





3

# SECTION III

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 1-5

Exactly six workers—Faith, Gus, Hannah, Juan, Kenneth, and Lisa—will travel to a business convention in two cars—car 1 and car 2. Each car must carry at least two of the workers, one of whom will be assigned to drive. For the entire trip, the workers will comply with an assignment that also meets the following constraints:

Either Faith or Gus must drive the car in which Hannah travels.

Either Faith or Kenneth must drive the car in which Juan travels.

Gus must travel in the same car as Lisa.

- 1. Which one of the following is a possible assignment of the workers to the cars?
  - (A) car 1: Faith (driver), Hannah, and Juan car 2: Gus (driver), Kenneth, and Lisa
  - (B) car 1: Faith (driver), Hannah, and Kenneth car 2: Lisa (driver), Gus, and Juan
  - (C) car 1: Faith (driver), Juan, Kenneth, and Lisa car 2: Gus (driver) and Hannah
  - (D) car 1: Faith (driver) and Juan car 2: Kenneth (driver), Gus, Hannah, and Lisa
  - (E) car 1: Gus (driver), Hannah, and Lisa car 2: Juan (driver), Faith, and Kenneth
- 2. The two workers who drive the cars CANNOT be
  - (A) Faith and Gus
  - (B) Faith and Kenneth
  - (C) Faith and Lisa
  - (D) Gus and Kenneth
  - (E) Kenneth and Lisa

- 3. If Lisa drives one of the cars, then which one of the following could be true?
  - (A) Faith travels in the same car as Kenneth.
  - (B) Faith travels in the same car as Lisa.
  - (C) Gus travels in the same car as Hannah.
  - (D) Gus travels in the same car as Juan.
  - (E) Hannah travels in the same car as Lisa.
- 4. If Faith travels with two other workers in car 1, and if Faith is not the driver, then the person in car 1 other than Faith and the driver must be
  - (A) Gus
  - (B) Hannah
  - (C) Juan
  - (D) Kenneth
  - (E) Lisa
- 5. Which one of the following CANNOT be true?
  - (A) Gus is the only person other than the driver in one of the cars.
  - (B) Hannah is the only person other than the driver in one of the cars.
  - (C) Juan is the only person other than the driver in one of the cars.
  - (D) Kenneth is the only person other than the driver in one of the cars.
  - (E) Lisa is the only person other than the driver in one of the cars.

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## Questions 6–11

An archaeologist has six ancient artifacts—a figurine, a headdress, a jar, a necklace, a plaque, and a tureen—no two of which are the same age. She will order them from first (oldest) to sixth (most recent). The following has already been determined:

The figurine is older than both the jar and the headdress. The necklace and the jar are both older than the tureen. Either the plaque is older than both the headdress and the necklace, or both the headdress and the necklace are older than the plaque.

- 6. Which one of the following could be the artifacts in the order of their age, from first to sixth?
  - (A) figurine, headdress, jar, necklace, plaque, tureen
  - (B) figurine, jar, plaque, headdress, tureen, necklace
  - (C) figurine, necklace, plaque, headdress, jar, tureen
  - (D) necklace, jar, figurine, headdress, plaque, tureen
  - (E) plaque, tureen, figurine, necklace, jar, headdress
- 7. Exactly how many of the artifacts are there any one of which could be first?
  - (A) one
  - (B) two
  - (C) three
  - (D) four
  - (E) five
- 8. Which one of the following artifacts CANNOT be fourth?
  - (A) figurine
  - (B) headdress
  - (C) jar
  - (D) necklace
  - (E) plaque

- 9. If the figurine is third, which one of the following must be second?
  - (A) headdress
  - (B) jar
  - (C) necklace
  - (D) plaque
  - (E) tureen
- 10. If the plaque is first, then exactly how many artifacts are there any one of which could be second?
  - (A) one
  - (B) two
  - (C) three
  - (D) four
  - (E) five
- 11. Which one of the following, if substituted for the information that the necklace and the jar are both older than the tureen, would have the same effect in determining the order of the artifacts?
  - (A) The tureen is older than the headdress but not as old as the figurine.
  - (B) The figurine and the necklace are both older than the tureen.
  - (C) The necklace is older than the tureen if and only if the jar is.
  - (D) All of the artifacts except the headdress and the plaque must be older than the tureen.
  - (E) The plaque is older than the necklace if and only if the plaque is older than the tureen.

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#### Questions 12–17

The coach of a women's track team must determine which four of five runners—Quinn, Ramirez, Smith, Terrell, and Uzoma—will run in the four races of an upcoming track meet. Each of the four runners chosen will run in exactly one of the four races—the first, second, third, or fourth. The coach's selection is bound by the following constraints:

- If Quinn runs in the track meet, then Terrell runs in the race immediately after the race in which Quinn runs. Smith does not run in either the second race or the fourth race.
- If Uzoma does not run in the track meet, then Ramirez runs in the second race.
- If Ramirez runs in the second race, then Uzoma does not run in the track meet.
- 12. Which one of the following could be the order in which the runners run, from first to fourth?
  - (A) Uzoma, Ramirez, Quinn, Terrell
  - (B) Terrell, Smith, Ramirez, Uzoma
  - (C) Smith, Ramirez, Terrell, Quinn
  - (D) Ramirez, Uzoma, Smith, Terrell
  - (E) Quinn, Terrell, Smith, Ramirez
- 13. Which one of the following runners must the coach select to run in the track meet?
  - (A) Ouinn
  - (B) Ramirez
  - (C) Smith
  - (D) Terrell
  - (E) Uzoma

- 14. The question of which runners will be chosen to run in the track meet and in what races they will run can be completely resolved if which one of the following is true?
  - (A) Ramirez runs in the first race.
  - (B) Ramirez runs in the second race.
  - (C) Ramirez runs in the third race.
  - (D) Ramirez runs in the fourth race.
  - (E) Ramirez does not run in the track meet.
- 15. Which one of the following CANNOT be true?
  - (A) Ramirez runs in the race immediately before the race in which Smith runs.
  - (B) Smith runs in the race immediately before the race in which Quinn runs.
  - (C) Smith runs in the race immediately before the race in which Terrell runs.
  - (D) Terrell runs in the race immediately before the race in which Ramirez runs.
  - (E) Uzoma runs in the race immediately before the race in which Terrell runs.
- 16. If Uzoma runs in the first race, then which one of the following must be true?
  - (A) Quinn does not run in the track meet.
  - (B) Smith does not run in the track meet.
  - (C) Quinn runs in the second race.
  - (D) Terrell runs in the second race.
  - (E) Ramirez runs in the fourth race.
- 17. If both Quinn and Smith run in the track meet, then how many of the runners are there any one of whom could be the one who runs in the first race?
  - (A) one
  - (B) two
  - (C) three
  - (D) four
  - (E) five

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### Questions 18-23

From the 1st through the 7th of next month, seven nurses—Farnham, Griseldi, Heany, Juarez, Khan, Lightfoot, and Moreau—will each conduct one information session at a community center. Each nurse's session will fall on a different day. The nurses' schedule is governed by the following constraints:

At least two of the other nurses' sessions must fall in between Heany's session and Moreau's session.

Griseldi's session must be on the day before Khan's.

Juarez's session must be on a later day than Moreau's.

Farnham's session must be on an earlier day than Khan's but on a later day than Lightfoot's.

Lightfoot cannot conduct the session on the 2nd.

- 18. Which one of the following could be the order of the nurses' sessions, from first to last?
  - (A) Farnham, Griseldi, Khan, Moreau, Juarez, Lightfoot, Heany
  - (B) Heany, Lightfoot, Farnham, Moreau, Juarez, Griseldi, Khan
  - (C) Juarez, Heany, Lightfoot, Farnham, Moreau, Griseldi, Khan
  - (D) Lightfoot, Moreau, Farnham, Juarez, Griseldi, Khan, Heany
  - (E) Moreau, Lightfoot, Heany, Juarez, Farnham, Griseldi, Khan
- 19. Juarez's session CANNOT be on which one of the following days?
  - (A) the 2nd
  - (B) the 3rd
  - (C) the 5th
  - (D) the 6th
  - (E) the 7th

- 20. If Juarez's session is on the 3rd, then which one of the following could be true?
  - (A) Moreau's session is on the 1st.
  - (B) Khan's session is on the 5th.
  - (C) Heany's session is on the 6th.
  - (D) Griseldi's session is on the 5th.
  - (E) Farnham's session is on the 2nd.
- 21. If Khan's session is on an earlier day than Moreau's, which one of the following could conduct the session on the 3rd?
  - (A) Griseldi
  - (B) Heany
  - (C) Juarez
  - (D) Lightfoot
  - (E) Moreau
- 22. If Griseldi's session is on the 5th, then which one of the following must be true?
  - (A) Farnham's session is on the 3rd.
  - (B) Heany's session is on the 7th.
  - (C) Juarez's session is on the 4th.
  - (D) Lightfoot's session is on the 1st.
  - (E) Moreau's session is on the 2nd.
- 23. Lightfoot's session could be on which one of the following days?
  - (A) the 3rd
  - (B) the 4th
  - (C) the 5th
  - (D) the 6th
  - (E) the 7th
- 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.