**Campus to Corporate C2C @CTD**

**Concepts**

**Of**

**Day**

**Explained**

**Logic Lessons 17**

**I. General Reasoning**

**P, Q, R and S are playing a game of table tennis (mixed doubles), such that:**

1. **There are two pairs of siblings: P & Q and R & S.**
2. **Q is directly across the net from R.**
3. **S is diagonally across the net from the worst player’s sibling.**
4. **The best player and the worst player are on the same side of the net.**

**Who is the best player?**

|  |  |
| --- | --- |
| Answer | Q |
| Explanation | **From b,** Q is directly across R ----- ❶  **From c,** S is diagonally across P/if Q is the worst player ----- ❷  or S is diagonally across Q/if P is the worst player ----- ❸  or S is diagonally across R/if S is the worst player ----- ❹  Combining ❶, ❷, ❸ & ❹, we get only the following two possibilities:  S P – worst player  R Q – best player  worst player -S P  best player - Q R  In both the cases, ‘Q’ is the best player |
| Level of Difficulty | Medium |
| Test | General |

**II. Numerical Reasoning**

**A, B and C started going to the *Shadows Salon* last month. The way in which they visit the salon is as follows:**

1. **One of them goes to the salon every 2 days, another one visits every 3 days, and the third one goes every 7 days.**
2. **A went to the salon for the first time in this month on a Monday, B went for the first time in this month on a Wednesday, and C went for the first time in this month on a Friday.**
3. **All three of them went at the salon on the same day this month, which was where they met.**

**When did they meet? (day of this month)**

|  |  |
| --- | --- |
| Answer | 27th |
| Explanation | The person who visits every 2 days visits the salon for the first time this month on the 1st or the 2nd, depending whether this person visits the salon for the last time in the previous month on the penultimate or the last day respectively.  Similarly, the person goes every 3rd day visits the salon for the first time this month on the 1st, 2nd or 3rd, depending upon whether this person visits the salon for the last time in the previous month on the third last, penultimate or last day respectively.  From *b* the first and the third day of this month need to be a Monday and a Wednesday respectively OR a Wednesday and a Friday respectively. Thus, the person visiting every second day will visit on the 1st, and the person visiting every 3rd day will visit on the 3rd, because they need to be separated by a day.  Case I: 1st day of this month is a Monday  In this case A goes to the salon on the 1st and then every 2 days; B goes to the salon on the 3rd day and then every 3 days; C goes on the 5th and thus every 7 days. So, the visiting pattern in this case is as follows:  A: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31  B: 3, 6, 9, 12, 15, 18, 21, 24, 29, 30  C: 5, 12, 19, 26  Note: The dates which are underlined will depend on the type of month. For example: 29, 30 and 31 are not possible for a leap month; 31 is not possible for months ending in 30 days.  Case II: 1st day of this month is a Wednesday  In this case B goes on the 1st and then every 2 days; C goes on the 3rd and then every 3 days; A goes on the 6th and then every 7 days. The visiting pattern is as follows:  B: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31  C: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30  A: 6, 13, 20, 27  Out of the two cases, case I is ruled out because it does not satisfy condition *c* which states that they all meet on a particular day this month. Thus, only case II is possible, and they meet on the 27th of this month. |
| Level of Difficulty | Difficult |