



SECTION III

Time—35 minutes

23 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 1–5

A dance is being choreographed for six dancers: three men—Felipe, Grant, and Hassan—and three women—Jaclyn, Keiko, and Lorena. At no time during the dance will anyone other than the dancers be on stage. Who is on stage and who is off stage at any particular time in the dance is determined by the following constraints:

If Jaclyn is on stage, Lorena is off stage.

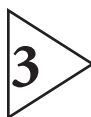
If Lorena is off stage, Jaclyn is on stage.

If Felipe is off stage, Jaclyn is also off stage.

If any of the women are on stage, Grant is also on stage.

1. Which one of the following is a list of all of the dancers who could be on stage at a particular time?
 - (A) Grant
 - (B) Keiko, Lorena
 - (C) Grant, Hassan, Lorena
 - (D) Grant, Hassan, Jaclyn
 - (E) Felipe, Grant, Jaclyn, Lorena
2. Which one of the following CANNOT be true at any time during the dance?
 - (A) Felipe and Grant are the only men on stage.
 - (B) Grant and Hassan are the only men on stage.
 - (C) Jaclyn is the only woman on stage.
 - (D) Keiko is the only woman on stage.
 - (E) Jaclyn and Keiko are the only women on stage.
3. Which one of the following is a complete and accurate list of the dancers any one of whom could be off stage when Jaclyn is on stage?
 - (A) Lorena
 - (B) Felipe, Lorena
 - (C) Hassan, Lorena
 - (D) Hassan, Keiko
 - (E) Hassan, Keiko, Lorena
4. If there are more women than men on stage, then exactly how many dancers must be on stage?
 - (A) five
 - (B) four
 - (C) three
 - (D) two
 - (E) one
5. What is the minimum number of dancers that must be on stage at any given time?
 - (A) zero
 - (B) one
 - (C) two
 - (D) three
 - (E) four

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Questions 6–12

A critic has prepared a review of exactly six music CDs—*Headstrong*, *In Flight*, *Nice*, *Quasi*, *Reunion*, and *Sounds Good*. Each CD received a rating of either one, two, three, or four stars, with each CD receiving exactly one rating. Although the ratings were meant to be kept secret until the review was published, the following facts have been leaked to the public:

For each of the ratings, at least one but no more than two of the CDs received that rating.

Headstrong received exactly one more star than *Nice* did.

Either *Headstrong* or *Reunion* received the same number of stars as *In Flight* did.

At most one CD received more stars than *Quasi* did.

6. Which one of the following could be an accurate matching of ratings to the CDs that received those ratings?
 - (A) one star: *In Flight*, *Reunion*; two stars: *Nice*; three stars: *Headstrong*; four stars: *Quasi*, *Sounds Good*
 - (B) one star: *In Flight*, *Reunion*; two stars: *Quasi*, *Sounds Good*; three stars: *Nice*; four stars: *Headstrong*
 - (C) one star: *Nice*; two stars: *Headstrong*; three stars: *In Flight*, *Sounds Good*; four stars: *Quasi*, *Reunion*
 - (D) one star: *Nice*, *Sounds Good*; two stars: *In Flight*, *Reunion*; three stars: *Quasi*; four stars: *Headstrong*
 - (E) one star: *Sounds Good*; two stars: *Reunion*; three stars: *Nice*, *Quasi*; four stars: *Headstrong*, *In Flight*
7. If *Headstrong* is the only CD that received a rating of two stars, then which one of the following must be true?
 - (A) *In Flight* received a rating of three stars.
 - (B) *Nice* received a rating of three stars.
 - (C) *Quasi* received a rating of three stars.
 - (D) *Reunion* received a rating of one star.
 - (E) *Sounds Good* received a rating of one star.
8. If *Reunion* received the same rating as *Sounds Good*, then which one of the following must be true?
 - (A) *Headstrong* received a rating of two stars.
 - (B) *In Flight* received a rating of three stars.
 - (C) *Nice* received a rating of two stars.
 - (D) *Quasi* received a rating of four stars.
 - (E) *Sounds Good* received a rating of one star.
9. If *Nice* and *Reunion* each received a rating of one star, then which one of the following could be true?
 - (A) *Headstrong* received a rating of three stars.
 - (B) *Headstrong* received a rating of four stars.
 - (C) *In Flight* received a rating of three stars.
 - (D) *Sounds Good* received a rating of two stars.
 - (E) *Sounds Good* received a rating of three stars.
10. Which one of the following CANNOT be true?
 - (A) *Quasi* is the only CD that received a rating of three stars.
 - (B) *Quasi* is the only CD that received a rating of four stars.
 - (C) *Reunion* is the only CD that received a rating of one star.
 - (D) *Reunion* is the only CD that received a rating of two stars.
 - (E) *Reunion* is the only CD that received a rating of three stars.
11. If *Reunion* is the only CD that received a rating of one star, then which one of the following could be true?
 - (A) *Headstrong* received a rating of four stars.
 - (B) *In Flight* received a rating of two stars.
 - (C) *Nice* received a rating of three stars.
 - (D) *Quasi* received a rating of three stars.
 - (E) *Sounds Good* received a rating of two stars.
12. Which one of the following CANNOT have received a rating of four stars?
 - (A) *Headstrong*
 - (B) *In Flight*
 - (C) *Quasi*
 - (D) *Reunion*
 - (E) *Sounds Good*

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Questions 13–17

A cake has exactly six layers—lemon, marzipan, orange, raspberry, strawberry, and vanilla. There is exactly one bottom layer (the first layer), and each succeeding layer (from second through sixth) completely covers the layer beneath it. The following conditions must apply:

The raspberry layer is neither immediately above nor immediately below the strawberry layer.

The marzipan layer is immediately above the lemon layer.

The orange layer is above the marzipan layer but below the strawberry layer.

13. Which one of the following could be an accurate list of the layers of the cake, from bottom to top?
 - (A) lemon, marzipan, orange, strawberry, vanilla, raspberry
 - (B) lemon, marzipan, orange, strawberry, raspberry, vanilla
 - (C) marzipan, lemon, raspberry, vanilla, orange, strawberry
 - (D) raspberry, lemon, marzipan, vanilla, strawberry, orange
 - (E) raspberry, orange, lemon, marzipan, strawberry, vanilla
14. If the strawberry layer is not immediately above the orange layer, then which one of the following could be true?
 - (A) The raspberry layer is immediately above the vanilla layer.
 - (B) The raspberry layer is immediately above the orange layer.
 - (C) The raspberry layer is immediately below the marzipan layer.
 - (D) The raspberry layer is the second layer.
 - (E) The raspberry layer is the top layer.
15. If the strawberry layer is not the top layer, then which one of the following is a complete and accurate list of the layers that could be the vanilla layer?
 - (A) the first, the second, the third, the fourth, the fifth, the sixth
 - (B) the second, the third, the fourth, the fifth, the sixth
 - (C) the third, the fourth, the fifth, the sixth
 - (D) the fourth, the fifth, the sixth
 - (E) the fifth, the sixth
16. If the lemon layer is third, then which one of the following could be true?
 - (A) The vanilla layer is fifth.
 - (B) The vanilla layer is immediately above the raspberry layer.
 - (C) The orange layer is not immediately above the marzipan layer.
 - (D) The raspberry layer is above the marzipan layer.
 - (E) The strawberry layer is not the top layer.
17. Which one of the following could be an accurate list of the two lowest layers of the cake, listed in order from the bottom up?
 - (A) lemon, raspberry
 - (B) vanilla, raspberry
 - (C) marzipan, raspberry
 - (D) raspberry, marzipan
 - (E) raspberry, strawberry

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Questions 18–23

A panel reviews six contract bids—H, J, K, R, S, and T. No two bids have the same cost. Exactly one of the bids is accepted. The following conditions must hold:

The accepted bid is either K or R and is either the second or the third lowest in cost.

H is lower in cost than each of J and K.

If J is the fourth lowest in cost, then J is lower in cost than each of S and T.

If J is not the fourth lowest in cost, then J is higher in cost than each of S and T.

Either R or S is the fifth lowest in cost.

18. Which one of the following could be an accurate list of the bids in order from lowest to highest in cost?

(A) T, K, H, S, J, R
 (B) H, T, K, S, R, J
 (C) H, S, T, K, R, J
 (D) H, K, S, J, R, T
 (E) H, J, K, R, S, T

19. Which one of the following bids CANNOT be the fourth lowest in cost?

(A) H
 (B) J
 (C) K
 (D) R
 (E) T

20. Which one of the following bids CANNOT be the second lowest in cost?

(A) H
 (B) J
 (C) K
 (D) R
 (E) T

21. If R is the accepted bid, then which one of the following must be true?

(A) T is the lowest in cost.
 (B) K is the second lowest in cost.
 (C) R is the third lowest in cost.
 (D) S is the fifth lowest in cost.
 (E) J is the highest in cost.

22. Which one of the following must be true?

(A) H is lower in cost than S.
 (B) H is lower in cost than T.
 (C) K is lower in cost than J.
 (D) S is lower in cost than J.
 (E) S is lower in cost than K.

23. If R is the lowest in cost, then which one of the following could be false?

(A) J is the highest in cost.
 (B) S is the fifth lowest in cost.
 (C) K is the third lowest in cost.
 (D) H is the second lowest in cost.
 (E) K is the accepted bid.

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.