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.

1. Which one of the following is an acceptable assignment of sponsors to tables?

(A) Table 1: K, P; Table 2: M, Q; Table 3: L, V, Z
(B) Table 1: K, Q, Z; Table 2: L, V; Table 3: M, P
(C) Table 1: L, P; Table 2: K, M; Table 3: Q, V, Z
(D) Table 1: L, Q, V; Table 2: K, M; Table 3: P, Z
(E) Table 1: L, V, Z; Table 2: K, M, P; Table 3: Q

2. 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?

(A) P, Q
(B) Q, Z
(C) P, Q, Z
(D) Q, V, Z
(E) P, Q, V, Z

3. If K is assigned to a different table than M, which one of the following must be true of the seating assignment?

(A) K is seated at the same table as L.
(B) L is seated at the same table as Q.
(C) M is seated at the same table as V.
(D) Exactly two sponsors are seated at table 1.
(E) Exactly two sponsors are seated at table 3.

4. If Q is assigned to table 1 along with two other sponsors, which one of the following could be true of the seating assignment?

(A) K is seated at the same table as L.
(B) K is seated at the same table as Q.
(C) M is seated at the same table as V.
(D) M is seated at the same table as Z.
(E) P Is seated at the same table as Q.

5. 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:

(A) K
(B) M
(C) P
(D) Q
(E) Z

6. 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?

(A) K, M
(B) K, Z
(C) P, V
(D) P, Z
(E) Q, Z

7. 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?

(A) At most two sponsors are seated at table 1.
(B) Any sponsor giving a speech is seated at table 1 or else table 2.
(C) Any sponsor giving a speech is seated at table 2 or else table 3.
(D) Exactly three of the sponsors are seated at table 1.
(E) 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; near: 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.