

## The Sample of Master in Finance Admission Test

**Quantitative Section****Problem solving**

*Directions: Solve each of the following questions; then indicate the correct answer.*

1. A salesman's income consists of commission and base salary. His weekly income totals over the past 5 weeks have been \$360, \$390, \$430, \$415 and \$450. What must his average income over the next two weeks be to increase his average weekly income to \$460 over the 7-week period?
  - A. \$570
  - B. \$587.50
  - C. \$557.50
  - D. \$586
  - E. \$615
2. A fish tank is one-fourth full of water. If six gallons of water were added, the tank would be three-fourths full. What is the capacity of the tank (in gallons)?
  - A. 10
  - B. 14
  - C. 18
  - D. 12
  - E. 8
3. The value of a cellular phone declines by 33 percent of its current value every year. At this rate, approximately how many years will it take for the price of a \$243 cell phone to reach \$72?
  - A. 2.5
  - B. 2
  - C. 3
  - D. 13
  - E. 13.5
5. City B is 4 km due east of city A. City C is 3 km due south of city B. City D is 4 km due east of city C, and city E is 9 km due north of city D. What is the distance between city A and city E?
  - A. 10 km
  - B. 20 km
  - C. 24 km
  - D. 30 km
  - E. 42 km

**Data Sufficiency**

*Directions: Each of the following problems has a question and two statements which are labeled (1) and (2). Use the data given in (1) and (2) together with other available information to decide whether the statements are sufficient to answer the question. Then fill in space*

- (A) If you can get the answer from (1) ALONE but not from (2) alone.
- (B) If you can get the answer from (2) ALONE but not from (1) alone.
- (C) If you can get the answer from BOTH (1) and (2) TOGETHER but not from (1) alone or (2) alone.
- (D) If EITHER statement (1) ALONE OR statement (2) ALONE suffices.
- (E) If you CANNOT get the answer from statements (1) and (2) TOGETHER but need even more data

1. What is the distance between two cities X and Y? City Z is 60 miles due south of city X.
  - (1) The distance between cities Y and Z is 80 miles.
  - (2) City Z is due west of city Y.
2. A fish tank has two holes A and B. How long will it take for the two holes A and B to empty the tank if they each worked alternately for an hour at a time, starting with hole B?
  - (1) Working alone, hole A can empty the tank in 5 hours.
  - (2) Hole B takes twice the time as that of hole A.
3. Is the perimeter of a given rectangle greater than 10 cm?
  - (1) The length of the rectangle is 2 cm greater than the width.
  - (2) The two shorter sides of the rectangle are 2.5 cm long.
4. What is the value of the integer P?
  - (1) P is an integer multiple of 2, 4 and 5.
  - (2)  $P < 60$
5. What is the value of X, if X and Y are two distinct integers and their product is 30?
  - (1) X is an odd integer
  - (2)  $X > Y$

### Verbal Section

#### Reading comprehension questions

Modern manufacturers, who need reliable sources of materials and technologically advanced components to operate profitably, face an increasingly difficult choice between owning the producers of these items (a practice known as backward integration) and buying from independent producers. Manufacturers who integrate may reap short-term rewards, but they often restrict their future capacity for innovative product development.

Backward integration removes the need for some purchasing and marketing functions, centralizers overhead, and permits manufacturers to eliminate duplicated efforts in research and development. Where components are commodities (ferrous metals or petroleum, for example), backward integration almost certainly boosts profits. Nevertheless, because product innovation means adopting the most technologically advanced and cost-effective ways of making components, backward integration may entail a serious risk for a technologically active company—for example, a producer of sophisticated consumer electronics.

A company that decides to make rather than buy important parts can lock itself into an outdated technology. Independent suppliers may be unwilling to share innovations with assemblers with whom they are competing. Moreover, when an assembler sets out to master the technology of producing advanced components, the resulting demands on its resources may compromise its ability to assemble these components successfully into end products. Long-term contracts with suppliers can achieve many of the same cost benefits as backward integration without compromising a company's ability to innovate.

However, moving away from backward integration is not a complete solution either. Developing innovative technologies requires independent suppliers of components to invest huge sums in research and development. The resulting low profit margins on the sale of components threaten the long-term financial stability of these firms. Because the ability of end-product assemblers to respond to market opportunities depends heavily on suppliers of components, assemblers are often forced to integrate by purchasing the suppliers of components just to keep their suppliers in business.

1. According to the passage, all of the following are benefits associated with backward integration EXCEPT:
  - (A) improvement in the management of overhead expenses
  - (B) enhancement of profit margins on sales of components

- (C) simplification of purchasing and marketing operations
- (D) reliability of a source of necessary components
- (E) elimination of unnecessary research efforts

2. According to passage, when an assembler buys a firm that makes some important component of the end product that the assembler produces, independent suppliers of the same component may

- (A) withhold technological innovations from the assembler
- (B) experience improved profit margins on sales of their products
- (C) lower their prices to protect themselves from competition
- (D) suffer financial difficulties and go out of business
- (E) stop developing new versions of the component

3. Which of the following best describes the way the last paragraph functions in the context of the passage?

- (A) The last in a series of arguments supporting the central argument of the passage is presented.
- (B) A viewpoint is presented which qualifies one presented earlier in the passage.
- (C) Evidence is presented in support of the argument developed in the preceding paragraph.
- (D) Questions arising from the earlier discussion are identified as points of departure for further study of the topic.
- (E) A specific example is presented to illustrate the main elements of argument presented in the earlier paragraphs.

4. According to the passage, which of the following relationships between profits and investments in research and development holds true for producers of technologically advanced components?

- (A) Modest investments are required and the profit margins on component sales are low.
- (B) Modest investments are required but the profit margins on component sales are quite high.
- (C) Despite the huge investments that are required, the profit margins on components sales are high.
- (D) Because huge investments are required, the profit margins on component sales are low.
- (E) Long-term contractual relationships with purchasers of components ensure a high ratio of profits to investment costs.

### **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.

### **Sentence correction**

1. In the textbook publishing business, the second quarter is historically weak, because revenues are low and marketing expenses are high as companies prepare for the coming school year.

- (A) low and marketing expenses are high as companies prepare
- (B) low and their marketing expenses are high as they prepare
- (C) low with higher marketing expenses in preparation
- (D) low, while marketing expenses are higher to prepare
- (E) low, while their marketing expenses are higher in preparation

2. Teratomas are unusual forms of cancer because they are composed of tissues such as tooth and bone not normally found in the organ in which the tumor appears.

- (A) because they are composed of tissues such as tooth and bone

- (B) because they are composed of tissues like tooth and bone that are
- (C) because they are composed of tissues, like tooth and bone, tissues
- (D) in that their composition, tissues such as tooth and bone, is
- (E) in that they are composed of tissues such as tooth and bone, tissues
3. The Senate approved immigration legislation that would grant permanent residency to millions of aliens currently residing here and if employers hired illegal aliens they would be penalized.
- (A) if employers hired illegal aliens they would be penalized
- (B) hiring illegal aliens would be a penalty for employers
- (C) penalize employers who hire illegal aliens
- (D) penalizing employers hiring illegal aliens
- (E) employers to be penalized for hiring illegal aliens
4. Scientists have recently discovered what could be the largest and oldest living organism on Earth, a giant fungus that is an interwoven filigree of mushrooms and rootlike tentacles spawned by a single fertilized spore some 10,000 years ago and extending for more than 30 acres in the soil of a Michigan forest.
- (A) extending
- (B) extends
- (C) extended
- (D) it extended
- (E) is extending
5. The period when the great painted caves at Lascaux and Altamira were occupied by Upper Paleolithic people has been established by carbon-14 dating, but what is much more difficult to determine are the reason for their decoration, the use to which primitive people put the caves, and the meaning of the magnificently depicted animals.
- (A) has been established by carbon-14 dating, but what is much more difficult to determine are
- (B) has been established by carbon-14 dating, but what is much more difficult to determine is
- (C) have been established by carbon-14 dating, but what is much more difficult to determine is
- (D) have been established by carbon-14 dating, but what is much more difficult to determine are

(E) are established by carbon-14 dating, but that which is much more difficult to determine is

6. The Baldrick Manufacturing Company has for several years followed a policy aimed at decreasing operating costs and improving the efficiency of its distribution system.

(A) aimed at decreasing operating costs and improving

(B) aimed at the decreasing of operating costs and to improve

(C) aiming at the decreasing of operating costs and improving

(D) the aim of which is the decreasing of operating costs and improving

(E) with the aim to decrease operating costs and to improve