

**CRITICAL REASONING:**

**1. In the past most airline companies minimized aircraft weight to minimize fuel costs. The safest airline seats were heavy, and airlines equipped their planes with few of these seats. This year the seat that has sold best to airlines has been the safest one—a clear indication that airlines are assigning a higher priority to safe seating than to minimizing fuel costs.**

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

- (A) Last year's best-selling airline seat was not the safest airline seat on the market.
- (B) No airline company has announced that it would be making safe seating a higher priority this year.
- (C) The price of fuel was higher this year than it had been in most of the years when the safest airline seats sold poorly.
- (D) Because of increases in the cost of materials, all airline seats were more expensive to manufacture this year than in any previous year.
- (E) Because of technological innovations, the safest airline seat on the market this year weighed less than most other airline seats on the market.

**2. 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.
- (E) In many cases even authorized users are denied legitimate access to computers equipped with the software.

**3. Division manager: I want to replace the Microton computers in my division with Vitech computers.**

**General manager: Why?**

**Division manager: It costs 28 percent less to train new staff on the Vitech.**

**General manager: But that is not a good enough reason. We can simply hire only people who already know how to use the Microton computer.**

Which of the following, if true, most seriously undermines the general manager's objection to the replacement of Microton computers with Vitechs?

- (A) Currently all employees in the company are required to attend workshops on how to use Microton computers in new applications.
- (B) Once employees learn how to use a computer, they tend to change employers more readily than before.

- (C) Experienced users of Microton computers command much higher salaries than do prospective employees who have no experience in the use of computers.
- (D) The average productivity of employees in the general manager's company is below the average productivity of the employees of its competitors.
- (E) The high costs of replacement parts make Vitech computers more expensive to maintain than Microton computers.

**4. An airplane engine manufacturer developed a new engine model with safety features lacking in the earlier model, which was still being manufactured. During the first year that both were sold, the earlier model far outsold the new model; the manufacturer thus concluded that safety was not the customers' primary consideration.**

Which of the following, if true, would most seriously weaken the manufacturer's conclusion?

- (A) Both private plane owners and commercial airlines buy engines from this airplane engine manufacturer.
- (B) Many customers consider earlier engine models better safety risks than new engine models, since more is usually known about the safety of the earlier models.
- (C) Many customers of this airplane engine manufacturer also bought airplane engines from manufacturers who did not provide additional safety features in their newer models.
- (D) The newer engine model can be used in all planes in which the earlier engine model can be used.
- (E) There was no significant difference in price between the newer engine model and the earlier engine model.

**5. Between 1975 and 1985, nursing-home occupancy rates averaged 87 percent of capacity, while admission rates remained constant, at an average of 95 admissions per 1,000 beds per year. Between 1985 and 1988, however, occupancy rates rose to an average of 92 percent of capacity, while admission rates declined to 81 per 1,000 beds per year.**

If the statements above are true, which of the following conclusions can be most properly drawn?

- (A) The average length of time nursing-home residents stayed in nursing homes increased between 1985 and 1988.
- (B) The proportion of older people living in nursing homes was greater in 1988 than in 1975.
- (C) Nursing home admission rates tend to decline whenever occupancy rates rise.
- (D) Nursing homes built prior to 1985 generally had fewer beds than did nursing homes built between 1985 and 1988.
- (E) The more beds a nursing home has, the higher its occupancy rate is likely to be.

**6. Firms adopting "profit-related-pay" (PRP) contracts pay wages at levels that vary with the firm's profits. In the metalworking industry last year, firms with PRP contracts in place showed productivity per worker on average 13 percent higher than that of their competitors who used more traditional contracts.**

If, on the basis of the evidence above, it is argued that PRP contracts increase worker productivity, which of the following, if true, would most seriously weaken that argument?

- (A) Results similar to those cited for the metal-working industry have been found in other industries where PRP contracts are used.

- (B) Under PRP contracts costs other than labor costs, such as plant, machinery, and energy, make up an increased proportion of the total cost of each unit of output.
- (C) Because introducing PRP contracts greatly changes individual workers' relationships to the firm, negotiating the introduction of PRP contracts is complex and time consuming.
- (D) Many firms in the metalworking industry have modernized production equipment in the last five years, and most of these introduced PRP contracts at the same time.
- (E) In firms in the metalworking industry where PRP contracts are in place, the average take-home pay is 15 percent higher than it is in those firms where workers have more traditional contracts.

**7. Crops can be traded on the futures market before they are harvested. If a poor corn harvest is predicted, prices of corn futures rise; if a bountiful corn harvest is predicted, prices of corn futures fall. This morning meteorologists are predicting much-needed rain for the corn-growing region starting tomorrow. Therefore, since adequate moisture is essential for the current crop's survival, prices of corn futures will fall sharply today.**

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

- (A) Corn that does not receive adequate moisture during its critical pollination stage will not produce a bountiful harvest.
- (B) Futures prices for corn have been fluctuating more dramatically this season than last season.
- (C) The rain that meteorologists predicted for tomorrow is expected to extend well beyond the corn-growing region.
- (D) Agriculture experts announced today that a disease that has devastated some of the corn crop will spread widely before the end of the growing season.
- (E) Most people who trade in corn futures rarely take physical possession of the corn they trade.

**8. A discount retailer of basic household necessities employs thousands of people and pays most of them at the minimum wage rate. Yet following a federally mandated increase of the minimum wage rate that increased the retailer's operating costs considerably, the retailer's profits increased markedly.**

Which of the following, if true, most helps to resolve the apparent paradox?

- (A) Over half of the retailer's operating costs consist of payroll expenditures; yet only a small percentage of those expenditures go to pay management salaries.
- (B) The retailer's customer base is made up primarily of people who earn, or who depend on the earnings of others who earn, the minimum wage.
- (C) The retailer's operating costs, other than wages, increased substantially after the increase in the minimum wage rate went into effect.
- (D) When the increase in the minimum wage rate went into effect, the retailer also raised the wage rate for employees who had been earning just above minimum wage.
- (E) The majority of the retailer's employees work as cashiers, and most cashiers are paid the minimum wage.

**9. The cotton farms of Country Q became so productive that the market could not absorb all that they produced. Consequently, cotton prices fell. The government tried to boost cotton prices by offering farmers who took 25 percent of their cotton acreage out of production direct support payments up to a specified maximum per farm.**

The government's program, if successful, will not be a net burden on the budget. Which of the following, if true, is the best basis for an explanation of how this could be so?

- (A) Depressed cotton prices meant operating losses for cotton farms, and the government lost revenue from taxes on farm profits.
- (B) Cotton production in several counties other than Q declined slightly the year that the support-payment program went into effect in Q.
- (C) The first year that the support-payment program was in effect, cotton acreage in Q was 5% below its level in the base year for the program.
- (D) The specified maximum per farm meant that for very large cotton farms the support payments were less per acre for those acres that were withdrawn from production than they were for smaller farms.
- (E) Farmers who wished to qualify for support payments could not use the cotton acreage that was withdrawn from production to grow any other crop.

**10. United States hospitals have traditionally relied primarily on revenues from paying patients to offset losses from unreimbursed care. Almost all paying patients now rely on governmental or private health insurance to pay hospital bills. Recently, insurers have been strictly limiting what they pay hospitals for the care of insured patients to amounts at or below actual costs.**

Which of the following conclusions is best supported by the information above?

- (A) Although the advance of technology has made expensive medical procedures available to the wealthy, such procedures are out of the reach of low-income patients.
- (B) If hospitals do not find ways to raising additional income for unreimbursed care, they must either deny some of that care or suffer losses if they give it.
- (C) Some patients have incomes too high for eligibility for governmental health insurance but are unable to afford private insurance for hospital care.
- (D) If the hospitals reduce their costs in providing care, insurance companies will maintain the current level of reimbursement, thereby providing more funds for unreimbursed care.
- (E) Even though philanthropic donations have traditionally provided some support for the hospitals, such donations are at present declining.

## Answers

1. If the safest airline seats are now among the lightest, as choice E says, then buying them could be part of a strategy of minimizing fuel costs, rather than indicating a shift away from that goal. Choice E, therefore, is the best choice.

Choice A merely confirms that seat safety has improved, and thus does not weaken the argument. Many policy shifts take place without being publicly announced, so choice B does not weaken the argument. Choice C indicates that minimizing fuel costs remains a priority, but it is neutral on whether safety has become more important, so C is incorrect. Choice D does not distinguish between safe and unsafe seats, and is thus also incorrect.

2.

The passage asserts that skill at forging signatures is not by itself sufficient to match all of the characteristics that the software analyzes to identify signatures. Because the software gives access only after identifying a signature, access cannot be achieved by someone employing forging skill alone. Choice C is thus the best answer.

The passage gives no information about how fast the software operates or about how long the software was under development, so neither A nor D can be concluded. Choice B is incorrect since the software might have features not mentioned in the passage that make it unattractive to banks. The passages give no reason to think that errors of the sort that choice E describes, even if made, would be numerous.

3.

The general manager's objection is based on avoiding training costs altogether. But if, as choice C says, hiring experienced users of Microton computers is significantly more costly than hiring otherwise qualified people who would have to be trained to use Vitech computers, the force of the objection is weakened. Choice C, therefore, is the best answer.

Choices A, B, and D are all incorrect; none of them provides information relevant to an evaluation of Microton computers as compared with Vitech computers. Choice E argues independently against replacing Microton computers with Vitech and thus is also incorrect.

4.

The manufacturers' conclusion would be weakened if it could be argued that, in the opinion of customers, safety considerations favor the earlier model. Choice B supports such an argument and is the best answer.

The groups mentioned in choice A would both be expected to consider safety important, so their failing to buy the new model would be striking, without casting doubt on the conclusion; thus, choice A is incorrect. Choice C might support the conclusion, because customers bought other engine support the conclusion, because customers bought other engine models that might not include the newer safety features. Choice D and E suggest that usability and price, respectively, were not the customers' primary consideration in favoring the earlier model, but neither choice weakens the conclusion that safety was not their primary consideration.

5.

Between 1985 and 1988, nursing home occupancy rates rose although admission rates declined. Choice A receives support from these facts since it would be a basis for an adequate account of how they arose. Because it is the only choice that receives support, A is therefore the best answer.

Without information about the population of older people, nothing can be concluded about percentages in nursing homes; thus, choice B is incorrect. Since there is nothing to indicate whether the development that took place between 1985 and 1988 was an unusual development or a common one, choice C receives no support. No information about numbers of beds is provided, so neither choice D nor choice E is correct.

6.

According to choice D, many firms with PRP contracts also have modernized equipment. Since the cause of their improved productivity might be the modernized equipment, not the PRP contracts, this weakens the argument, so D is the best answer.

Choice A does not weaken the argument: it is merely more evidence of the sort already being used. Choice B is incorrect because it is a natural consequence of increased worker productivity if other costs remain stable. Choice C is incorrect because it explains why introducing PRP contracts is difficult, but says nothing about the results of doing so. Choice E is incorrect because it is not implausible that workers' pay should roughly correspond to their productivity.

7.

The argument, in predicting a drop in the price of corn futures, relies on news suggesting a good-sized corn crop. This prediction is undermined if there is, at the same time, news suggesting a small crop. Choice D presents such news and is therefore the best answer.

Choice A provides background information describing a stage at which rains are essential, and choice C makes rain over the entire corn-growing area seem more certain. Both are fully compatible with the argument and do nothing to weaken it. Past price changes (choice B) and details of who handles harvested corn (choice E) cannot affect the eventual size of this year's corn crop, so neither is relevant to the argument.

8.

The question to be resolved is why the mandated wage increase, which increased operating costs, was accompanied by an increase in profits. By showing how the wage increase might have led to an increase in the retailer's sales, choice B helps resolve this question, and thus is the best answer.

Choices A and E are incorrect, since they suggest that the wages that rose as a result of the mandated increase constituted a significant proportion of the retailer's expenditures, which if anything adds to the seeming paradox. Choices C and D also contribute to the paradox, since they indicate that along with increases in the minimum wage there were increases in the retailer's operating costs; so choices C and D are also incorrect.

9.

If the government's program of support payments to cotton farmers succeeded in raising revenue for the government that would, in the absence of the program, not be raised, this could explain why the program will not be a net burden on the budget. Choice A suggests that the program

would raise revenue: by raising the price of cotton, the direct support payments will boost cotton farmers' profits and thereby increase the tax revenues the government receives from cotton farmers. Therefore, A is the best answer.

None of the other choices provides a source of revenue to the government or suggests that savings would be realized in a governmental expense category, so choices B, C, D, and E are all incorrect.

10.

The passage explains that the primary way hospitals have covered the cost of unreimbursed care in the past is no longer available to them. It follows that they have three options: finding a new way to cover that cost, reducing it by giving less unreimbursed care, or suffering a loss. This is essentially what choice B concludes, so B is the best answer.

The passage touches neither on kinds of medical procedures administered in hospitals (choice A) nor on revenue other than that received from patients or their insurers (choice E), so neither choice is correct. The passage gives no hint of who the paying patients are how do not rely on insurance, so choice C is unsupported. Concerning choice D, the passage actually suggests that it is false.