Jones Industries.

1. In the arid land along the Colorado River, use of the river's water supply is strictly controlled: farms along the river each have a limited allocation that they are allowed to use for irrigation. But the trees that grow in narrow strips along the river's banks also use its water. Clearly, therefore, if farmers were to remove those trees, more water would be available for crop irrigation.

Which of the following, if true, most seriously weakens the argument?

(a) The trees along the river's banks shelter it from the sun and wind, thereby greatly reducing the amount of water lost through evaporation.

(b) Owners of farms along the river will probably not undertake the expense of cutting down trees along the banks unless they are granted a greater allocation of water in return.

(c) Many of the tree species currently found along the river's banks are specifically adapted to growing in places where tree roots remain constantly wet.

(d) The strip of land where trees grow along the river's banks would not be suitable for growing crops if the trees were removed.

1. Automobile Dealer's Advertisement:

The Highway Traffic Safety Institute reports that the PZ 1000 has the fewest injuries per accident of any car in its class. This shows that the PZ 1000 is one of the safest cars available today.

Which of the following, if true, most seriously weakens the argument in the advertisement?

(a) The Highway Traffic Safety Institute report listed many cars in other classes that had more injuries per accident than did the PZ 1000.

(b) In recent years many more PZ 1000s have been sold than have any other kind of car in its class.

(c) Cars in the class to which the PZ 1000 belongs are more likely to be involved in accidents than are other types of cars.

(d) The difference between the number of injuries per accident for the PZ 1000 and that for other cars in its class is quite pronounced.

4. Editorial: The mayor plans to deactivate the city's fire alarm boxes, because most calls received from them are false alarms. The mayor claims that the alarm boxes are no longer necessary, since most people now have access to either public or private telephones. But the city's commercial district, where there is the greatest risk of fire, has few residents and few public telephones, so some alarm boxes are still necessary.

Which of the following, if true, most seriously weakens the editorial's argument?

(a) Maintaining the fire alarm, boxes costs the city more than five million dollars annually.

(b) Commercial buildings have automatic fire alarm systems that are linked directly to the fire department.

(c) The fire department gets less information from an alarm box than it does from a telephone call.

(d) The city's fire department is located much closer to the residential areas than to the commercial district.

5. A study of marital relationships in which one partner's sleeping and waking cycles differ from those of the other partner reveals that such couples share fewer activities with each other and have more violent arguments than do couples in a relationship in which both partners follow the same sleeping and waking patterns. Thus, mismatched sleeping and waking cycles can seriously jeopardize a marriage.

Which of the following, if true, most seriously weakens the argument above?

(a) Married couples in which both spouses follow the same sleeping and waking patterns also occasionally have arguments that can jeopardize the couple's marriage.

(b) The sleeping and waking cycles of individuals tend to vary from season to season.

(c) The individuals who have sleeping and waking cycles that differ significantly from those of their spouses tend to argue little with colleagues at work.

(d) People in unhappy marriages have been found to express hostility by adopting a different sleeping and waking cycle from that of their spouses.

6. Some rental car agencies in the U.S. are now looking into installing satellite-guided navigation systems in their automobiles. The driver inputs the address on a keyboard, and the on-board computer calls out directions in American English, such as “You are now approaching Main Street”. Rental car agencies hope to target foreign tourists and travelers unfamiliar with the United States.

Which of the following, if true, provides the greatest reason to suggest that the plan will not work?

a. These new computer navigation systems are expensive to install in many automobiles.

b. Some foreigners visiting the United States may not understand English.

c. Some people argue that the computer’s voice sounds extremely cold and impersonal.

d. Many American citizens will also want to take advantage of the satellite-guided navigation systems.

Strengthen the argument

1. The city council of Nowheresville has proposed establishing tollbooths on all of the major routes into the city. The council’s reasoning is that this fee will force many commuters to switch from private automobiles to the public transportation system.

Which of the following statements, if true, provides the best evidence that the city council’s plan will be successful?

a. The price of gasoline is projected to plummet in the next few months.

b. Several other cities have attempted to implement the scheme in the past, with mixed results.

c. Currently the average private commuter car spends one hour and forty-five minute in the commute into the city.

d. A new study suggests that many commuters with cars would switch to public transportation if driving in the city became any more expensive.

2. Virtually all health experts agree that second-hand smoke poses a serious health risk. After the publication of yet another research paper explicating the link between exposure to second-hand smoke and a shorter life span, some members of the State House Representatives proposed a ban on smoking in most public places in an attempt to promote quality of life and length of lifespan.

Which of the following, if true, provides the most support for the actions of the State Representatives?

a. The amount of damaging chemicals and fumes released into the air by cigarette smoke is far less than the amount released from automobiles, especially from older models.

b. Banning smoking in most public places will not considerably reduce the percent of the population in the state in question that smokes.

c. The state whose legislators are proposing the tough smoking legislation has a relatively high percent of its population that smoke.

d. Another state that enacted a similar law a decade ago saw a statistically significant drop in lung-cancer rates among non-smokers.

3. Aphasia, an impairment of the capacity to use language, often occurs when a stroke damages the left half the brain. Many people with stroke-related aphasia recover at least some capacity to use language within a year. One proposed explanation for such recoveries is that the right side of the brain, which is not usually the major language center, develops its latent language capabilities to compensate for the damage to the left side.

Which of the following, if true, most strongly supports the explanation?

(A) In a study of local brain activity in people performing a language task, people with stroke-related aphasia showed higher activity levels in the right half of the brain than people who did not have aphasia.

(B) A blow to the head injuring the left half of the brain can result in impairment of the capacity to use language indistinguishable from that produced by a stroke.

(C) Among people with stroke-related aphasia, recovering lost capacity to use language does not lead to any impairment of those capacities normally controlled by the right half of the brain.

(D) A stroke that damages the left half of the brain often causes physical impairments of the right side of the body that lessen over time.

4. Toughened hiring standards have not been the primary cause of the present staffing shortage in public schools. The shortage of teachers is primarily caused by the fact that in recent years teachers have not experienced any improvements in working conditions and their salaries have not kept pace with salaries in other professions.

Which of the following, if true, would most support the claim above?

(A) Many teachers already in the profession would not have been hired under the new hiring standards.

(B) Today more teachers are entering the profession with a higher educational level than in the past.

(C) Some teachers have cited higher standards for hiring as a reason for the current staffing shortage.

(D) Many teachers have cited low pay and lack of professional freedom as reasons for their leaving the profession.

5. Two decades after the Emerald River Dam was built, none of the eight fish species native to the Emeraid River was still reproducing adequately in the river below the dam. Since the dam reduced the annual range of water temperature in the river below the dam from 50 degrees to 6 degrees, scientists have hypothesized that sharply rising water temperatures must be involved in signaling the native species to begin the reproductive cycle.

Which of the following statements, if true, would most strengthen the scientists' hypothesis?

(A) The native fish species were still able to reproduce only in side streams of the river below the dam where the annual temperature range remains approximately 50 degrees.

(B) Before the dam was built, the Emeraid River annually overflowed its banks, creating backwaters that were critical breeding areas for the native species of fish.

(C) The lowest recorded temperature of the Emerald River before the dam was built was 34 degrees, whereas the lowest recorded temperature of the river after the dam was built has been 43 degrees.

(D) Non native species of fish, introduced into the Emerald River after the dam was built, have begun competing with the declining native fish species for food and space.

Supply the conclusion

1. Some studies indicate that alcohol advertisements on television cause people to increase their alcohol consumption. In Arcadia, however, where there has been a ban on alcohol advertising for the last ten years, alcohol consumption per capita is at least as high as in countries that do not have such a ban in place.

Which of the following statements draws the most reliable conclusion from the information above?

a. People tend to consume more alcohol if they are exposed to alcohol advertisements than if they are not exposed to those advertisements.

b. Advertising has no effect on whether people consume more or less alcohol.

c. Advertising cannot be the only factor that determines an individual’s consumption of alcohol.

d. Most people continued to consume alcohol after the ban was implemented.

2. Political Commentator: In order for a democracy to flourish, it is essential that political and journalistic freedom of expression exist. Even if commentators voice ideas that do not support the current government, a society is strengthened by the variety of views expressed. Yet, our government continues to exercise a stranglehold on certain forms of speech. It is essential that the government loosen its control on the media. Despite the potential short-term instability this may cause the country, it will strengthen the long-term health of the country.

Which of the following expresses the conclusion of the argument?

a. The government is exercising too much control over the media.

b. The government needs to open the media and release its hold on certain forms of speech.

c. Democracy requires a strong and free press.

d. Even ideas not supportive of democracy can strengthen a government.

3. Large national budget deficits do not cause large trade deficits. If they did, countries with the largest budget deficits would also have the largest trade deficits. In fact, when deficits figures are adjusted so that different countries are reliably comparable to each other, there is no such correlation.

If the statements above are all true, which of the following can properly be inferred on the basis of them?

(A) Countries with large national budget deficits tend to restrict foreign trade.

(B) Reliable comparisons of the deficit figures of the country with those of another are impossible.

(C) Reducing a country's national budget deficit will not necessarily result in a lowering of any trade deficit that country may have.

(D) When countries are ordered from largest to smallest countries generally have the smallest budget and trade deficits.

4. A computer equipped with signature-recognition software, which restricts access to a computer to those people whose signatures are on file, identifies a person's signature by analyzing not only the form of the signature but also such characteristics as pen pressure and signing speed. Even the most adept forgers cannot duplicate all of the characteristics the program analyzes.

Which of the following can be logically concluded from the passage above?

(A) The time it takes to record and analyze a signature makes the software impractical for everyday use.

(B) Computers equipped with the software will soon be installed in most banks.

(C) Nobody can gain access to a computer equipped with the software solely by virtue of skill at forging signatures.

(D) Signature-recognition software has taken many years to develop and perfect.

5. Laws requiring the use of headlights during daylight hours can prevent automobile collisions. However, since daylight visibility is worse in countries farther from the equator, any such laws would obviously be more effective in preventing collisions in those countries. In fact, the only countries that actually have such laws are farther from the equator than is the continental United States.

Which of the following conclusions could be most properly drawn from the information given above?

(A) Drivers in the continental United States who used their headlights during the day would be just as likely to become involved in a collision as would drivers who did not use their headlights.

(B) In many countries that are farther from the equator than is the continental United States, poor daylight visibility is the single most important factor in automobiles collisions.

(C) The proportion of automobile collisions that occur each year in countries that have daytime is greater in the continental United States than in the countries that have daytime headlights laws.

(D) Daytime headlight laws would probably do less to prevent automobile collisions in the continental United States than they do in the countries that have the laws.