ENTRY EXIT, SELECTIONS, ARRANGEMENT, BAR GRAPH

The following table gives the Entry and Exit record of the number of people visiting the R&D Unit of a company on 08/08/2008.

For security reasons:

1. No one is allowed to stay in the unit from 6:00 pm to 7:00 am
2. The door opens only at 7:00 am and then at every interval of an hour till 6:00 pm.
3. Only three types of people are allowed inside the unit - employees, sweepers and visitors.
4. Visitors can stay inside the unit for 1 or 2 hours, sweepers for 2 or 3 hours and employees for 3 or 4 hours only.
5. Not more than 2 visitors or 2 sweepers or 2 employees can leave the unit together.
6. The table below gives the Entry Record of the visitors to this unit on O8/08/2008.

	7:00 am	8:00 am	9:00 am	10:00 am	11:00 am	12:00 pm	1:00 pm	2:00 pm	3:00 pm	4:00 pm	5:00 pm	6:00 pm
Entry Record	3	4	5	1	4	5	5	3	2	3	1	0
Exit record	0	1	2	3	3	3	3	4	6	3	3	5

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Visitors	1	1	2	0	2	0	2	2	0	1	1	0

Q1. The number of sweepers entering the unit at 12:00 pm and 1:00 pm couldn't have been:

a. 0, 2   b. 2, 1   c. 1, 1   d. 0, 0

Q2. If no sweeper entered at 2:00 pm, then at 5:00 pm:

a. only one sweeper left after 2 hours   b. a sweeper left after 3 hours

c. a visitor left after 2 hours   d. None of these

Q3. How many employees left at 6:00 pm?

a. None   b. 1   c. 2   d. 1 or 2

Q4. If during the entire day from 8:00 am, no visitor left the unit only at 9:00 am, then how many times did exactly 2 visitors leave the unit together?

a. 0   b. Once   c. Twice   d. Thrice

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Visitors	1	1	2	0	2	0	2	2	0	1	1	0

	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit
7:00								
8:00								
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Q1. The number of sweepers entering the unit at 12:00 pm and 1:00 pm couldn't have been:

a. 0, 2   b. 2, 1   c. 1, 1   d. 0, 0

Q2. If no sweeper entered at 2:00 pm, then at 5:00 pm:

a. only one sweeper left after 2 hours   b. a sweeper left after 3 hours

c. a visitor left after 2 hours   d. None of these

Q3. How many employees left at 6:00 pm?

a. None   b. 1   c. 2   d. 1 or 2

Q4. If during the entire day from 8:00 am, no visitor left the unit only at 9:00 am, then how many times did exactly 2 visitors leave the unit together?

a. 0   b. Once   c. Twice   d. Thrice

Ramesh, a school teacher, wants to select a team of six students to help him with a project. He wants to select these six students from a group of ten − A through J − ensuring that there are at least as many girls in the team as there are boys. Among the ten students, A, C, G, H and I are boys and the rest are girls.

Further, it is also known that

1. if B is in the team, at most one among C and F can be in the team.
2. if A is in the team, neither H nor I can be in the team.
3. between D, E and F, at least one student must be in the team and at most two students can be in the team.
4. if E is in the team, neither B nor J can be in the team.
5. if I is in the team, D must be in the team.

Q1. In how many ways can Ramesh select the team such that there are an equal number of boys and girls in the team?
a) 12   b) 11   c) 13   d) 10

Q2. In how many ways can Ramesh select the team such that there are more number of girls than boys in the team?

Q3. If there are more number of girls than boys in the team, who among the following can never be in the team?
a) A   b) C   c) G   d) H

Q4. Who among the following will definitely be in the team?
a) B   b) C   c) F   d) D

Four persons, A through D, work in the same office. The graph below provides the number of days that each person worked in each month from February 2017 to May 2017 as a percentage of the total number of days that he worked during that period. The number of days that any person worked in any month is not necessarily an integer.

Q1. During the given period, the number of days (approximately) that any person worked is not more than

a) 106.9   b) 120   c) 115.3   d) 100

Q2. What is the difference between the maximum number of days that A could have worked in March 2017 and the maximum number of days that B could have worked in February 2017?

a) 2.5   b) 5   c) 10   d) 3

Q3. If in a particular month during the given period each person worked on exactly 10 days in that month, which of the following months can it be?

a) February   b) March   c) May   d) More than one of the above

Q4. In at most how many of the four months given is it possible that at least one of the four persons could have worked on all the days of that month?

a) 1   b) 2   c) 3   d) 4