MATH SECTION

Q1:

A wire that weighs 24 kilograms is cut into two pieces so that one of the pieces weighs 16 kilograms and is 34 meters long. If the weight of each piece is proportional to its length, how many meters long is the other piece of wire?

        A. 8
        B. 11
        C. 13
        D. 17
        E. 20

Q2:

If a certain machine produces bolts at a constant rate, how many seconds will it take the machine to produce 300 bolts?
    (1) It takes the machine 56 seconds to produce 40 bolts.
    (2) It takes the machine 1.4 seconds to produce 1 bolt.

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q3:

If k, m, and p are integers, is $k - m - p$ odd?
    (1) k and m are even and p is odd.
    (2) k, m, and p are consecutive integers.

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q4:

If x is the product of the positive integers from 1 to 8, inclusive, and if i, k, m, and p are positive integers such that $x = 2^i 3^k 5^m 7^p$, then $i + k + m + p =$

A. 4
B. 7
C. 8
D. 11
E. 12

Q5:
If a code word is defined to be a sequence of different letters chosen from the 10 letters
A, B, C, D, E, F, G, H, I, and *J*, what is the ratio of the number of 5-letter code words to
the number of 4-letter code words?

A. 5 to 4
B. 3 to 2
C. 2 to 1
D. 5 to 1
E. 6 to 1

Q6:
If two copying machines work simultaneously at their respective constant rates, how
many copies do they produce in 5 minutes?
   (1) One of the machines produces copies at the constant rate of 250 copies per
        minute.
   (2) One of the machines produces copies at twice the constant rate of the other
        machine.

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is
sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

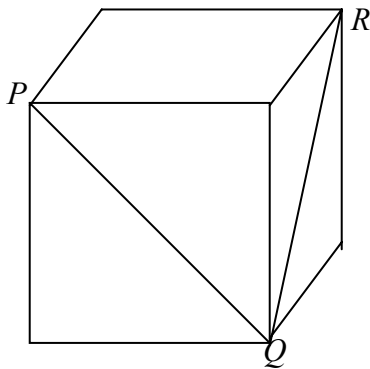---

Q7:
Is $xy > x^2y^2$?
    (1) $14x^2 = 3$
    (2) $y^2 = 1$

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is
sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q8:

For the cube shown above, what is the degree measure of $\angle PQR$?

        A. 30
        B. 45
        C. 60
        D. 75
        E. 90

Q9:
If an integer n is to be chosen at random from the integers 1 to 96, inclusive, what is the probability that $n(n + 1)(n + 2)$ will be divisible by 8?

    A. $\dfrac{1}{4}$

    B. $\dfrac{3}{8}$

    C. $\dfrac{1}{2}$

    D. $\dfrac{5}{8}$

    E. $\dfrac{3}{4}$

Q10:
A total of $60,000 was invested for one year. Part of this amount earned simple annual interest at the rate of x percent per year, and the rest earned simple annual interest at the

rate of y percent per year. If the total interest earned by the $60,000 for that year was $4,080, what is the value of x?

(1) $x = \dfrac{3y}{4}$

(2) The ratio of the amount that earned interest at the rate of x percent per year to the amount that earned interest at the rate of y percent per year was 3 to 2.

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q11:
If n and k are positive integers, is n divisible by 6?
(1) $n = k(k + 1)(k - 1)$
(2) $k - 1$ is a multiple of 3.

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q12:
What was the cost of a certain telephone call?
(1) The call lasted 8 minutes.
(2) The cost of the first minute of the call was $0.32, which was twice the cost of each minute of the call after the first.

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q13:
Company S produces two kinds of stereos: basic and deluxe. Of the stereos produced by Company S last month, $\dfrac{2}{3}$ were basic and the rest were deluxe. If it takes $\dfrac{7}{5}$ as many

hours to produce a deluxe stereo as it does to produce a basic stereo, then the number of hours it took to produce the deluxe stereos last month was what fraction of the total number of hours it took to produce all the stereos?

A. $\dfrac{7}{17}$

B. $\dfrac{14}{31}$

C. $\dfrac{7}{15}$

D. $\dfrac{17}{35}$

E. $\dfrac{1}{2}$

Q14:

$$99{,}999^2 - 1^2 =$$

A. $10^{10} - 2$
B. $(10^5 - 2)^2$
C. $10^4(10^5 - 2)$
D. $10^5(10^4 - 2)$
E. $10^5(10^5 - 2)$

Q15:
Is $x^2 + y^2 > 6$?
  (1) $(x + y)^2 > 6$
  (2) $xy = 2$

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q16:
What is the probability that a student randomly selected from a class of 60 students will be a male who has brown hair?
  (1) One-half of the students have brown hair.
  (2) One-third of the students are males.

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q17:
The number of defects in the first five cars to come through a new production line are 9, 7, 10, 4, and 6, respectively. If the sixth car through the production line has either 3, 7, or 12 defects, for which of theses values does the mean number of defects per car for the first six cars equal the median?

I.   3
II.   7
III.   12

A.   I only
B.   II only
C.   III only
D.   I and III only
E.   I, II, and III

Q18:
Which of the following is equal to $(2^k)(5^{k-1})$?

A. $2(10^{k-1})$
B. $5(10^{k-1})$
C. 10^k
D. $2(10^k)$
E. 10^{2k-1}

Q19:
If $\sqrt{x} = 25$, then $x^3 - x^2 =$

A. 5^{12}
B. 5^{20}
C. $6(5^5)$
D. $5^4(5^2 + 1)$
E. $5^8(5^4 - 1)$

Q20:
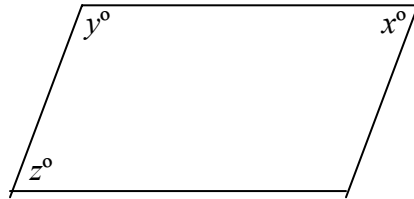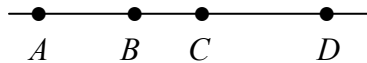

In the parallelogram shown, what is the value of x?
  (1) $y = 2x$
  (2) $x + z = 120$

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q21:

   Note: Figure not drawn to scale.

On line segment AD shown, $AB = \dfrac{1}{2} CD$ and $BC = 10$. If $AD = 100$, then $CD =$

    A. 40
    B. 45
    C. 50
    D. 55
    E. 60

Q22:
At a garage sale, all of the prices of the items sold were different. If the price of a radio sold at the garage sale was both the 15th highest price and the 20th lowest price among the prices of the items sold, how many items were sold at the garage sale?

    A. 33
    B. 34

C. 35
D. 36
E. 37

Q23:

If $x \neq 0$, is $\dfrac{x^2}{|x|} < 1$?

   (1) $x < 1$
   (2) $x > -1$

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q24:
At a certain company, each employee has a salary grade s that is at least 1 and at most 5. Each employee receives an hourly wage p, in dollars, determined by the formula $p = 9.50 + 0.25(s - 1)$. An employee with a salary grade of 5 receives how many more dollars per hour than an employee with a salary grade of 1?

        A. $0.50
        B. $1.00
        C. $1.25
        D. $1.50
        E. $1.75

Q25:
In the sequence 1, 2, 4, 8, 16, 32, …, each term after the first is twice the previous term. What is the sum of the 16th, 17th, and 18th terms in the sequence?

        A. 2^{18}
        B. $3(2^{17})$
        C. $7(2^{16})$
        D. $3(2^{16})$
        E. $7(2^{15})$

Q26:

In the *xy*-plane, the line with equation $ax + by + c = 0$, where $abc \neq 0$, has slope $\frac{2}{3}$. What is the value of *b*?

   (1) $a = 4$

   (2) $c = -6$

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q27:
Of the cans of peaches inspected yesterday at a certain plant, 1.5 percent failed to pass inspection. Of the cans that failed inspection, $\frac{5}{6}$ were incorrectly labeled and the rest were dented. If all of the cans that were incorrectly labeled or dented failed inspection, how many of the cans of peaches inspected yesterday at the plant were dented?

   (1) 450 of the cans of peaches inspected yesterday at the plant failed to pass inspection.

   (2) 29,550 of the cans of peaches inspected yesterday at the plant passed inspection.

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q28:
A car traveling at a certain constant speed takes 2 seconds longer to travel 1 kilometer than it would take to travel 1 kilometer at 75 kilometers per hour. At what speed, in kilometers per hour, is the car traveling?

        A. 71.5
        B. 72
        C. 72.5
        D. 73
        E. 73.5

Q29:

The annual rent collected by a corporation from a certain building was x percent more in 1998 than in 1997 and y percent less in 1999 than in 1998. Was the annual rent collected by the corporation from the building more in 1999 than in 1997?

(1) $x > y$

(2) $\dfrac{xy}{100} < x - y$

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q30:
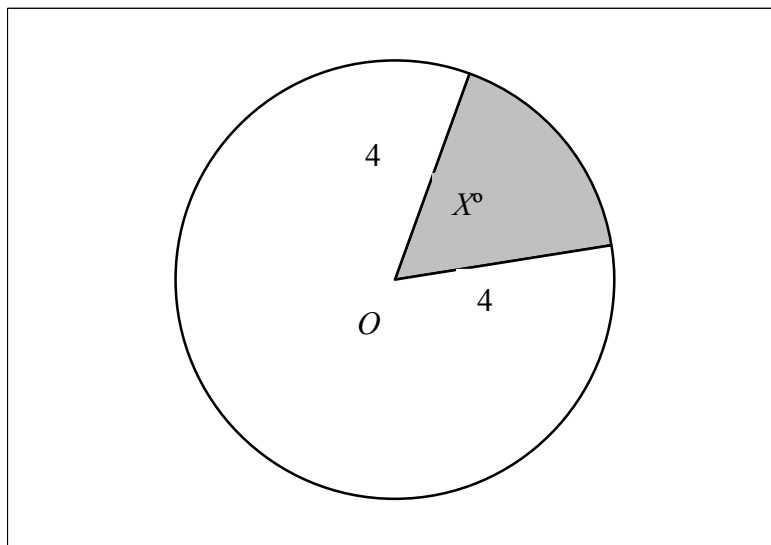
In the figure above, O is the center of the circle. If the area of the shaded region is 2π, what is the value of x?

A. $\dfrac{45}{2}$

B. 30

C. 45

D. 60

E. 90

Q31:
The numbers x and y are three-digit positive integers, and $x + y$ is a four-digit integer. The tens digit of x equals 7 and the tens digit of y equals 5. If $x < y$, which of the following must be true?

   I. The units digit of $x + y$ is greater than the units digit of either x or y.

  II. The tens digit of $x + y$ equals 2.

 III. The hundreds digit of y is at least 5.

A.   II only
B.   III only
C.   I and II
D.   I and III
E.   II and III

Q32:
If m and v are integers, what is the value of $m + v$?
  (1) $mv = 6$
  (2) $(m + v)^2 = 25$

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q33:

A teacher gave the same test to three history classes: A, B, and C. The average (arithmetic mean) scores for the three classes were 65, 80, and 77, respectively. The ratio of the numbers of students in each class who took the test was 4 to 6 to 5, respectively. What was the average score for the three classes combined?

      A. 74
      B. 75
      C. 76
      D. 77
      E. 78

Q34:

The number n of units of its product that Company X is scheduled to produce in month t of its next fiscal year is given by the formula $n = \dfrac{900}{1 + c2^{-t}}$, where c is a constant and t is a positive integer between 1 and 6, inclusive. What is the number of units of its product that Company X is scheduled to produce in month 6 of its next fiscal year?

(1) Company X is scheduled to produce 180 units of its product in month 1 of its next fiscal year.
(2) Company X is scheduled to produce 300 units of its product in month 2 of its next fiscal year.

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q35:

The operation Δ is defined for all nonzero x and y by $x \, \Delta \, y = x + \dfrac{x}{y}$. If $a > 0$, then $1 \, \Delta \, (1 \, \Delta \, a) =$

      A. a
      B. $a + 1$
      C. $\dfrac{a}{a+1}$
      D. $\dfrac{a+2}{a+1}$
      E. $\dfrac{2a+1}{a+1}$

Q36:
If *n* is an integer and 100 < *n* < 200, what is the value of *n*?

   (1) $\dfrac{n}{36}$ is an odd integer.

   (2) $\dfrac{n}{45}$ is an even integer.

A. Statement (1) **ALONE** is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) **ALONE** is sufficient, but statement (1) alone is not sufficient.
C. **BOTH** statements **TOGETHER** are sufficient, but **NEITHER** statement **ALONE** is sufficient.
D. **EACH** statement **ALONE** is sufficient.
E. Statements (1) and (2) **TOGETHER** are **NOT** sufficient.

Q37:
If an automobile averaged 22.5 miles per gallon of gasoline, approximately how many kilometers per liter of gasoline did the automobile average? (1 mile = 1.6 kilometers and 1 gallon = 3.8 liters, both rounded to the nearest tenth.)

        A. 3.7
        B. 9.5
        C. 31.4
        D. 53.4
        E. 136.8

VERBAL SECTION

Q1:
The four-million-year-old fossilized skeleton known as Lucy is so small compared with many other skeletons underlined presumed to be of the same species, and so some paleontologists have argued that Lucy represents a different lineage.

   A. presumed to be of the same species, and so
   B. presumed to be of the same species that
   C. presumed that they are of the same species, and so
   D. that they have presumed to be of the same species, so that
   E. that they have presumed are of the same species, and

Q2:
In Greek theology the supreme being was Esaugetu Emissee (Master of Breath), who dwelt in an upper realm <u>in which the sky was the floor, and who had the power to give and to take</u> away the breath of life.

  A. in which the sky was the floor, and who had the power to give and to take
  B. where the sky was the floor, having the power to give and to take
  C. whose floor was the sky, and who has the power of giving and of taking
  D. in which the sky was the floor, with the power of giving and taking
  E. whose floor was the sky, having the power to give and take

----

Q3:
Today's technology allows manufacturers to make <u>small cars more fuel-efficient now than at any time in their</u> production history.

  A. small cars more fuel-efficient now than at any time in their
  B. small cars that are more fuel-efficient than they were at any time in their
  C. small cars that are more fuel-efficient than those at any other time in
  D. more fuel-efficient small cars than those at any other time in their
  E. more fuel-efficient small cars now than at any time in

Q4:
A new hair-growing drug is being sold for three times the price, per milligram, <u>as</u> the drug's maker charges for another product with the same active ingredient.

  A. as
  B. than
  C. that
  D. of what
  E. at which

Q5 to Q7:

	Many scholars have theorized that economic development, particularly industrialization and urbanization, con-
Line	tributes to the growth of participatory
(5)	democracy; according to this theory, it would seem logical that women would both demand and gain suffrage in ever greater numbers whenever economic development expanded their economic
(10)	opportunities. However, the economic

development theory is inadequate to
explain certain historical facts about the
implementation of women's suffrage.
For example, why was women's suf-

(15)   frage, instituted nationally in the United
States in 1920, not instituted nationally
in Switzerland until the 1970's? Indus-
trialization was well advanced in both
countries by 1920: over 33 percent

(20)   of American workers were employed
in various industries, as compared
to 44 percent of Swiss workers.
Granted, Switzerland and the United
States diverged in the degree to

(25)   which the expansion of industry coin-
cided with the degree of urbanization:
only 29 percent of the Swiss population
lived in cities of 10,000 or more inhabi-
tants by 1920. However, urbanization

(30)   cannot fully explain women's suffrage.
Within the United States prior to 1920,
for example, only less urbanized
states had granted women suffrage.
Similarly, less urbanized countries

(35)   such as Cambodia and Ghana had
voting rights for women long before
Switzerland did. It is true that Switzer-
land's urbanized cantons (political
subdivisions) generally enacted

(40)   women's suffrage legislation earlier
than did rural cantons. However,
these cantons often shared other
characteristics—similar linguistic back-
grounds and strong leftist parties—that
may help to explain this phenomenon.

Q5:
The passage states which of the following about Switzerland's urbanized cantons?

   A. These cantons shared characteristics other than urbanization that may have
       contributed to their implementation of women's suffrage.
   B. These cantons tended to be more politically divided than were rural cantons.
   C. These cantons shared with certain rural cantons characteristics such as similar
       linguistic backgrounds and strong leftist parties.
   D. The populations of these cantons shared similar views because urbanization
       furthered the diffusion of ideas among them.

E. These cantons were comparable to the most highly urbanized states in the United States in their stance toward the implementation of women's suffrage.

Q6:

The primary purpose of the passage is to

A. contrast two explanations for the implementation of women's suffrage
B. demonstrate that one factor contributes more than another factor to the implementation of women's suffrage
C. discuss the applicability of a theory for explaining the implementation of women's suffrage
D. clarify certain assumptions underlying a particular theory about the implementation of women's suffrage
E. explain how a particular historical occurrence was causally connected to the implementation of women's suffrage

----

Q7:

The passage suggests which of the following about urbanization in Switzerland and the United States by 1920?

A. A greater percentage of Swiss industrial workers than American industrial workers lived in urban areas.
B. There were more cities of 10,000 or more inhabitants in Switzerland than there were in the United States.
C. Swiss workers living in urban areas were more likely to be employed in industry than were American workers living in urban areas.
D. Urbanized areas of Switzerland were more likely than similar areas in the United States to have strong leftist parties.
E. A greater percentage of the United States population than the Swiss population lived in urban areas.

Q8:

From 1980 to 1989, total consumption of fish in the country of Jurania increased by 4.5 percent, and total consumption of poultry products there increased by 9.0 percent. During the same period, the population of Jurania increased by 6 percent, in part due to immigration to Jurania from other countries in the region.

If the statements above are true, which of the following must also be true on the basis of them?

A. During the 1980's in Jurania, profits of wholesale distributors of poultry products increased at a greater rate than did profits of wholesale distributors of fish.

B. For people who immigrated to Jurania during the 1980's, fish was less likely to be a major part of their diet than was poultry.

C. In 1989 Juranians consumed twice as much poultry as fish.

D. For a significant proportion of Jurania's population, both fish and poultry products were a regular part of their diet during the 1980's.

E. Per capita consumption of fish in Jurania was lower in 1989 than in 1980.

Q9 to Q12:

In its 1903 decision in the case of *Lone Wolf* v. *Hitchcock*, the United States Supreme Court rejected the
Line efforts of three Native American tribes
(5) to prevent the opening of tribal lands to non-Indian settlement without tribal consent. In his study of the *Lone Wolf* case, Blue Clark properly emphasizes the Court's assertion
(10) of a virtually unlimited unilateral power of Congress (the House of Representatives and the Senate) over Native American affairs. But he fails to note the decision's more far-reaching
(15) impact: shortly after *Lone Wolf*, the federal government totally abandoned negotiation and execution of formal written agreements with Indian tribes as a prerequisite for the implemen-
(20) tation of federal Indian policy. Many commentators believe that this change had already occurred in 1871 when— following a dispute between the House and the Senate over which
(25) chamber should enjoy primacy in Indian affairs—Congress abolished the making of treaties with Native American tribes. But in reality the federal government continued to nego-
(30) tiate formal tribal agreements past the turn of the century, treating these documents not as treaties with sovereign nations requiring ratification by the Senate but simply as legislation to be
(35) passed by both houses of Congress. The *Lone Wolf* decision ended this era of formal negotiation and finally

did away with what had increasingly
become the empty formality of obtain-
ing tribal consent.

Q9:

The author of the passage is primarily concerned with

    A. identifying similarities in two different theories
    B. evaluating a work of scholarship
    C. analyzing the significance of a historical event
    D. debunking a revisionist interpretation
    E. exploring the relationship between law and social reality

----

Q10:

According to the passage, which of the following was true of relations between the
federal government and Native American tribes?

    A. Some Native American tribes approved of the congressional action of 1871
       because it simplified their dealings with the federal government.
    B. Some Native American tribes were more eager to negotiate treaties with the
       United States after the *Lone Wolf* decision.
    C. Prior to the *Lone Wolf* decision, the Supreme Court was reluctant to hear cases
       involving agreements negotiated between Congress and Native American tribes.
    D. Prior to 1871, the federal government sometimes negotiated treaties with Native
       American tribes.
    E. Following 1871, the House exercised more power than did the Senate in the
       government's dealings with Native American tribes.

Q11:

As an element in the argument presented by the author of the passage, the reference to
Blue Clark's study of the *Lone Wolf* case serves primarily to

    A. point out that this episode in Native American history has received inadequate
       attention from scholars
    B. support the contention of the author of the passage that the *Lone Wolf* decision
       had a greater long-term impact than did the congressional action of 1871
    C. challenge the validity of the Supreme Court's decision confirming the unlimited
       unilateral power of Congress in Native American affairs
    D. refute the argument of commentators who regard the congressional action of 1871
       as the end of the era of formal negotiation between the federal government and
       Native American tribes
    E. introduce a view about the *Lone Wolf* decision that the author will expand upon

----

Q12:
According to the passage, which of the following resulted from the *Lone Wolf* decision?

    A. The Supreme Court took on a greater role in Native American affairs.
    B. Native American tribes lost their legal standing as sovereign nations in their dealings with the federal government, but their ownership of tribal lands was confirmed.
    C. The federal government no longer needed to conclude a formal agreement with a Native American tribe in order to carry out policy decisions that affected the tribe.
    D. The federal government began to appropriate tribal lands for distribution to non-Indian settlers.
    E. Native American tribes were no longer able to challenge congressional actions by appealing to the Supreme Court.

Q13:
A leading figure in the Scottish enlightenment, <u>Adam Smith's two major books are to democratic capitalism what</u> Marx's *Das Kapital* is to socialism.

    A. Adam Smith's two major books are to democratic capitalism what
    B. Adam Smith's two major books are to democratic capitalism like
    C. Adam Smith's two major books are to democratic capitalism just as
    D. Adam Smith wrote two major books that are to democratic capitalism similar to
    E. Adam Smith wrote two major books that are to democratic capitalism what

----

Q14:
Guidebook writer: I have visited hotels throughout the country and have noticed that in those built before 1930 the quality of the original carpentry work is generally superior to that in hotels built afterward. Clearly carpenters working on hotels before 1930 typically worked with more skill, care, and effort than carpenters who have worked on hotels built subsequently.

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

    A. The quality of original carpentry in hotels is generally far superior to the quality of original carpentry in other structures, such as houses and stores.
    B. Hotels built since 1930 can generally accommodate more guests than those built before 1930.
    C. The materials available to carpenters working before 1930 were not significantly different in quality from the materials available to carpenters working after 1930.
    D. The better the quality of original carpentry in a building, the less likely that building is to fall into disuse and be demolished.
    E. The average length of apprenticeship for carpenters has declined significantly since 1930.

Q15:
Brochure: Help conserve our city's water supply. By converting the landscaping in your yard to a water-conserving landscape, you can greatly reduce your outdoor water use. A water-conserving landscape is natural and attractive, and it also saves you money.

Criticism: For most people with yards, the savings from converting to a water-conserving landscape cannot justify the expense of new landscaping, since typically the conversion would save less than twenty dollars on a homeowner's yearly water bills.

Which of the following, if true, provides the best basis for a rebuttal of the criticism?

    A. Even homeowners whose yards do not have water-conserving landscapes can conserve water by installing water-saving devices in their homes.
    B. A conventional landscape generally requires a much greater expenditure on fertilizer and herbicide than does a water-conserving landscape.
    C. A significant proportion of the residents of the city live in buildings that do not have yards.
    D. It costs no more to put in water-conserving landscaping than it does to put in conventional landscaping.
    E. Some homeowners use more water to maintain their yards than they use for all other purposes combined.

Q16:
Economist: Tropicorp, which constantly seeks profitable investment opportunities, has been buying and clearing sections of tropical forest for cattle ranching, although pastures newly created there become useless for grazing after just a few years. The company has not gone into rubber tapping, even though **greater profits can be made from rubber tapping**, which leaves the forest intact. Thus, some environmentalists conclude that **Tropicorp has not acted wholly out of economic self-interest.** However, these environmentalists are probably wrong. The initial investment required for a successful rubber-tapping operation is larger than that needed for a cattle ranch. Furthermore, there is a shortage of workers employable in rubber-tapping operations, and finally, taxes are higher on profits from rubber tapping than on profits from cattle ranching.

In the economist's argument, the two **boldfaced** portions play which of the following roles?

    A. The first supports the conclusion of the economist's argument; the second calls that conclusion into question.
    B. The first states the conclusion of the economist's argument; the second supports that conclusion.
    C. The first supports the environmentalists' conclusion; the second states that conclusion.

D. The first states the environmentalists' conclusion; the second states the conclusion of the economist's argument.
E. Each supports the conclusion of the economist's argument.

Q17:
Although <u>the restaurant company has recently added many new restaurants across the country and its sales have increased dramatically, its</u> sales at restaurants open for more than a year have declined.

A. the restaurant company has recently added many new restaurants across the country and its sales have increased dramatically, its
B. the restaurant company has recently added many new restaurants across the country and its sales increased dramatically, its
C. many new restaurants have recently been opened across the country and its sales increased dramatically, the restaurant company's
D. having recently added many new restaurants across the country and with its sales increasing dramatically, the restaurant company's
E. recently adding many new restaurants across the country and having its sales increase dramatically, the restaurant company's

----

Q18:
Yellow jackets number among the 900 or so species of the world's social wasps, <u>wasps living in a highly cooperative and organized society where they consist almost entirely of</u> females—the queen and her sterile female workers.

A. wasps living in a highly cooperative and organized society where they consist almost entirely of
B. wasps that live in a highly cooperative and organized society consisting almost entirely of
C. which means they live in a highly cooperative and organized society, almost all
D. which means that their society is highly cooperative, organized, and it is almost entirely
E. living in a society that is highly cooperative, organized, and it consists of almost all

----

Q19:
Though subject to the same wild-animal control efforts that killed off almost all the wolves in North America over the past century, the <u>coyote's amazing ability of adapting to the presence of humans has enabled it to expend its</u> range into Alaska and Central America.

A. coyote's amazing ability of adapting to the presence of humans has enabled it to expend its

B. coyote, because of its amazing ability of adapting to the presence of humans, have been able to expand their
C. coyote, because of its amazing ability to adapt to the presence of humans, has been able to expand its
D. amazing ability of the coyote to adapt to the presence of humans have enabled it to expand the
E. amazing ability of the coyote to adapt to the presence of humans has enabled it to expand the

----

Q20:

Community activist: If Morganville wants to keep its central shopping district healthy, it should prevent the opening of a huge SaveAll discount department store on the outskirts of Morganville. Records from other small towns show that whenever SaveAll has opened a store outside the central shopping district of a small town, within five years the town has experienced the bankruptcies of more than a quarter of the stores in the shopping district.

The answer to which of the following would be most useful for evaluating the community activist's reasoning?

A. Have community activists in other towns successfully campaigned against the opening of a SaveAll store on the outskirts of their towns?
B. Do a large percentage of the residents of Morganville currently do almost all of their shopping at stores in Morganville?
C. In towns with healthy central shopping districts, what proportion of the stores in those districts suffer bankruptcy during a typical five-year period?
D. What proportion of the employees at the SaveAll store on the outskirts of Morganville will be drawn from Morganville?
E. Do newly opened SaveAll stores ever lose money during their first five years of operation?

Q21:

Hunter: Hunters alone are blamed for the decline in Greenrock National Forest's deer population over the past ten years. Yet clearly, **black bears have also played an important role in this decline.** In the past ten years, the forest's protected black bear population has risen sharply, and examination of black bears found dead in the forest during the deer hunting season showed that a number of them had recently fed on deer.

In the hunter's argument, the boldface portion plays which of the following roles?

A. It is the main conclusion of the argument.
B. It is an objection that has been raised against the main conclusion of the argument.
C. It is a judgment that the argument opposes.

D. It is a finding that the argument seeks to explain.
E. It provides evidence in support of the main conclusion of the argument.

Q22 to Q25:

Many managers are influenced by dangerous myths about pay that lead to counterproductive decisions about
Line how their companies compensate
(5) employees. One such myth is that labor rates, the rate per hour paid to workers, are identical with labor costs, the money spent on labor in relation to the productivity of the labor force.
(10) This myth leads to the assumption that a company can simply lower its labor costs by cutting wages. But labor costs and labor rates are not in fact the same: one company could pay
(15) its workers considerably more than another and yet have lower labor costs if that company's productivity were higher due to the talent of its workforce, the efficiency of its work
(20) processes, or other factors. The confusion of costs with rates persists partly because labor rates are a convenient target for managers who want to make an impact on their com-
(25) pany's budgets. Because labor rates are highly visible, managers can easily compare their company's rates with those of competitors. Furthermore, labor rates often appear to be a
(30) company's most malleable financial variable: cutting wages appears an easier way to control costs than such options as reconfiguring work processes or altering product design.
(35) The myth that labor rates and labor costs are equivalent is supported by business journalists, who frequently confound the two. For example, prominent business journals often remark on
(40) the "high" cost of German labor, citing as evidence the average amount paid

to German workers. The myth is also
perpetuated by the compensation-
consulting industry, which has its own
(45)   incentives to keep such myths alive.
First, although some of these con-
sulting firms have recently broadened
their practices beyond the area of
compensation, their mainstay con-
(50)   tinues to be advising companies on
changing their compensation prac-
tices. Suggesting that a company's
performance can be improved in
some other way than by altering its
(55)   pay system may be empirically cor-
rect but contrary to the consultants'
interests. Furthermore, changes
to the compensation system may
appear to be simpler to implement
(60)   than changes to other aspects of an
organization, so managers are more
likely to find such advice from con-
sultants palatable. Finally, to the
extant that changes in compensation
(65)   create new problems, the consultants
will continue to have work solving the
problems that result from their advice.

Q22:
The author of the passage suggests which of the following about the advice that the consulting firms discussed in the passage customarily give to companies attempting to control costs?

   A. It often fails to bring about the intended changes in companies' compensation systems.
   B. It has highly influenced views that predominate in prominent business journals.
   C. It tends to result in decreased labor rates but increased labor costs.
   D. It leads to changes in companies' compensation practices that are less visible than changes to work processes would be.
   E. It might be different if the consulting firms were less narrowly specialized.

Q23:
The author of the passage mentions business journals (line 39) primarily in order to

   A. demonstrate how a particular kind of evidence can be used to support two different conclusions

B. cast doubt on a particular view about the average amount paid to German workers
C. suggest that business journalists may have a vested interest in perpetuating a particular view
D. identify one source of support for a view common among business managers
E. indicate a way in which a particular myth could be dispelled

----

Q24:
It can be inferred from the passage that the author would be most likely to agree with which of the following statements about compensation?

A. A company's labor costs are not affected by the efficiency of its work processes.
B. High labor rates are not necessarily inconsistent with the goals of companies that want to reduce costs
C. It is more difficult for managers to compare their companies' labor rates with those of competitors than to compare labor costs.
D. A company whose labor rates are high is unlikely to have lower labor costs than other companies.
E. Managers often use information about competitors' labor costs to calculate those companies' labor rates.

Q25:
According to the passage, which of the following is true about changes to a company's compensation system?

A. They are often implemented in conjunction with a company's efforts to reconfigure its work processes.
B. They have been advocated by prominent business journals as the most direct way for a company to bring about changes in its labor costs.
C. They are more likely to result in an increase in labor costs than they are to bring about competitive advantages for the company.
D. They sometimes result in significant cost savings but are likely to create labor-relations problems for the company.
E. They may seem to managers to be relatively easy to implement compared with other kinds of changes managers might consider.

Q26:
Which of following most logically completes the argument?

The last members of a now-extinct species of a European wild deer called the giant dear lived in Ireland about 16,000 years ago. Prehistoric cave paintings in France depict this animal as having a large hump on its back. Fossils of this animal, however, do not show

any hump. Nevertheless, there is no reason to conclude that the cave paintings are therefore inaccurate in this regard, since _____.

    A. some prehistoric cave paintings in France also depict other animals as having a hump
    B. fossils of the giant deer are much more common in Ireland than in France
    C. animal humps are composed of fatty tissue, which dose not fossilize
    D. the cave paintings of the giant deer were painted well before 16,000 years ago
    E. only one currently existing species of deer has any anatomical feature that even remotely resembles a hump

----

Q27:
Newspaper editorial:

In an attempt to reduce the crime rate, the governor is getting tough on criminals and making prison conditions harsher. Part of this effort has been to deny inmates the access they formerly had to college-level courses. However, this action is clearly counter to the governor's ultimate goal, since after being released form prison, inmates who had taken such courses committed far fewer crimes overall than other inmates.

Which of the following is an assumption on which the argument depends?

    A. Not being able to take college-level courses while in prison is unlikely to deter anyone from a crime that he or she might otherwise have committed.
    B. Former inmates are no more likely to commit crimes than are members of the general population.
    C. The group of inmates who chose to take college-level courses were not already less likely than other inmates to commit crimes after being released.
    D. Taking high school level courses in prison has less effect on an inmate's subsequent behavior than taking college-level courses does.
    E. The governor's ultimate goal actually is to gain popularity by convincing people that something effective is being done about crime.

Q28:
Antarctica receives more solar radiation than does any other place on Earth, yet the temperatures are so cold and the ice cap <u>is reflective, so that little polar ice melts during the summer; otherwise,</u> the water levels of the oceans would rise 250 feet and engulf most of the world's great cities.

    A. is reflective, so that little polar ice melts during the summer; otherwise,
    B. is so reflective that little of the polar ice melts during the summer; were it not to do so,
    C. so reflective that little polar ice melts during the summer, or else
    D. reflective, so that little of the polar ice melts during the summer, or

E. reflects so that little of the polar ice melts during the summer; if it did

----

Q29:
In ancient Thailand, <u>much of the local artisans' creative energy was expended for the creation of Buddha images and when they constructed and decorated the temples that enshrined them</u>.

   A. much of the local artisans' creative energy was expended for the creation of Buddha images and when they constructed and decorated the temples that enshrined them
   B. much of the local artisans' creative energy was expended on the creation of Buddha images and on construction and decoration of the temples in which they were enshrined
   C. much of the local artisans' creative energy was expended on the creation of Buddha images as well as constructing and decoration of the temples in which they were enshrined
   D. creating images of Buddha accounted for much of the local artisans' creative energy, and also constructing and decorating the temples enshrining them
   E. the creating of Buddha images accounted for much of the local artisans' creative energy as well as construction and decoration of the temples that enshrined them

----

Q30:
<u>Data gathered by weather satellites has been analyzed by scientists, reporting that the Earth's northern latitudes have</u> become about ten percent greener since 1980, due to more vigorous plant growth associated with warmer temperatures and higher levels of atmospheric carbon dioxide.

   A. Data gathered by weather satellites has been analyzed by scientists, reporting that the Earth's northern latitudes have
   B. Data gathered by weather satellites has been analyzed by scientists, and they report the Earth's northern latitudes as having
   C. After analyzing data gathered by weather satellites, scientists report that the Earth's northern latitudes have
   D. After analysis of data, gathered by weather satellites, scientists report the Earth's northern latitudes as having
   E. After data gathered by weather satellites was analyzed by scientists, who report that the Earth's northern latitudes have

----

Q31:
Twenty-two feet long and 10 feet in diameter, the AM-1 is one of the many new <u>satellites that is a part of 15 years effort of subjecting the interactions of Earth's atmosphere, oceans, and land surfaces</u> to detailed scrutiny from space.

A. satellites that is a part of 15 years effort of subjecting the interactions of Earth's atmosphere, oceans, and land surfaces
B. satellites, which is a part of a 15-year effort to subject how Earth's atmosphere, oceans, and land surfaces interact
C. satellites, part of 15 years effort of subjecting how Earth's atmosphere, oceans, and land surfaces are interacting
D. satellites that are part of an effort for 15 years that has subjected the interactions of Earth's atmosphere, oceans, and land surfaces
E. satellites that are part of a 15-year effort to subject the interactions of Earth's atmosphere, ocean, and land surfaces

----

Q32:
Although most smoking-related illnesses are caused by inhaling the tar in tobacco smoke, it is addiction to nicotine that prevents most smokers from quitting. In
an effort to decrease the incidence of smoking-related illnesses, lawmakers in Sandonia plan to reduce the average quantity of nicotine per cigarette by half over the next five years. Unfortunately, smokers who are already addicted to nicotine tend to react to such reductions by smoking correspondingly more cigarettes.

The information above most strongly supports which of the following predictions about the effects of implementing the Sandonian government's plan?

A. The average quantity of tar inhaled by Sandonian smokers who are currently addicted to nicotine will probably not decrease during the next five years.
B. Sandonian smokers who are not already addicted to nicotine will probably also begin to smoke more cigarettes during the next five years than they had previously.
C. The annual number of Sandonian smokers developing smoking-related illnesses will probably decrease during the next five years.
D. The proportion of Sandonians attempting to quit smoking who succeed in that attempt will probably decrease during the next five years.
E. The number of Sandonians who quit smoking during the next five years will probably exceed the number who quit during the last five years.

Q33:
Competition in the mid-nineteenth century by large western farms gradually caused farmers in Pennsylvania to turn to livestock raising, but before that it was predominantly grain-producing.

A. Competition in the mid-nineteenth century by large western farms gradually caused farmers in Pennsylvania to turn to livestock raising, but before that it was predominantly grain-producing.

B. Once predominantly a grain-producing state, competition in the mid-nineteenth century from large western farms gradually was causing Pennsylvania's farmers to turn to livestock raising.

C. Pennsylvania's farmers were gradually caused to turn to livestock raising by competition from large western farms in the mid-nineteenth century, but before that it was predominantly a grain-producing state.

D. It was once predominantly grain-producing, but competition in the mid-nineteenth century by large western farms was gradually causing Pennsylvania's farmers to turn to livestock raising.

E. Pennsylvania was once a predominantly grain-producing state, but competition in the mid-nineteenth century from large western farms gradually caused the state's farmers to turn to livestock raising.

Q34:

Building on civilizations that preceded them in coastal Peru, the Mochica developed their own elaborate society, <u>based on cultivating such crops like corn and beans, the harvesting of fish and shellfish, and exploiting</u> other wild and domestic resources.

A. based on cultivating such crops like corn and beans, the harvesting of fish and shellfish, and exploiting

B. based on the cultivation of such crops as corn and beans, the harvesting of fish and seafood, and the exploitation of

C. and basing it on the cultivation of crops like corn and beans, harvesting fish and seafood, and the exploiting of

D. and they based it on their cultivation of crops such as corn and beans, the harvest of fish and seafood, and exploiting

E. and they based it on their cultivating such crops like corn and beans, their harvest of fish and shellfish, and they exploited

---

Q35 to Q37:

In addition to conventional galaxies, the universe contains very dim galaxies that until
Line recently went unnoticed by
(5) astronomers. Possibly as numerous as conventional gal-axies, these galaxies have the same general shape and even the same approximate number
(10) of stars as a common type of conventional galaxy, the spiral, but tend to be much larger. Because these galaxies' mass is spread out over

(15) larger areas, they have far
fewer stars per unit volume
than do conventional galaxies.
Apparently these low-surface-
brightness galaxies, as they
(20) are called, take much longer
than conventional galaxies to
condense their primordial gas
and convert it to stars—that is,
they evolve much more slowly.
(25)   These galaxies may
constitute an answer to the long-
standing puzzle of the missing
baryonic mass in the universe.
Baryons—subatomic particles
(30) that are generally protons or
neutrons—are the source of
stellar, and therefore galactic,
luminosity, and so their numbers
can be estimated based on how
(35) luminous galaxies are. How-
ever, the amount of helium
in the universe, as measured
by spectroscopy, suggests
that there are far more baryons
(40) in the universe than estimates
based on galactic luminosity
indicate. Astronomers have
long speculated that the missing
baryonic mass might eventually
(45) be discovered in intergalactic
space or as some large popu-
lation of galaxies that are difficult
to detect.

Q35:
The primary purpose of the passage is to

   A. describe a phenomenon and consider its scientific significance
   B. contrast two phenomena and discuss a puzzling difference between them
   C. identify a newly discovered phenomenon and explain its origins
   D. compare two classes of objects and discuss the physical properties of each
   E. discuss a discovery and point out its inconsistency with existing theory

----

Q36:

The author mentions the fact that baryons are the source of stars' luminosity primarily in order to explain

    A. how astronomers determine that some galaxies contain fewer stars per unit volume than do others
    B. how astronomers are able to calculate the total luminosity of a galaxy
    C. why astronomers can use galactic luminosity to estimate baryonic mass
    D. why astronomers' estimates of baryonic mass based on galactic luminosity are more reliable than those based on spectroscopic studies of helium
    E. how astronomers know bright galaxies contain more baryons than do dim galaxies

----
Q37:
It can be inferred from the passage that which of the following is an accurate physical description of typical low-surface-brightness galaxies?

    A. They are large spiral galaxies containing fewer stars than do conventional galaxies.
    B. They are compact but very dim spiral galaxies.
    C. They are diffuse spiral galaxies that occupy a large volume of space.
    D. They are small, young spiral galaxies that contain a high proportion of primordial gas.
    E. They are large, dense spirals with low luminosity.

Q38:
Two centuries ago, Tufe Peninsula became separated form the mainland, isolating on the newly formed Tufe Island a population of Turfil sunflowers. This population's descendants grow to be, on average, 40 centimeters shorter than Turfil sunflowers found on the mainland. Tufe Island is significantly drier than Tufe Peninsula was. So the current average height of Tufe's Turfil sunflowers is undoubtedly at least partially attributable to changes in Tufe's environmental conditions.

Which of the following is an assumption on which the argument depends?

    A. There are no types of vegetation on Tufe Island that are known to benefit from dry conditions.
    B. There were about as many Turfil sunflowers on Tufe Peninsula two centuries ago as there are on Tufe Island today.
    C. The mainland's environment has not changed in ways that have resulted in Turfil sunflowers on the mainland growing to be 40 centimeters taller than they did two centuries ago.
    D. The soil on Tufe Island, unlike that on the mainland, lacks important nutrients that help Turfil sunflowers survive and grow tall in a dry environment.
    E. The 40-centimeter height difference between the Turfil sunflowers on Tufe Island and those on the mainland is the only difference between the two populations.

Q39:

Minivans carry as many as seven passengers and, compared with most sport utility
vehicles, cost less, get better gas mileage, allow passengers to get in and out more easily,
and have a smoother ride.

- A. Minivans carry as many as seven passengers and, compared with most sport
  utility vehicles, cost less,
- B. Minivans, which carry as many as seven passengers, compared with most sport
  utility vehicles, they cost less,
- C. Minivans carry as many as seven passengers, in comparison with most sport
  utility vehicles, and have a lower cost, they
- D. Minivans, carrying as many as seven passengers, compared with most sport
  utility vehicles, cost less,
- E. Minivans, which carry as many as seven passengers, compared with most sport
  utility vehicles the cost is lower, and they

Q41:

The coyote is one of several recent ecological success stories: along with the white-tailed
deer, the moose, and other species that are enlarging their natural domains, they have
established themselves as supreme adapters in an era when the capability to adjust to the
environmental changes wrought by human beings has created a whole new class of
dominant large mammals.

- A. they have established themselves as supreme adapters in an era when the
  capability
- B. they have established themselves as being supreme adapters in an era when being
  able
- C. it has established itself as a supreme adapter in an era when to be able
- D. it has established itself as being a supreme adapter in an era when its ability
- E. it has established itself as a supreme adapter in an era when the ability

----

Maths Answer:
1. D
2. D
3. A
4. D
5. E
6. E
7. E
8. C

9. D
10. C
11. A
12. C
13. A
14. E
15. E
16. E
17. D
18. A
19. E
20. D
21. E
22. B
23. C
24. C
25. E
26. A
27. D
28. B
29. B
30. C
31. B
32. E
33. B
34. D
35. E
36. C
37. B

Verbal Answer::
1. B
2. A
3. C
4. D
5. A
6. C
7. E
8. E
9. C
10. D

11. E
12. E
13. E
14. D
15. B
16. C
17. A
18. B
19. C
20. C
21. A
22. A
23. D
24. B
25. E
26. C
27. A
28. B
29. B
30. C
31. E
32. A
33. E
34. B
35. A
36. C
37. C
38. C
39. D
40. x
41. E
 (Note: Q40 is missing!)