**23GET276 - VQAR-II**

**UNIT III - VERBAL REASONING II**

## Input Output

Input Output, also called Machine Input Output

**These are the common types of operations being applied on input and various steps:**

- Shifting (fixed pattern)
- Arithmetic
- Operations
- Arranging (fixed order)
- Combination of the above

Shifting goes on endlessly whereas arranging ends as soon as the order intended is achieved.

*First, check for arrangements;*
*then check for shifting next*

- **Tip to check of arrangement:**

  If either the first or the last word (or number) of all the steps (excluding input) remains unchanged then it is (almost) certain that it is an arrangement problem. Also, you can look at the output or the final step.

- **Tip to check for shifting:**

  Check if words (or numbers) from a particular position are going to a fixed particular position and it is repeated

**Common logics for rearrangement of numbers: (you can add to this list)**

- Based on Increasing/Decreasing order
- Based on even or odd numbers
- Based on the digital sum
- Based on Squares/Cubes
- Based on Digital Product

**Common logics for rearrangement of words: (you can add to this list)**

- Based on Alphabetical order (or reverse order)
- Based on the place value of letters
- Based on the Number of Letters
- The number of letters is Odd/Even
- Based on the number of vowels/consonants

Example 1:

**INPUT: Train Car Airplane Ship Bus Cycle Autorickshaw**

Step 1: Train Ship Car Airplane Bus Cycle Autorickshaw

Step 2: Train Ship Cycle Car Airplane Bus Autorickshaw

Step 3: Train Ship Cycle Car Bus Airplane Autorickshaw

Step 4: Train Ship Cycle Car Bus Autorickshaw Airplane

Based on the above-mentioned Input, Find what should be the Output of the following Input?

**INPUT: Diver Actor Astronaut Engineer Therapist Sportsperson Doctor**

**Solution:** If we carefully examine the Input "**Train Car Airplane Ship Bus Cycle Autorickshaw"**, Step 4 is the final step and the Output clearly shows that all the words have been arranged in descending order of their appearance in the Alphabetic Series.

Thus, the Output for "**Diver Actor Astronaut Engineer Therapist Sportsperson Doctor"** shall be:

Step 1: Therapist Diver Actor Astronaut Engineer Sportsperson Doctor

Step 2: Therapist Sportsperson Diver Actor Astronaut Engineer Doctor

Step 3: Therapist Sportsperson Engineer Diver Actor Astronaut Doctor

Step 4: Therapist Sportsperson Engineer Doctor Diver Actor Astronaut

Step 5: Therapist Sportsperson Engineer Doctor Diver Astronaut Actor

Step 5, is the final step.

## Inequalities

**The common types of inequality signs are:**

| Definite symbols | Name | Indefinite symbols | Name |
|---|---|---|---|
| > | Greater than | ≤ | Less than or equal to |
| < | Less than | ≥ | Greater than or equal to |
| = | Equal to | ≠ | Not equal to |
| ≰ | Not Less than or equal to | ≯ | Not greater than |
| ≱ | Not Greater than or equal to | ≮ | Not less than |

**Note:**

- ≰ means >
- ≮ means ≤
- ≯ means ≥
- ≱ means <

**Either-or Cases**

This is one of the most misunderstood area of this chapter as well as in syllogism chapter. 'Either-Or' implies that the conclusions may not be true in their individual existence but work as a pair.

Let me first take a very easy and basic example of either-or case:

Statement: A ≥ B = C

👉 Conclusions:

I. A = C

II. A > C

So, we can conclude that A ≥ C

Here, we can say that either conclusion I or conclusion II is true.

Now, let me discuss the other type of either-or case that can arise if the below three conditions are fulfilled:

1. No relation can be established between the two elements
2. The given two conclusions are between the same two elements
3. The given two conclusions are complimentary pairs

Note: There are two complimentary pairs:

1. < and ≥
2. > and ≤

Let's take an example:

Statement: A < B > C

👉 Conclusions:

1. A > C

2. A ≤ C

Here, we cannot establish any relation between A and C. The given two conclusions are between A and C only. Moreover, the given two conclusions are complementary pairs. So, all the three above-specified conditions are fulfilled.

So, we can say, either conclusion I or conclusion II is true.