

Q. 2

Ans: -

### SECTION - 2

The tower of Hanoi is a mathematical game or puzzle. It consists of three rods and a number of disks of different sizes, which can slide onto any rod. The puzzle starts with the disks in a neat stack in ascending order of size on one rod, the smallest at the top, thus making a conical shape.

The objective of the puzzle is to move the entire stack to another rod, obeying the following simple rules: -

- ① only one disk can be moved at a time.
- ② Each move consists of taking the upper disk from one of the stacks and placing it on top of another stack or on an empty rod.
- ③ No larger disk may be placed on top of a smaller disk.

## Applications:-

- ① The towers of Hanoi is frequently used in psychological research on problem solving. There also exists a variant of this task called towers of London for neuropsychological diagnosis and treatment of executive functions.
- ② The towers of Hanoi is also used as a backup rotation scheme when performing computer data backups where multiple tapes/media are involved.
- ③ This knowledge has impacted on the development of the TURF framework for the representation of human computer interaction.