

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 1–7

At a benefit dinner, a community theater's seven sponsors—K, L, M, P, Q, V, and Z—will be seated at three tables—1, 2, and 3. Of the sponsors, only K, L, and M will receive honors, and only M, P, and Q will give a speech. The sponsors' seating assignments must conform to the following conditions:

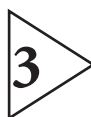
Each table has at least two sponsors seated at it, and each sponsor is seated at exactly one table.

Any sponsor receiving honors is seated at table 1 or table 2.

L is seated at the same table as V.

- Which one of the following is an acceptable assignment of sponsors to tables?
 - Table 1: K, P; Table 2: M, Q; Table 3: L, V, Z
 - Table 1: K, Q, Z; Table 2: L, V; Table 3: M, P
 - Table 1: L, P; Table 2: K, M; Table 3: Q, V, Z
 - Table 1: L, Q, V; Table 2: K, M; Table 3: P, Z
 - Table 1: L, V, Z; Table 2: K, M, P; Table 3: Q
- Which one of the following is a list of all and only those sponsors any one of whom could be among the sponsors assigned to table 3?
 - P, Q
 - Q, Z
 - P, Q, Z
 - Q, V, Z
 - P, Q, V, Z
- If K is assigned to a different table than M, which one of the following must be true of the seating assignment?
 - K is seated at the same table as L.
 - L is seated at the same table as Q.
 - M is seated at the same table as V.
 - Exactly two sponsors are seated at table 1.
 - Exactly two sponsors are seated at table 3.
- If Q is assigned to table 1 along with two other sponsors, which one of the following could be true of the seating assignment?
 - K is seated at the same table as L.
 - K is seated at the same table as Q.
 - M is seated at the same table as V.
 - M is seated at the same table as Z.
 - P is seated at the same table as Q.
- If the sponsors assigned to table 3 include exactly one of the sponsors who will give a speech, then the sponsors assigned to table 1 could include any of the following EXCEPT:
 - K
 - M
 - P
 - Q
 - Z
- If three sponsors, exactly two of whom are receiving honors, are assigned to table 2, which one of the following could be the list of sponsors assigned to table 1?
 - K, M
 - K, Z
 - P, V
 - P, Z
 - Q, Z
- Which one of the following conditions, if added to the existing conditions, results in a set of conditions to which no seating assignment for the sponsors can conform?
 - At most two sponsors are seated at table 1.
 - Any sponsor giving a speech is seated at table 1 or else table 2.
 - Any sponsor giving a speech is seated at table 2 or else table 3.
 - Exactly three of the sponsors are seated at table 1.
 - Any table at which both L and V are seated also has a third sponsor seated at it.

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Questions 8–14

Exactly four medical training sessions—M, O, R, and S—will be scheduled for four consecutive days—day 1 through day 4—one session each day. Six professionals—three nurses and three psychologists—will teach the sessions. The nurses are Fine, Johnson, and Leopold; the psychologists are Tyler, Vitale, and Wong. Each session will be taught by exactly one nurse and exactly one psychologist. The schedule must conform to the following conditions:

- Each professional teaches at least once.
- Day 3 is a day on which Leopold teaches.
- Neither Fine nor Leopold teaches with Tyler.
- Johnson teaches session S only.
- Session M is taught on the day after the day on which session S is taught.

8. If session R is the only session for which Leopold is scheduled, which one of the following is a pair of professionals who could be scheduled for day 2 together?
 - (A) Fine and Tyler
 - (B) Fine and Wong
 - (C) Johnson and Tyler
 - (D) Johnson and Wong
 - (E) Leopold and Wong
9. Which one of the following must be false?
 - (A) Session O is scheduled for day 1.
 - (B) Session S is scheduled for day 3.
 - (C) Leopold is scheduled for day 1.
 - (D) Vitale is scheduled for day 4.
 - (E) Wong is scheduled for day 1.
10. Which one of the following could be the session and the professionals scheduled for day 4?
 - (A) session M, Fine, Wong
 - (B) session O, Fine, Tyler
 - (C) session O, Johnson, Tyler
 - (D) session R, Fine, Wong
 - (E) session S, Fine, Vitale
11. If session S is scheduled for day 2, which one of the following is a professional who must be scheduled to teach session M?
 - (A) Fine
 - (B) Leopold
 - (C) Tyler
 - (D) Vitale
 - (E) Wong
12. If session O and session R are scheduled for consecutive days, which one of the following is a pair of professionals who could be scheduled for day 2 together?
 - (A) Fine and Leopold
 - (B) Fine and Wong
 - (C) Johnson and Tyler
 - (D) Johnson and Vitale
 - (E) Leopold and Tyler
13. Which one of the following could be the order in which the nurses teach the sessions, listed from day 1 through day 4?
 - (A) Fine, Johnson, Leopold, Leopold
 - (B) Fine, Leopold, Leopold, Johnson
 - (C) Johnson, Johnson, Leopold, Fine
 - (D) Johnson, Leopold, Leopold, Johnson
 - (E) Leopold, Leopold, Fine, Fine
14. If session O is scheduled for day 3, which one of the following must be scheduled for day 4?
 - (A) session R
 - (B) session S
 - (C) Fine
 - (D) Leopold
 - (E) Vitale

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Questions 15–19

Six paintings hang next to each other as shown below:

1	2	3
4	5	6

Each of the paintings is an oil or else a watercolor.

Each oil is directly beside, directly above, or directly below another oil.

Each watercolor is directly beside, directly above, or directly below another watercolor.

Each painting is a nineteenth-century painting or else a twentieth-century painting.

Each painting is directly beside, directly above, or directly below another painting painted in the same century.

Painting 2 is a nineteenth-century painting.

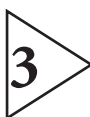
Painting 3 is an oil.

Painting 5 is a twentieth-century painting.

15. If all of the nineteenth-century paintings are watercolors, which one of the following must be true?
- (A) Painting 1 is an oil.
 - (B) Painting 3 is a nineteenth-century painting.
 - (C) Painting 4 is a watercolor.
 - (D) Painting 5 is an oil.
 - (E) Painting 6 is a twentieth-century painting.
16. It is possible that the only two watercolors among the six paintings are
- (A) paintings 1 and 5
 - (B) paintings 1 and 6
 - (C) paintings 2 and 4
 - (D) paintings 4 and 5
 - (E) paintings 4 and 6

17. If there are exactly three oils and three watercolors, which one of the following must be true?
- (A) Painting 1 is a watercolor.
 - (B) Painting 2 is a watercolor.
 - (C) Painting 4 is a watercolor.
 - (D) Painting 5 is a watercolor.
 - (E) Painting 6 is a watercolor.
18. If exactly two paintings are oils and exactly two paintings are nineteenth-century paintings, which one of the following must be false?
- (A) Painting 1 is a nineteenth-century painting, and painting 6 is an oil.
 - (B) Painting 2 is both a nineteenth-century painting and an oil.
 - (C) Painting 3 is a nineteenth-century painting.
 - (D) Paintings 1 and 2 are both nineteenth-century paintings.
 - (E) Painting 2 is an oil, and painting 4 is a nineteenth-century painting.
19. Which one of the following could be true?
- (A) Paintings 1 and 4 are two of exactly three twentieth-century paintings.
 - (B) Paintings 1 and 6 are two of exactly three twentieth-century paintings.
 - (C) Paintings 1 and 6 are two of exactly three nineteenth-century paintings.
 - (D) Paintings 3 and 4 are two of exactly three nineteenth-century paintings.
 - (E) Paintings 4 and 6 are two of exactly three nineteenth-century paintings.

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Questions 20–24

Exactly six of seven jugglers—G, H, K, L, N, P, and Q—are each assigned to exactly one of three positions—front, middle, and rear—on one of two teams—team 1 and team

2. For each team, exactly one juggler must be assigned to each position according to the following conditions:

If either G or H or both are assigned to teams, they are assigned to front positions.

If assigned to a team, K is assigned to a middle position.

If assigned to a team, L is assigned to team 1.

Neither P nor K is on the same team as N.

P is not on the same team as Q.

If H is on team 2, then Q is assigned to the middle position on team 1.

20. Which one of the following is an acceptable list of assignments of jugglers to team 2?

- (A) front: Q; middle: K; rear: N
- (B) front: H; middle: P; rear: K
- (C) front: H; middle: L; rear: N
- (D) front: G; middle: Q; rear: P
- (E) front: G; middle: Q; rear: N

21. If H is assigned to team 2, which one of the following is an acceptable assignment of jugglers to team 1?

- (A) front: G; middle: K; rear: L
- (B) front: G; middle: K; rear: N
- (C) front: L; middle: K; rear: P
- (D) front: L; middle: Q; rear: G
- (E) front: L; middle: Q; rear: N

22. Which one of the following is an acceptable list of assignments of jugglers to team 1?

- (A) front: G; middle: K; rear: L
- (B) front: G; middle: K; rear: P
- (C) front: L; middle: K; rear: Q
- (D) front: Q; middle: K; rear: P
- (E) front: Q; middle: L; rear: N

23. If G is assigned to team 1, which one of the following is a pair of jugglers who could also be assigned to team 1?

- (A) H and N
- (B) K and L
- (C) K and P
- (D) L and N
- (E) L and Q

24. If G is assigned to team 1 and K is assigned to team 2, which one of the following must be assigned the rear position on team 2?

- (A) H
- (B) L
- (C) N
- (D) P
- (E) Q

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.