SECTION I

Time—35 minutes

24 Questions

<u>Directions</u>: 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.

<u>Questions 1–7</u>

Three couples—John and Kate, Lewis and Marie, and Nat and Olive have dinner in a restaurant together. Kate, Marie, and Olive are women; the other three are men. Each person orders one and only one of the following kinds of entrees: pork chops, roast beef, swordfish, tilefish, veal cutlet. The six people order in a manner consistent with the following conditions:

    The two people in each couple do not order the same kind of entree as each other.

    None of the men orders the same kind of entree as any of the other men.

    Marie orders swordfish.

    Neither John nor Nat orders a fish entree.

    Olive orders roast beef.

1. Which one of the following is a complete and accurate list of the entrees any one of which Lewis could order?

    (A) pork chops, roast beef
    (B) pork chops, veal cutlet
    (C) pork chops, swordfish, veal cutlet
    (D) pork chops, roast beef, tilefish, veal cutlet
    (E) pork chops, roast beef, swordfish, tilefish, veal cutlet

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

    (A) John orders the same kind of entree as Marie does.
    (B) Kate orders the same kind of entree as Nat does.
    (C) Lewis orders the same Kind of entree as Nat does.
    (D) Marie orders the same kind of entree as Olive does.
    (E) Nat orders the same kind of entree as Olive does.

3. Which one of the following statements must be true?

    (A) One of the men orders pork chops or veal cutlet.
    (B) One of the men orders swordfish or veal cutlet.
    (C) Two of the women order tilefish.
    (D) None of the men orders a fish entree.
    (E) Exactly one of the women orders a fish entree.

4. If John orders veal cutlet, then which one of the following statements must be true?

    (A) Kate orders roast beef.
    (B) Kate orders swordfish.
    (C) Lewis orders tilefish.
    (D) Lewis orders veal cutlet.
    (E) Nat orders pork chops.

5. If none of the six people orders pork chops, then which one of the following statements must be true?

    (A) John orders veal cutlet.
    (B) Kate orders tilefish.
    (C) Lewis orders tilefish.
    (D) One of the men orders swordfish.
    (E) One of the women orders tilefish.

6. If Lewis orders pork chops, then which one of the following is a complete and accurate list of the entrees any one of which John could order?

    (A) roast beef
    (B) veal cutlet
    (C) roast beef, veal cutlet
    (D) roast beef, swordfish
    (E) pork chops, roast beef, swordfish

7. Suppose that the people in each couple both order the same kind of entree as each other rather than order different kinds of entrees. If all other conditions remain the same, and no two women order the same kind of entree, then which one of the following statements could be true?

    (A) John orders roast beef.
    (B) John orders swordfish.
    (C) Kate orders roast beef.
    (D) Two of the people order pork chops.
    (E) Two of the people order tilefish.

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<u>Questions 8–13</u>

There are exactly seven houses on a street. Each house is occupied by exactly one of seven families: the Kahns, Lowes, Muirs, Newmans, Owens, Piatts, Rutans. All the houses are on the same side of the street, which runs from west to east.

    The Rutans do not live in the first or the last house on the street.
    The Kahns live in the fourth house from the west end of the street.
    The Muirs live next to the Kahns.
    The Piatts live east of both the Kahns and the Muirs but west of the Lowes.

8. Which one of the following families could live in the house that is the farthest east?

    (A) the Kahns
    (B) the Muirs
    (C) the Newmans
    (D) the Piatts
    (E) the Rutans

9. Which one of the following families CANNOT live next to the Kahns?

    (A) the Lowes
    (B) the Newmans
    (C) the Owens
    (D) the Piatts
    (E) the Rutans

10. If the Muirs live west of the Kahns, then the Rutans CANNOT live next to both

    (A) the Kahns and the Piatts
    (B) the Lowes and the Piatts
    (C) the Muirs and the Piatts
    (D) the Muirs and the Owens
    (E) the Muirs and the Newmans

11. If the Newmans live immediately west of the Kahns, which one of the following statements must be false?

    (A) The Owens live next to the Newmans.
    (B) The Owens live next to the Rutans.
    (C) The Piatts live next to the Lowes.
    (D) The Piatts live next to the Muirs.
    (E) The Rutans live next to the Newmans.

12. If the Owens live east of the Muirs, which one of the following statements must be true?

    (A) The Kahns live east of the Muirs.
    (B) The Kahns live west of the Rutans.
    (C) The Owens live west of the Lowes.
    (D) The Owens live east of the Piatts.
    (E) The Owens live west of the Piatts.

13. If the Owens live east of the Kahns, which one of the following pairs of families must live next to each other?

    (A) the Kahns and the Piatts
    (B) the Lowes and the Owens
    (C) the Muirs and the Newmans
    (D) the Newmans and the Rutans
    (E) the Owens and the Piatts

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Questions 14–19

At an automobile exhibition, cars are displayed on each floor of a three-floor building. On each floor the cars are either all family cars or all sports cars, either all new or all used, and either all production models or all research models. The following conditions apply to this exhibition:

If the exhibition includes both family cars and sports cars, then each family car is displayed on a lower numbered floor than any sports car.
The exhibition includes no used research models.
The exhibition includes no research models that are sports cars.
There are new cars on floor 1.
There are used cars on floor 3.

14. If there are sports cars on exactly two floors, then which one of the following statements could be true?

(A) There are research models on floor 1.
(B) There are sports cars on floor 1.
(C) There are family cars on floor 2.
(D) There are research models on floor 2.
(E) There are family cars on floor 3.

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

(A) The exhibition includes new research model sports cars.
(B) The exhibition includes used research model family cars.
(C) The exhibition includes used research model sports cars.
(D) There are research models on exactly one floor.
(E) There are research models on all three floors.

16. Which one of the following statements must be true?

(A) There are production models on floor 1.
(B) There are research models on floor 1.
(C) There are production models on floor 2.
(D) There are production models on floor 3.
(E) There are research models on floor 3.

17. If there are research models on exactly two floors, then which one of the following statements can be false?

(A) There are family cars on floor 1.
(B) There are research models on floor 1.
(C) There are new cars on floor 2.
(D) There are research models on floor 2.
(E) There are family cars on floor 3.

18. If all the new cars in the exhibition are research models, then which one of the following statements must be true?

(A) All the family cars in the exhibition are new.
(B) All the family cars in the exhibition are research models.
(C) All the family cars in the exhibition are used.
(D) All the new cars in the exhibition are family cars.
(E) All the production models in the exhibition are family cars.

19. If all the production models in the exhibition are used, then which one of the following statements must be true?

(A) There are family cars on floor 1.
(B) There are new cars on floor 2.
(C) There are research models on floor 2.
(D) There are family cars on floor 3.
(E) There are sports cars on floor 3.

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Questions 20–24

Planes 1, 2, 3, and 4—and no others—are available to fly in an air show.

> Pilots Anna, Bob, and Cindy are all aboard planes that are flying in the show and they are the only qualified pilots in the show.
>
> Copilots Dave, Ed, and Fran are all aboard planes that are flying in the show and they are the only qualified copilots in the show.
>
> No plane flies in the show without a qualified pilot aboard.
>
> No one but qualified pilots and qualified copilots flies in the show.
>
> Anna will only fly in either plane 1 or plane 4.
>
> Dave will only fly in either plane 2 or plane 3.

20. If Anna flies in plane 4 and Dave flies in plane 2, which one of the following must be true?

(A) Cindy flies in either plane 1 or plane 3.
(B) If Cindy flies in plane 3, Bob flies in plane 2.
(C) Bob and one other person fly in plane l.
(D) If Bob is aboard plane 4, Cindy flies in plane 3.
(E) If Cindy is in plane 2, Bob flies in plane 3.

21. If Bob and Anna fly on the same plane, which one of the following must be true?

(A) Cindy flies with Dave and Ed.
(B) Cindy flies with Ed.
(C) Dave flies with Cindy.
(D) Dave flies with Cindy, Ed, and Fran.
(E) Fran flies with Ed.

22. If Cindy and Fran are the only people in one of the planes, which one of the following must be true?

(A) Bob flies with Anna.
(B) Dave flies with Ed.
(C) Dave and Ed fly with Bob.
(D) Dave flies with Bob.
(E) Ed flies with Anna.

23. If plane 1 is used, its crew could consist of

(A) Anna, Bob, Cindy, Fran
(B) Anna, Bob, Ed, Fran
(C) Bob, Cindy, Ed, Fran
(D) Bob, Cindy, Dave, Ed
(E) Bob, Dave, Ed, Fran

24. If as many of the pilots and copilots as possible fly in plane 4, that group will consist of

(A) exactly two people
(B) exactly three people
(C) exactly four people
(D) exactly five people
(E) three pilots and two copilots

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.