

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 1–5

The Mammoth Corporation has just completed hiring nine new workers: Brandt, Calva, Duvall, Eberle, Fu, Garcia, Haga, Irving, and Jessup.

Fu and Irving were hired on the same day as each other, and no one else was hired that day.

Calva and Garcia were hired on the same day as each other, and no one else was hired that day.

On each of the other days of hiring, exactly one worker was hired.

Eberle was hired before Brandt.

Haga was hired before Duvall.

Duvall was hired after Irving but before Eberle.

Garcia was hired after both Jessup and Brandt.

Brandt was hired before Jessup.

1. Who were the last two workers to be hired?

- (A) Eberle and Jessup
- (B) Brandt and Garcia
- (C) Brandt and Calva
- (D) Garcia and Calva
- (E) Jessup and Brandt

2. Who was hired on the fourth day of hiring?

- (A) Eberle
- (B) Brandt
- (C) Irving
- (D) Garcia
- (E) Jessup

3. Exactly how many workers were hired before Jessup?

- (A) 6
- (B) 5
- (C) 4
- (D) 3
- (E) 2

4. Which one of the following must be true?

- (A) Duvall was the first worker to be hired.
- (B) Haga was the first worker to be hired.
- (C) Fu and Irving were the first two workers to be hired.
- (D) Haga and Fu were the first two workers to be hired.
- (E) Either Haga was the first worker to be hired or Fu and Irving were the first two workers to be hired.

5. If Eberle was hired on a Monday, what is the earliest day on which Garcia could have been hired?

- (A) Monday
- (B) Tuesday
- (C) Wednesday
- (D) Thursday
- (E) Friday

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Questions 6–12

An apartment building has five floors. Each floor has either one or two apartments. There are exactly eight apartments in the building. The residents of the building are J, K, L, M, N, O, P, and Q, who each live in a different apartment.

J lives on a floor with two apartments.

K lives on the floor directly above P.

The second floor is made up of only one apartment.

M and N live on the same floor.

O does not live on the same floor as Q.

L lives in the only apartment on her floor.

Q does not live on the first or second floor.

6. Which one of the following must be true?

- (A) Q lives on the third floor.
- (B) Q lives on the fifth floor.
- (C) L does not live on the fourth floor.
- (D) N does not live on the second floor.
- (E) J lives on the first floor.

7. Which one of the following CANNOT be true?

- (A) K lives on the second floor.
- (B) M lives on the first floor.
- (C) N lives on the fourth floor.
- (D) O lives on the third floor.
- (E) P lives on the fifth floor.

8. If J lives on the fourth floor and K lives on the fifth floor, which one of the following can be true?

- (A) O lives on the first floor.
- (B) Q lives on the fourth floor.
- (C) N lives on the fifth floor.
- (D) L lives on the fourth floor.
- (E) P lives on the third floor.

9. If O lives on the second floor, which one of the following CANNOT be true?

- (A) K lives on the fourth floor.
- (B) K lives on the fifth floor.
- (C) L lives on the first floor.
- (D) L lives on the third floor.
- (E) L lives on the fourth floor.

10. If M lives on the fourth floor, which one of the following must be false?

- (A) O lives on the fifth floor.
- (B) J lives on the first floor.
- (C) L lives on the second floor.
- (D) Q lives on the third floor.
- (E) P lives on the first floor.

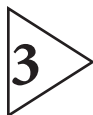
11. Which one of the following must be true?

- (A) If J lives on the fourth floor, then Q does not live on the fifth floor.
- (B) If O lives on the second floor, then L does not live on the fourth floor.
- (C) If N lives on the fourth floor, then K does not live on the second floor.
- (D) If K lives on the third floor, then O does not live on the fifth floor.
- (E) If P lives on the fourth floor, then M does not live on the third floor.

12. If O lives on the fourth floor and P lives on the second floor, which one of the following must be true?

- (A) L lives on the first floor.
- (B) M lives on the third floor.
- (C) Q lives on the third floor.
- (D) N lives on the fifth floor.
- (E) Q lives on the fifth floor.

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Questions 13–17

Hannah spends 14 days, exclusive of travel time, in a total of six cities.

Each city she visits is in one of three countries—X, Y, or Z.

Each of the three countries has many cities.

Hannah visits at least one city in each of the three countries.

She spends at least two days in each city she visits.

She spends only whole days in any city.

13. If Hannah spends exactly eight days in the cities of country X, then which one of the following CANNOT be true?
- (A) She visits exactly two cities in country X.
 - (B) She visits exactly two cities in country Y.
 - (C) She visits exactly two cities in country Z.
 - (D) She visits more cities in country Y than in country Z.
 - (E) She visits more cities in country Z than in country Y.
14. If Hannah visits an equal number of cities in each of the countries, what is the greatest total number of days she can spend visiting cities in country X?
- (A) 3
 - (B) 4
 - (C) 5
 - (D) 6
 - (E) 7
15. If Hannah spends three days in the cities of country Y and seven days in the cities of country Z, then which one of the following must be false?
- (A) She visits more cities in country X than in country Y.
 - (B) She visits exactly two cities in country X.
 - (C) She visits more cities in country Z than in country X.
 - (D) She visits exactly two cities in country Z.
 - (E) She visits exactly three cities in country Z.
16. If the city of Nomo is in country X, and if Hannah spends as many days as possible in Nomo and as few days as possible in each of the other cities that she visits, then which one of the following must be true?
- (A) Hannah cannot visit any other cities in country X.
 - (B) Hannah can visit four cities in country Y.
 - (C) Hannah can spend six days in Nomo.
 - (D) Hannah cannot spend more than four days in country Z.
 - (E) Hannah can visit, at most, a total of four cities in countries Y and Z.
17. If Hannah visits a combined total of four cities in countries X and Y, what is the greatest total number of days she can spend visiting cities in country Y?
- (A) 6
 - (B) 7
 - (C) 8
 - (D) 9
 - (E) 10

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Questions 18–24

Exactly six dogs—P, Q, R, S, T, and U—are entered in a dog show. The judge of the show awards exactly four ribbons, one for each of first, second, third, and fourth places, to four of the dogs. The information that follows is all that is available about the six dogs:

Each dog is either a greyhound or a labrador, but not both.

Two of the six dogs are female and four are male.

The judge awards ribbons to both female dogs, exactly one of which is a labrador.

Exactly one labrador wins a ribbon.

Dogs P and R place ahead of dog S, and dog S places ahead of dogs Q and T.

Dogs P and R are greyhounds.

Dogs S and U are labradors.

18. Which one of the following is a complete and accurate list of the dogs that can be greyhounds?
 - (A) P, Q
 - (B) P, R
 - (C) P, Q, R
 - (D) P, R, T
 - (E) P, Q, R, T
19. Which one of the following statements CANNOT be true?
 - (A) A female greyhound wins the second place ribbon.
 - (B) A female labrador wins the second place ribbon.
 - (C) A female labrador wins the third place ribbon.
 - (D) A male greyhound wins the fourth place ribbon.
 - (E) A female greyhound wins the fourth place ribbon.
20. Which one of the following dogs must be male?
 - (A) dog P
 - (B) dog R
 - (C) dog S
 - (D) dog T
 - (E) dog U
21. Which one of the following statements can be false?
 - (A) Dog P places ahead of dog R.
 - (B) Dog P places ahead of dog T.
 - (C) Dog R places ahead of dog U.
 - (D) Dog R places ahead of dog T.
 - (E) Dog S places ahead of dog U.
22. If dog Q is female, which one of the following statements can be false?
 - (A) Dog P is male.
 - (B) Dog R is male.
 - (C) Dog Q wins the fourth place ribbon.
 - (D) Dog Q is a greyhound.
 - (E) Dog T is a greyhound.
23. If dog T wins the fourth place ribbon, then which one of the following statements must be true?
 - (A) Dog P is male.
 - (B) Dog Q is male.
 - (C) Dog T is male.
 - (D) Dog Q is a labrador.
 - (E) Dog T is a labrador.
24. Which one of the following statements could be true?
 - (A) Dog P does not win a ribbon.
 - (B) Dog R does not win a ribbon.
 - (C) Dog S does not win a ribbon.
 - (D) Dog T wins a ribbon.
 - (E) Dog U wins a ribbon.

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.