MANHATTAN LSAT

Computer Processors

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

A computer engineering student must build four motherboards—labeled R, S, T, and U—using a total of eight processors. Each processor has a unique amount of processing power—from 1 to 8 gigahertz—and an identification number that matches this processing power. Each motherboard must use exactly two processors, and the total processing power of a board is equal to the sum of the capacities of those two processors. The assignment of processors to boards must follow the following guidelines:

Each board must have the same total processing capacity as every other board.

T cannot be assigned processor 6.

U must be assigned one processor that has more processing power than either of the processors assigned to T.

1. Which of the following is an acceptable partial list of processors and the motherboards for which they are used?

(A) 1: U, 2: T, 3: S, 4: T
(B) 1: U, 2: R, 3: S, 4: T
(C) 1: T, 2: U, 3: S, 4: R
(D) 1: R, 2: T, 3: U, 4: S
(E) 1: U, 2: S, 3: T, 4: R

2. What is the smallest processor that can be assigned to T?

(A) 1
(B) 2
(C) 3
(D) 4
(E) 5

3. Which of the following is a complete and accurate list of boards that could be constructed with a pair of processors that differ in power by one gigahertz?

(A) R, T
(B) S, R
(C) R, T, U
(D) R, S, T
(E) R, S, T, U

4. If both S and T have processors that are consecutively-sized with at least one of the processors of the other board, how many different assignments of all eight processors are possible?

(A) 1
(B) 2
(C) 3
(D) 4
(E) 5

5. If R is assigned processor 6, which of the following must be true?

(A) S must have a larger processor than either processor assigned to R.
(B) S must have a smaller processor than either processor assigned to T.
(C) U must have a larger processor than either processor assigned to S.
(D) U must have a smaller processor than either processor assigned to R.
(E) T must have a larger processor than either processor assigned to R.

6. Each of the following could be the boards to which processors 6 and 7 are assigned, though not necessarily in the order listed, EXCEPT:

(A) T, R
(B) S, U
(C) R, S
(D) U, T
(E) S, T

7. Which of the following, if substituted for the rule that T cannot be assigned processor 6 would have the same effect on the assignment of processors to boards?

(A) R must have a smaller processor than any processor assigned to either T or U, or T and U must each have a larger processor than any processor assigned to R.
(B) T must have a smaller processor than any processor assigned to either R or S, or R and S must each have a larger processor than any processor assigned to T.
(C) Each processor assigned to S must be consecutive with a processor assigned to R.
(D) Each processor assigned to T must be consecutive with a processor assigned to U.
(E) U cannot be assigned processor 5.

COMPUTER PROCESSORS (MANHATTAN LSAT)

1. B
2. B
3. D
4. C
5. D
6. D
7. B

The questions on the previous page are simulated LSAT questions and are not meant to be used in place of actual LSAT questions. Visit Cambridge LSAT (http://www.cambridgelsat.com) to purchase and download actual LSAT questions.