SECTION I

Time—35 minutes

24 Questions

Directions: Each group of questions in this section is based on a set of conditions. In answering some of the questions, it may be useful to draw a rough diagram. Choose the response that most accurately and completely answers each question and blacken the corresponding space on your answer sheet.

Questions 1–6

Each of five students—Hubert, Lori, Paul, Regina, and Sharon—will visit exactly one of three cities—Montreal, Toronto, or Vancouver—for the month of March, according to the following conditions:

Sharon visits a different city than Paul.
Hubert visits the same city as Regina.
Lori visits Montreal or else Toronto.
If Paul visits Vancouver, Hubert visits Vancouver with him.
Each student visits one of the cities with at least one of the other four students.

1. Which one of the following could be true for March?
   (A) Hubert, Lori, and Paul visit Toronto, and Regina and Sharon visit Vancouver.
   (B) Hubert, Lori, Paul, and Regina visit Montreal, and Sharon visits Vancouver.
   (C) Hubert, Paul, and Regina visit Toronto, and Lori and Sharon visit Montreal.
   (D) Hubert, Regina, and Sharon visit Montreal, and Lori and Paul visit Vancouver.
   (E) Lori, Paul, and Sharon visit Montreal, and Hubert and Regina visit Toronto.

2. If Hubert and Sharon visit a city together, which one of the following could be true in March?
   (A) Hubert visits the same city as Paul.
   (B) Lori visits the same city as Regina.
   (C) Paul visits the same city as Regina.
   (D) Paul visits Toronto.
   (E) Paul visits Vancouver.

3. If Sharon visits Vancouver, which one of the following must be true for March?
   (A) Hubert visits Montreal.
   (B) Lori visits Montreal.
   (C) Paul visits Toronto.
   (D) Lori visits the same city as Paul.
   (E) Lori visits the same city as Regina.

4. Which one of the following could be false in March?
   (A) Sharon must visit Montreal if Paul visits Vancouver.
   (B) Regina must visit Vancouver if Paul visits Vancouver.
   (C) Regina visits a city with exactly two of the other four students.
   (D) Lori visits a city with exactly one of the other four students.
   (E) Lori visits a city with Paul or else with Sharon.

5. If Regina visits Toronto, which one of the following could be true in March?
   (A) Lori visits Toronto.
   (B) Lori visits Vancouver.
   (C) Paul visits Toronto.
   (D) Paul visits Vancouver.
   (E) Sharon visits Vancouver.

6. Which one of the following must be true for March?
   (A) If any of the students visits Montreal, Lori visits Montreal.
   (B) If any of the students visits Montreal, exactly two of them do.
   (C) If any of the students visits Toronto, exactly three of them do.
   (D) If any of the students visits Vancouver, Paul visits Vancouver.
   (E) If any of the students visits Vancouver, exactly three of them do.

GO ON TO THE NEXT PAGE.

Questions 7–13

A college offers one course in each of three subjects—mathematics, nutrition, and oceanography—in the fall and again in the spring. Students' book orders for these course offerings are kept in six folders, numbered 1 through 6, from which labels identifying the folders' contents are missing. The following is known:

Each folder contains only the orders for one of the six course offerings.

Folder 1 contains orders for the same subject as folder 2 does.

The orders in folder 3 are for a different subject than are the orders in folder 4.

The fall mathematics orders are in folder 1 or else folder 4.

The spring oceanography orders are in folder 1 or else folder 4.

The spring nutrition orders are not in folder 5.

7. Which one of the following could be the list of the contents of the folders, in order from folder 1 to folder 6 ?

(A) fall mathematics, spring mathematics, fall oceanography, fall nutrition, spring nutrition, spring oceanography
(B) fall oceanography, spring nutrition, fall nutrition, fall mathematics, spring mathematics, spring oceanography
(C) spring mathematics, fall mathematics, spring nutrition, fall oceanography, fall nutrition, spring oceanography
(D) spring oceanography, fall oceanography, fall nutrition, fall mathematics, spring mathematics, spring nutrition
(E) spring oceanography, fall oceanography, spring mathematics, fall mathematics, fall nutrition, spring nutrition

8. Which one of the following statements must be false?

(A) The spring mathematics orders are in folder 3.
(B) The fall nutrition orders are in folder 3.
(C) The spring oceanography orders are in folder 1.
(D) The spring nutrition orders are in folder 6.
(E) The fall oceanography orders are in folder 5.

9. If the fall oceanography orders are in folder 2, then which one of the following statements could be true?

(A) The spring mathematics orders are in folder 4.
(B) The spring mathematics orders are in folder 6.
(C) The fall nutrition orders are in folder 1.
(D) The spring nutrition orders are in neither folder 3 nor folder 6.
(E) Neither the spring nor the fall nutrition orders are in folder 3.

10. Which one of the following statements could be true?

(A) The spring mathematics orders are in folder 1.
(B) The fall oceanography orders are in folder 1.
(C) The fall nutrition orders are in folder 4, and the fall oceanography orders are in folder 6.
(D) The fall oceanography orders are in folder 2, and the spring oceanography orders are in folder 1.
(E) The spring oceanography orders are in folder 1, and neither the spring nor the fall nutrition orders are in folder 3.

11. If the fall oceanography orders are in folder 2, then for exactly how many of the remaining five folders can it be deduced which course offering's orders are in that folder?

(A) one
(B) two
(C) three
(D) four
(E) five

12. Which one of the following lists a pair of folders that must together contain orders for two different subjects?

(A) 3 and 5
(B) 4 and 5
(C) 3 and 6
(D) 4 and 6
(E) 5 and 6

13. Which one of the following could be true?

(A) The fall mathematics and spring oceanography orders are in folders with consecutive numbers.
(B) Folder 5 contains the orders for a spring course in a subject other than mathematics.
(C) Folder 6 contains the orders for a subject other than nutrition.
(D) The mathematics orders are in folders 1 and 4.
(E) The orders for the fall courses are in folders 1, 3, and 6.

GO ON TO THE NEXT PAGE.

Questions 14 - 19

Greenburg has exactly five subway lines: Ll, L2, L3, L4, and L5. Along each of the lines, trains run in both directions, stopping at every station.

Ll runs in a loop connecting exactly seven stations, their order being Rincon-Tonka-French-Semplain-Urstine-Quetzal-Park-Rincon in one direction of travel, and the reverse in the other direction.

L2 connects Tonka with Semplain, and with no other station.

L3 connects Rincon with Urstine, and with no other station.

L4 runs from Quetzal through exactly one other station, Greene, to Rincon.

L5 connects Quetzal with Tonka, and with no other station.

14. How many different stations are there that a traveler starting at Rincon could reach by using the subway lines without making any intermediate stops?

(A) two
(B) three
(C) four
(D) five
(E) six

15. In order to go from Greene to Semplain taking the fewest possible subway lines and making the fewest possible stops, a traveler must make a stop at

(A) French
(B) Park
(C) Quetzal
(D) Rincon
(E) Tonka

16. If L3 is not running and a traveler goes by subway from Urstine to Rincon making the fewest possible stops, which one of the following lists all of the intermediate stations in sequence along one of the routes that the traveler could take?

(A) Quetzal, Tonka
(B) Semplain, French
(C) Semplain, Park
(D) Quetzal, Park, Greene
(E) Semplain, French, Tonka

17. In order to go by subway from French to Greene, the minimum number of intermediate stops a traveler must make is

(A) zero
(B) one
(C) two
(D) three
(E) four

18. If the tracks that directly connect Urstine and Quetzal are blocked in both directions, a traveler going from Semplain to Park and making the fewest possible intermediate stops must pass through

(A) French or Tonka
(B) Greene or Urstine
(C) Quetzal or Tonka
(D) Quetzal or Urstine or both
(E) Rincon or Tonka or both

19. If a sixth subway line is to be constructed so that all of the stations would have two or more lines reaching them, the stations connected by the new subway line must include at least

(A) French, Greene, and Park
(B) French, Greene, and Quetzal
(C) French, Greene, and Rincon
(D) Park, Tonka, and Urstine
(E) Park, Semplain, and Tonka

GO ON TO THE NEXT PAGE.

Questions 20-24

Prior to this year's annual promotion review, the staff of a law firm consisted of partners Harrison and Rafael, associate Olivos, and assistants Ganz, Johnson, Lowry, Stefano, Turner, and Wilford. During each annual review, each assistant and associate is considered for promotion to the next higher rank, and at least one person is promoted from each of the two lower ranks. An assistant is promoted to associate when a majority of higherranking staff votes for promotion. An associate is promoted to partner when a majority of partners vote for promotion. Everyone eligible votes on every promotion. No one joins or leaves the firm.

Olivos never votes for promoting Ganz, Johnson, or Turner.
Rafael never votes for promoting Lowry or Stefano.
Harrison never votes for promoting Johnson or Wilford.

20. Which one of the following could be the distribution of staff resulting from this year's review?

	Partner	Associate	Assistance
(A)	Harrison, Olivos, Rafael	Ganz, Johnson, Lowry	Stefano, Turner, Wilford
(B)	Harrison, Rafael	Lowery, Olivos, Stefano	Ganz, Johnson, Turner, Wilford
(C)	Harrison, Olivos, Rafael, Stefano	Ganz, Lowry, Turner, Wilford	Johnson
(D)	Harrison, Olivos, Rafael		Ganz, Johnson, Lowry, Stefano, Turner, Wilford
(E)	Harrison, Olivos, Rafael	Ganz, Lowry Stefano, Turner	Johnson, Wilford

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21. If Rafael votes for promoting only Ganz, Olivos, and Wilford, and if Harrison votes for promoting only Lowry, Olivos, and Stefano, then which one of the following could be the complete roster of associates resulting from this year's review?

(A) Ganz, Lowry, Wilford
(B) Johnson, Lowry, Stefano
(C) Lowry, Stefano, Turner
(D) Lowry, Stefano, Wilford
(E) Olivos, Turner, Wilford

22. If Johnson is to be promoted to associate during next year's review, which one of the following is the smallest number of assistants who must be promoted during this year's review?

(A) one
(B) two
(C) three
(D) four
(E) five

23. Which one of the following must be true after next year's review?

(A) Lowry is an assistant.
(B) Wilford is a partner.
(C) There are no assistants.
(D) There are at least two assistants.
(E) There are no more than four assistants.

24. What is the smallest possible number of associates in the firm immediately after next year's review?

(A) none
(B) one
(C) two
(D) three
(E) four

S T O P

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.
DO NOT WORK ON ANY OTHER SECTION IN THE TEST.