

SECTION II

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

Charlie makes a soup by adding exactly six kinds of foods—kale, lentils, mushrooms, onions, tomatoes, and zucchini—to a broth, one food at a time. No food is added more than once. The order in which Charlie adds the foods to the broth must be consistent with the following:

If the mushrooms are added third, then the lentils are added last.

If the zucchini is added first, then the lentils are added at some time before the onions.

Neither the tomatoes nor the kale is added fifth.

The mushrooms are added at some time before the tomatoes or the kale, but not before both.

1. Which one of the following could be the order in which the foods are added to the broth?
 - (A) kale, mushrooms, onions, lentils, tomatoes, zucchini
 - (B) kale, zucchini, mushrooms, tomatoes, lentils, onions
 - (C) lentils, mushrooms, zucchini, kale, onions, tomatoes
 - (D) zucchini, lentils, kale, mushrooms, onions, tomatoes
 - (E) zucchini, tomatoes, onions, mushrooms, lentils, kale
2. Which one of the following foods CANNOT be added first?
 - (A) kale
 - (B) lentils
 - (C) mushrooms
 - (D) onions
 - (E) tomatoes
3. If the lentils are added last, then which one of the following must be true?
 - (A) At least one of the foods is added at some time before the zucchini.
 - (B) At least two of the foods are added at some time before the kale.
 - (C) The mushrooms are added third.
 - (D) The zucchini is added third.
 - (E) The tomatoes are added fourth.
4. Which one of the following could be an accurate partial ordering of the foods added to the broth?
 - (A) lentils: second; mushrooms: third
 - (B) mushrooms: fourth; lentils: last
 - (C) onions: second; mushrooms: fifth
 - (D) zucchini: first; lentils: last
 - (E) zucchini: first; mushrooms: second
5. If the zucchini is added first, then which one of the following CANNOT be true?
 - (A) The kale is added second.
 - (B) The tomatoes are added second.
 - (C) The lentils are added third.
 - (D) The lentils are added fourth.
 - (E) The onions are added fourth.

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Questions 6–10

A study sponsored by a consumer group tests exactly five of seven cold medications—F, G, H, I, K, L, and M—and ranks the medications tested from first (best) to fifth (worst).

There are no ties. The following conditions must apply:

L ranks second.

Either F or G ranks first.

I is tested.

H ranks better than G if both are tested.

K ranks better than F if both are tested.

If M is tested, both F and H are also tested.

6. Which one of the following could be the five cold medications that the study ranks, listed from first to fifth?

(A) F, I, L, H, G
 (B) F, L, G, H, M
 (C) F, L, I, G, M
 (D) F, L, I, H, M
 (E) F, L, K, I, G

7. Which one of the following could be true of the study?

(A) G ranks better than M.
 (B) H ranks better than F.
 (C) I ranks better than F.
 (D) K ranks better than G.
 (E) M ranks better than G.

8. Which one of the following cold medications must be among those tested in the study?

(A) F
 (B) G
 (C) H
 (D) K
 (E) M

9. Which one of the following is a complete and accurate list of the cold medications any one of which could be the cold medication ranked fifth?

(A) F, G, H, M
 (B) G, H, I, M
 (C) G, H, L, M
 (D) F, G, H, I, K
 (E) F, G, H, I, M

10. If I ranks third, each of the following could also be true of the study EXCEPT:

(A) M ranks better than H.
 (B) K ranks better than G.
 (C) I ranks better than F.
 (D) H ranks better than M.
 (E) G ranks better than K.

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Questions 11–17

Each nonstop flight offered by Zephyr Airlines departs from one and arrives at another of five cities: Honolulu, Montreal, Philadelphia, Toronto, and Vancouver. Any two cities are said to be connected with each other if Zephyr offers nonstop flights between them. Each city is connected with at least one other city. The following conditions govern Zephyr's nonstop flights:

Montreal is connected with exactly one other city.

Honolulu is not connected with Toronto.

Any city that is connected with Honolulu is also connected with Toronto.

If Philadelphia is connected with Toronto, then

Philadelphia is not connected with Vancouver.

11. Which one of the following could be a complete and accurate list of Zephyr Airlines' connected cities?
 - (A) Honolulu and Vancouver; Montreal and Toronto; Philadelphia and Vancouver; Toronto and Vancouver
 - (B) Honolulu and Vancouver; Montreal and Philadelphia; Montreal and Toronto; Philadelphia and Toronto; Toronto and Vancouver
 - (C) Honolulu and Philadelphia; Honolulu and Montreal; Philadelphia and Toronto; Toronto and Vancouver
 - (D) Honolulu and Philadelphia; Montreal and Toronto; Philadelphia and Toronto; Philadelphia and Vancouver; Toronto and Vancouver
 - (E) Honolulu and Philadelphia; Honolulu and Toronto; Montreal and Philadelphia; Philadelphia and Vancouver
12. If exactly three cities are each connected with Philadelphia, then which one of the following could be a pair of connected cities?
 - (A) Honolulu and Montreal
 - (B) Honolulu and Vancouver
 - (C) Montreal and Toronto
 - (D) Montreal and Vancouver
 - (E) Philadelphia and Vancouver
13. Which one of the following is a pair of cities that CANNOT be connected?
 - (A) Honolulu and Montreal
 - (B) Honolulu and Philadelphia
 - (C) Montreal and Philadelphia
 - (D) Montreal and Vancouver
 - (E) Philadelphia and Toronto
14. Which one of the following could be true?
 - (A) Montreal and Philadelphia are connected with each other, but neither is connected with any other city.
 - (B) Montreal and Toronto are connected with each other, but neither is connected with any other city.
 - (C) Philadelphia and Toronto are connected with each other, but neither is connected with any other city.
 - (D) Philadelphia and Vancouver are connected with each other, but neither is connected with any other city.
 - (E) Toronto and Vancouver are connected with each other, but neither is connected with any other city.
15. If Toronto is the only city that is connected with Philadelphia, then which one of the following could be true?
 - (A) Exactly one city is connected with Toronto.
 - (B) Exactly one city is connected with Vancouver.
 - (C) Exactly two cities are each connected with Honolulu.
 - (D) Exactly two cities are each connected with Toronto.
 - (E) Exactly four cities are each connected with Toronto.
16. At most how many pairs of cities could be connected?
 - (A) four
 - (B) five
 - (C) six
 - (D) seven
 - (E) eight
17. If four of the cities are each connected with the remaining city, then the cities in which one of the following pairs must be connected with each other?
 - (A) Honolulu and Montreal
 - (B) Honolulu and Philadelphia
 - (C) Honolulu and Vancouver
 - (D) Montreal and Philadelphia
 - (E) Montreal and Toronto

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Questions 18–23

For a behavioral study, a researcher will select exactly six individual animals from among three monkeys—F, G, and H—three pandas—K, L, and N—and three raccoons—T, V, and Z. The selection of animals for the study must meet the following conditions:

- F and H are not both selected.
- N and T are not both selected.
- If H is selected, K is also selected.
- If K is selected, N is also selected.

18. Which one of the following is an acceptable selection of animals for the study?
 - (A) F, G, K, N, T, V
 - (B) F, H, K, N, V, Z
 - (C) G, H, K, L, V, Z
 - (D) G, H, K, N, V, Z
 - (E) G, H, L, N, V, Z
19. If H and L are among the animals selected, which one of the following could be true?
 - (A) F is selected.
 - (B) T is selected.
 - (C) Z is selected.
 - (D) Exactly one panda is selected.
 - (E) Exactly two pandas are selected.
20. Each of the following is a pair of animals that could be selected together EXCEPT
 - (A) F and G
 - (B) H and K
 - (C) K and T
 - (D) L and N
 - (E) T and V
21. If all three of the raccoons are selected, which one of the following must be true?
 - (A) K is selected.
 - (B) L is selected.
 - (C) Exactly one monkey is selected.
 - (D) Exactly two pandas are selected.
 - (E) All three of the monkeys are selected.
22. If T is selected, which one of the following is a pair of animals that must be among the animals selected?
 - (A) F and G
 - (B) G and H
 - (C) K and L
 - (D) K and Z
 - (E) L and N
23. The selection of animals must include
 - (A) at most two of each kind of animal
 - (B) at least one of each kind of animal
 - (C) at least two pandas
 - (D) exactly two monkeys
 - (E) exactly two raccoons

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.