SECTION III

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

A law firm has exactly nine partners: Fox, Glassen, Hae, Inman, Jacoby, Kohn, Lopez, Malloy, and Nassar.

Kohn's salary is greater than both Inman's and Lopez's.
Lopez's salary is greater than Nassar's.
Inman's salary is greater than Fox's.
Fox's salary is greater than Malloy's.
Malloy's salary is greater than Glassen's.
Glassen's salary is greater than Jacoby's.
Jacoby's salary is greater than Hae's.

1. Which one of the following partners cannot have the third highest salary?

(A) Fox
(B) Inman
(C) Lopez
(D) Malloy
(E) Nassar

2. If Malloy and Nassar earn the same salary, at least how many of the partners must have lower salaries than Lopez?

(A) 3
(B) 4
(C) 5
(D) 6
(E) 7

3. The salary rankings of each of the nine partners could be completely determined if which one of the following statements were true?

(A) Lopez's salary is greater than Fox's.
(B) Lopez's salary is greater than Inman's.
(C) Nassar's salary is greater than Fox's.
(D) Nassar's salary is greater than Inman's.
(E) Nassar's salary is greater than Malloy's.

4. If Nassar's salary is the same as that of one other partner of the firm, which one of the following must be false?

(A) Inman's salary is less than Lopez's.
(B) Jacoby's salary is less than Lopez's.
(C) Lopez's salary is less than Fox's.
(D) Lopez's salary is less than Hae's.
(E) Nassar's salary is less than Glassen's.

5. What is the minimum number of different salaries earned by the nine partners of the firm?

(A) 5
(B) 6
(C) 7
(D) 8
(E) 9

6. Assume that the partners of the firm are ranked according to their salaries, from first (highest) to ninth (lowest), and that no two salaries are the same. Which one of the following is a complete and accurate list of Glassen's possible ranks?

(A) fifth
(B) fifth, sixth
(C) fifth, seventh
(D) fifth, sixth, seventh
(E) fifth, sixth, seventh, eighth

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Questions 7–11

Each of five illnesses—J, K, L, M, and N—is characterized by at least one of the following three symptoms: fever, headache, and sneezing. None of the illnesses has any symptom that is not one of these three.

Illness J is characterized by headache and sneezing.
Illnesses J and K have no symptoms in common.
Illnesses J and L have at least one symptom in common.
Illness L has a greater number of symptoms than illness K.
Illnesses L and N have no symptoms in common.
Illness M has more symptoms than illness J.

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

(A) Illness J has exactly two symptoms.
(B) Illness K has exactly one symptom.
(C) Illness L has exactly two symptoms.
(D) Illness M has exactly three symptoms.
(E) Illness N has exactly two symptoms.

8. In which one of the following pairs could the first member of the pair be characterized by exactly the same number and types of symptoms as the second member of the pair?

(A) J and N
(B) K and L
(C) K and N
(D) L and M
(E) M and N

9. If illness L is characterized by a combination of symptoms different from any of the other illnesses, then which one of the following statements must be true?

(A) Fever is a symptom of illness L.
(B) Sneezing is a symptom of illness L.
(C) Headache is a symptom of illness L.
(D) Illnesses K and N are characterized by exactly the same symptoms.
(E) Illnesses M and N are characterized by exactly the same symptoms.

10. The illnesses in which one of the following pairs must have exactly one symptom in common?

(A) J and L
(B) J and M
(C) J and N
(D) K and L
(E) M and N

11. If Walter has exactly two of the three symptoms, then he cannot have all of the symptoms of

(A) both illness J and illness L
(B) both illness J and illness N
(C) both illness K and illness L
(D) both illness K and illness N
(E) both illness L and illness N

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Questions 12–17

A street cleaning crew works only Monday to Friday, and only during the day. It takes the crew an entire morning or an entire afternoon to clean a street. During one week the crew cleaned exactly eight streets—First, Second, Third, Fourth, Fifth, Sixth, Seventh, and Eighth streets. The following is known about the crew's schedule for the week:

The crew cleaned no street on Friday morning.
The crew cleaned no street on Wednesday afternoon.
It cleaned Fourth Street on Tuesday morning.
It cleaned Seventh Street on Thursday morning.
It cleaned Fourth Street before Sixth Street and after Eighth Street.
It cleaned Second, Fifth, and Eighth streets on afternoons.

12. If the crew cleaned Second Street earlier in the week than Seventh Street, then it must have cleaned which one of the following streets on Tuesday afternoon?

(A) First Street
(B) Second Street
(C) Third Street
(D) Fifth Street
(E) Eighth Street

13. If the crew cleaned Sixth Street on a morning and cleaned Second Street before Seventh Street, then what is the maximum number of streets whose cleaning times cannot be determined?

(A) 1
(B) 2
(C) 3
(D) 4
(E) 5

14. What is the maximum possible number of streets any one of which could be the one the crew cleaned on Friday afternoon?

(A) 1
(B) 2
(C) 3
(D) 4
(E) 5

15. If the crew cleaned First Street earlier in the week than Third Street, then which one of the following statements must be false?

(A) The crew cleaned First Street on Tuesday afternoon.
(B) The crew cleaned Second Street on Thursday afternoon.
(C) The crew cleaned Third Street on Wednesday morning.
(D) The crew cleaned Fifth Street on Thursday afternoon.
(E) The crew cleaned Sixth Street on Friday afternoon.

16. If the crew cleaned Fifth, Sixth, and Seventh streets in numerical order, then what is the maximum number of different schedules any one of which the crew could have had for the entire week?

(A) 1
(B) 2
(C) 3
(D) 4
(E) 5

17. Suppose the crew had cleaned Fourth Street on Tuesday afternoon instead of on Tuesday morning, but all other conditions remained the same. Which one of the following statements could be false?

(A) The crew cleaned First Street before Second Street.
(B) The crew cleaned Second Street before Fifth Street.
(C) The crew cleaned Third Street before Second Street.
(D) The crew cleaned Sixth Street before Fifth Street.
(E) The crew cleaned Seventh Street before Second Street.

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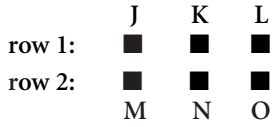
Questions 18–24

J, K, L, M, N, and O are square ski chalets of the same size, which are positioned in two straight rows as shown below:




J is directly opposite M; K is directly opposite N; and L is directly opposite O. After a snowstorm, residents shovel a single continuous path that connects all of the chalets and meets the following conditions:

The path is composed of five straight segments, each of which directly connects exactly two of the chalets.
Each chalet is directly connected by a segment of the path to another chalet.
No chalet is directly connected by segments of the path to more than two other chalets.
No segment of the path crosses any other segment.
One segment of the path directly connects chalets J and N, and another segment directly connects chalets K and L.

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

(A) One segment of the path directly connects chalets M and K.
(B) One segment of the path directly connects chalets M and L.
(C) One segment of the path directly connects chalets M and O.
(D) One segment of the path directly connects chalets J and K and another segment directly connects chalets K and M.
(E) One segment of the path directly connects chalets O and L and another segment directly connects chalets O and N.

19. If one segment of the path directly connects chalets K and N, then the two chalets in which one of the following pairs must be directly connected to each other by a segment?

(A) J and K
(B) K and O
(C) L and O
(D) M and N
(E) N and O

20. If a segment of the path directly connects chalets J and K, then the two chalets in which one of the following pairs must be directly connected to each other by a segment?

(A) J and M
(B) K and N
(C) K and O
(D) L and O
(E) N and O

21. If one segment of the path directly connects chalets K and O, then which one of the following statements could be true?

(A) Chalet J is directly connected to chalet M.
(B) Chalet K is directly connected to chalet N.
(C) Chalet L is directly connected to chalet O.
(D) Chalet L is directly connected to exactly two chalets.
(E) Chalet O is directly connected to exactly one chalet.

22. Which one of the following statements, if true, guarantees that one segment of the path directly connects chalets M and N?

(A) One segment of the path directly connects chalets K and J.
(B) One segment of the path directly connects chalets N and O.
(C) One segment of the path directly connects chalet K and a chalet in row 2.
(D) One segment of the path directly connects chalet L and a chalet in row 2.
(E) One segment of the path directly connects chalet O and a chalet in row 1.

23. Which one of the following chalets cannot be directly connected by segments of the path to exactly two other chalets?

(A) K
(B) L
(C) M
(D) N
(E) O

24. If no segment of the path directly connects any chalet in row 1 with the chalet in row 2 that is directly opposite it, then each of the following statements must be true EXCEPT:

(A) A segment of the path directly connects chalets M and N.
(B) A segment of the path directly connects chalets N and O.
(C) Chalet L is directly connected to exactly one other chalet.
(D) Chalet N is directly connected to exactly two other chalets.
(E) Chalet O is directly connected to exactly two other chalets.

**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.