#### SECTION II

#### Time—35 minutes

# 23 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.

## Questions 1–7

Workers at a water treatment plant open eight valves—G, H, I, K, L, N, O, and P—to flush out a system of pipes that needs emergency repairs. To maximize safety and efficiency, each valve is opened exactly once, and no two valves are opened at the same time. The valves are opened in accordance with the following conditions:

Both K and P are opened before H.

O is opened before L but after H.

L is opened after G.

N is opened before H.

I is opened after K.

- 1. Which one of the following could be the order, from first to last, in which the valves are opened?
  - (A) P, I, K, G, N, H, O, L
  - (B) P, G, K, N, L, H, O, I
  - (C) G, K, I, P, H, O, N, L
  - (D) N, K, P, H, O, I, L, G
  - (E) K, I, N, G, P, H, O, L
- 2. Each of the following could be the fifth valve opened EXCEPT:
  - (A) H
  - (B) I
  - (C) K
  - (D) N
  - (E) C
- 3. If I is the second valve opened, then each of the following could be true EXCEPT:
  - (A) G is the third valve opened.
  - (B) H is the fourth valve opened.
  - (C) P is the fifth valve opened.
  - (D) O is the sixth valve opened.
  - (E) G is the seventh valve opened.

- 4. If L is the seventh valve opened, then each of the following could be the second valve opened EXCEPT:
  - (A) G
  - (B) I
  - (C) K
  - (D) N
  - (E) P
- 5. Which one of the following must be true?
  - (A) At least one valve is opened before P is opened.
  - (B) At least two valves are opened before G is opened.
  - (C) No more than two valves are opened after O is opened.
  - (D) No more than three valves are opened after H is opened.
  - (E) No more than four valves are opened before N is opened.
- 6. If K is the fourth valve opened, then which one of the following could be true?
  - (A) I is the second valve opened.
  - (B) N is the third valve opened.
  - (C) G is the fifth valve opened.
  - (D) O is the fifth valve opened.
  - (E) P is the sixth valve opened.
- 7. If G is the first valve opened and I is the third valve opened, then each of the following must be true EXCEPT:
  - (A) K is the second valve opened.
  - (B) N is the fourth valve opened.
  - (C) H is the sixth valve opened.
  - (D) O is the seventh valve opened.
  - (E) L is the eighth valve opened.

### Questions 8-12

On a field trip to the Museum of Natural History, each of six children—Juana, Kyle, Lucita, Salim, Thanh, and Veronica—is accompanied by one of three adults—Ms. Margoles, Mr. O'Connell, and Ms. Podorski. Each adult accompanies exactly two of the children, consistent with the following conditions:

If Ms. Margoles accompanies Juana, then Ms. Podorski accompanies Lucita.

If Kyle is not accompanied by Ms. Margoles, then Veronica is accompanied by Mr. O'Connell.

Either Ms. Margoles or Mr. O'Connell accompanies Thanh.

Juana is not accompanied by the same adult as Kyle; nor is Lucita accompanied by the same adult as Salim; nor is Thanh accompanied by the same adult as Veronica.

- 8. Which one of the following could be an accurate matching of the adults to the children they accompany?
  - (A) Ms. Margoles: Juana, Thanh; Mr. O'Connell: Lucita, Veronica; Ms. Podorski: Kyle, Salim
  - (B) Ms. Margoles: Kyle, Thanh; Mr. O'Connell: Juana, Salim; Ms. Podorski: Lucita, Veronica
  - (C) Ms. Margoles: Lucita, Thanh; Mr. O'Connell: Juana, Salim; Ms. Podorski: Kyle, Veronica
  - (D) Ms. Margoles: Kyle, Veronica; Mr. O'Connell: Juana, Thanh; Ms. Podorski: Lucita, Salim
  - (E) Ms. Margoles: Salim, Veronica; Mr. O'Connell: Kyle, Lucita; Ms. Podorski: Juana, Thanh

- 9. If Ms. Margoles accompanies Lucita and Thanh, then which one of the following must be true?
  - (A) Juana is accompanied by the same adult as Veronica.
  - (B) Kyle is accompanied by the same adult as Salim.
  - (C) Juana is accompanied by Mr. O'Connell.
  - (D) Kyle is accompanied by Ms. Podorski.
  - (E) Salim is accompanied by Ms. Podorski.
- 10. If Ms. Podorski accompanies Juana and Veronica, then Ms. Margoles could accompany which one of the following pairs of children?
  - (A) Kyle and Salim
  - (B) Kyle and Thanh
  - (C) Lucita and Salim
  - (D) Lucita and Thanh
  - (E) Salim and Thanh
- 11. Ms. Podorski CANNOT accompany which one of the following pairs of children?
  - (A) Juana and Lucita
  - (B) Juana and Salim
  - (C) Kyle and Salim
  - (D) Salim and Thanh
  - (E) Salim and Veronica
- 12. Mr. O'Connell CANNOT accompany which one of the following pairs of children?
  - (A) Juana and Lucita
  - (B) Juana and Veronica
  - (C) Kyle and Thanh
  - (D) Lucita and Thanh
  - (E) Salim and Veronica

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### Questions 13–17

Three short seminars—Goals, Objections, and Persuasion—and three long seminars—Humor, Negotiating, and Telemarketing—will be scheduled for a three-day sales training conference. On each day, two of the seminars will be given consecutively. Each seminar will be given exactly once. The schedule must conform to the following conditions:

Exactly one short seminar and exactly one long seminar will be given each day.

Telemarketing will not be given until both Goals and Objections have been given.

Negotiating will not be given until Persuasion has been given.

- 13. Which one of the following could be an accurate schedule for the sales training conference?
  - (A) first day: Persuasion followed by Negotiating second day: Objections followed by Telemarketing third day: Goals followed by Humor
  - (B) first day: Objections followed by Humor second day: Goals followed by Telemarketing third day: Persuasion followed by Negotiating
  - (C) first day: Objections followed by Negotiating second day: Persuasion followed by Humor third day: Goals followed by Telemarketing
  - (D) first day: Objections followed by Goals second day: Telemarketing followed by Persuasion
    - third day: Negotiating followed by Humor first day: Goals followed by Humor
  - second day: Persuasion followed by
    Telemarketing
    third day: Objections followed by Negotiating

- 14. If Goals is given on the first day of the sales training conference, then which one of the following could be true?
  - (A) Negotiating is given on the first day.
  - (B) Objections is given on the first day.
  - (C) Persuasion is given on the first day.
  - (D) Humor is given on the second day.
  - (E) Telemarketing is given on the second day.
- 15. If Negotiating is given at some time before Objections, then which one of the following must be true?
  - (A) Negotiating is given at some time before Goals.
  - (B) Persuasion is given at some time before Goals.
  - (C) Persuasion is given at some time before Objections.
  - (D) Humor is given at some time before Objections.
  - (E) Negotiating is given at some time before Humor.
- 16. Which one of the following CANNOT be the second seminar given on the second day of the sales training conference?
  - (A) Humor
  - (B) Persuasion
  - (C) Objections
  - (D) Negotiating
  - (E) Goals
- 17. If Humor is given on the second day of the sales training conference, then which one of the following could be true?
  - (A) Telemarketing is given on the first day.
  - (B) Negotiating is given on the second day.
  - (C) Telemarketing is given on the second day.
  - (D) Objections is given on the third day.
  - (E) Persuasion is given on the third day.

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### Questions 18–23

A bread truck makes exactly one bread delivery to each of six restaurants in succession—Figueroa's, Ginsberg's, Harris's, Kanzaki's, Leacock's, and Malpighi's—though not necessarily in that order. The following conditions must apply:

Ginsberg's delivery is earlier than Kanzaki's but later than Figueroa's.

Harris's delivery is earlier than Ginsberg's. If Figueroa's delivery is earlier than Malpighi's, then Leacock's delivery is earlier than Harris's.

Either Malpighi's delivery is earlier than Harris's or it is later than Kanzaki's, but not both.

- 18. Which one of the following accurately represents an order in which the deliveries could occur, from first to last?
  - (A) Harris's, Figueroa's, Leacock's, Ginsberg's, Kanzaki's, Malpighi's
  - (B) Leacock's, Harris's, Figueroa's, Ginsberg's, Malpighi's, Kanzaki's
  - (C) Malpighi's, Figueroa's, Harris's, Ginsberg's, Leacock's, Kanzaki's
  - (D) Malpighi's, Figueroa's, Kanzaki's, Harris's, Ginsberg's, Leacock's
  - (E) Malpighi's, Figueroa's, Ginsberg's, Kanzaki's, Harris's, Leacock's
- 19. If Figueroa's delivery is fourth, then which one of the following must be true?
  - (A) Ginsberg's delivery is fifth.
  - (B) Harris's delivery is second.
  - (C) Harris's delivery is third.
  - (D) Leacock's delivery is second.
  - (E) Malpighi's delivery is first.

- 20. If Malpighi's delivery is first and Leacock's delivery is third, then which one of the following must be true?
  - (A) Figueroa's delivery is second.
  - (B) Harris's delivery is second.
  - (C) Harris's delivery is fourth.
  - (D) Kanzaki's delivery is fifth.
  - (E) Kanzaki's delivery is last.
- 21. Which one of the following must be true?
  - (A) Figueroa's delivery is earlier than Leacock's.
  - (B) Ginsberg's delivery is earlier than Leacock's.
  - (C) Harris's delivery is earlier than Kanzaki's.
  - (D) Leacock's delivery is earlier than Ginsberg's.
  - (E) Malpighi's delivery is earlier than Harris's.
- 22. If Kanzaki's delivery is earlier than Leacock's, then which one of the following could be true?
  - (A) Figueroa's delivery is first.
  - (B) Ginsberg's delivery is third.
  - (C) Harris's delivery is third.
  - (D) Leacock's delivery is fifth.
  - (E) Malpighi's delivery is second.
- 23. Which one of the following must be false?
  - (A) Figueroa's delivery is first.
  - (B) Ginsberg's delivery is fifth.
  - (C) Harris's delivery is third.
  - (D) Leacock's delivery is second.
  - (E) Malpighi's delivery is fourth.

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.