

Episode-4
$21^{\text {st }}-24^{\text {th }}$ April

# Number Placement and Evergreens <br> by <br> Salih Alan 

Puzzle Ramayan rounds will also serve as qualifiers for Indian Puzzle Championship for year 2017. Please check http://logicmastersindia.com/PR/201617pr.asp for details.

## About this Episode

This episode has 22 Puzzles from the following puzzle types:

- 3* Doppelblock
- $3^{*}$ Magic Snail
- 3* Skyscraper
- 1* Hungarian Doppelblock
- 1* Hungarian Magic Snail
- 3* Dominos
- $3^{*}$ Hashi
- $3^{*}$ Scrabble
- 2* Scrabble Instructionless


## How to participate?

- Understand the rules of different puzzles that will appear in this episode. This Instruction Booklet has rules for each puzzle.
- Download the password protected Puzzle booklet (will be uploaded before the test starts). The Puzzle booklet contains the actual Puzzles to be solved. It is password protected, so you won't be able to open it.
- Any time after $21^{\text {st }}$ April (but before $24^{\text {th }}$ April), login at the submission page using your LMI userid and password. Please check the submission page for exact timing.
- Click on "Start". At this time, password for pdf will be shown and timer will start.
- The puzzle booklet should be downloaded, printed and solved on paper.
- There will not be any interface / applet to solve the puzzles on web browser.
- Most of the puzzles are designed to be solved faster on paper.
- We advise you to have a printer accessible with enough paper.
- Outside solving help of any kind is not permitted. This includes but is not limited to: assistance of any kind from any other person; prepared notes, books, calculators, computers, or tools other than items explicitly permitted.
- You are allowed to use writing implements, eraser, blank paper (including commercial graph paper), ruler, scissors, and tape.

If you are participating at LMI for first time, you must check the F.A.Q. at http://logicmastersindia.com/t/?tid=381.

## About answer keys and Submission

- Each puzzle has some answer keys, as described in the instructions.
- After solving the puzzle, you need to submit the puzzle using the answer keys.
- You may submit the answer keys anytime during the test duration. You may consider submitting a puzzle as soon as you solve it.
- Answer keys are always to be entered from left to right or top to bottom
- Don't enter any separator unless specified in the answer key
- If one row and one column is marked, enter the row first and then the column
- If multiple rows are marked, enter from top to bottom for marked rows
- If multiple columns are marked, enter from left to right for marked columns
- If horizontal and vertical keys are needed, first enter the horizontal and then the vertical
- Uppercase or lower case of answer key does not matter
- Characters other than alphabets, numbers and comma will be removed while checking the answer


## Points Table and Scoring

Points typically indicate difficulty of the Puzzles and time required to solve them. You will get full points if you enter the correct answer key. While the organizers have made best efforts to match them, your personal experience and preference may differ.

| Doppelblock | $2,8,3$ |
| :--- | :--- |
| Magic Snail | $2,4,6$ |
| Skyscrapers | $2,3,8$ |
| Hungarian Doppelblock | 4 |
| Hungarian Magic Snail | 5 |
| Dominos | $1,4,5$ |
| Hashi | $2,6,10$ |
| Scrabble | $1,4,8$ |
| Scrabble Instructionless | 3,9 |

This test uses instant grading where a solver can submit any individual Puzzle and receive confirmation that the solution is correct or not. Each incorrect submission reduces the puzzle's potential score. The first, second, third, and fourth incorrect submission reduces the potential score to $90 \%, 70 \%, 40 \%$, and $0 \%$ respectively.

## Bonus and Ranking

If you submitted all Puzzles correctly, you can have bonus points 1 point per minute saved, computed up to seconds.

Ranking will be based on following rules in order:

1. Most total points
2. Earliest final submission time, up to seconds (ignoring incorrect submissions)

## About the Puzzle Booklet

The password protected Puzzle booklet will have 10 pages. We expect you to print and solve on page, so you would need to have a printer accessible with enough paper.

Blacken some cells and enter the numbers from 1 to $\mathrm{N}-2$ (where N is the size of the grid) in the remaining cells so that in each row and each column exactly two cells are blackened and each number appears exactly once. The numbers at the edge indicate the sum of the numbers between the two black cells in the row/column.


Answer key: Enter the contents of the marked row(s)/column(s). Enter $X$ for black cells. Example: X34X12, 4X23X1

## Magic Snail

Fill in the snail like grid such that each row and column has some re-arrangement of all the letters of the given key. The key in the example below is ABC. Some cells will remain blank. While reading the letters from outside towards the dead-end inside the grid, the order of the letters is to be same as the key. [E.g. in the example it should read as A-B-C-A-B-C...].


Answer key: Enter the contents of the marked row(s)/column(s). Enter $X$ for blank cells. Example: CXBAX, CABXX

Fill in the grid with digits $1-\mathbf{N}$ where $\mathbf{N}$ is the size of the grid so that each row and column contains each digit exactly once. Each number inside the grid represents the height of a building. The clues outside of the grid indicate how many buildings can be seen when looking from that direction. Taller buildings block the view of smaller buildings.


Answer key: Enter the contents of the marked row(s)/column(s).
Example: 532164, 165234

## Hungarian Doppelblock

Blacken some cells and enter the numbers from 1 to $\mathrm{N}-2$ (where N is the size of the grid) in the remaining cells so that in each row and each column exactly two cells are blackened and each number appears exactly once. The numbers at the edge indicate the sum of the numbers between the two black cells in the row/column. Starting from the leftmost cell in the top row, every third numbered cell is marked by a dotted square and is given as a clue.


Answer key: Enter the contents of the marked row(s)/column(s). Enter $X$ for black cells. Example: 3X4X12, 2X413X

Fill in the snail like grid such that each row and column has some re-arrangement of all the letters of the given key. The key in the example below is ABC. Some cells will remain blank. While reading the letters from outside towards the dead-end inside the grid, the order of the letters is to be same as the key. [E.g. in the example it should read as A-A-B-C-A-A-B-C...]. Starting from the leftmost cell in the top row, every third cell containing a letter is marked by a dotted square and is given as a clue.


Answer key: Enter the contents of the marked row(s)/column(s). Enter $X$ for blank cells. Example: XBAAXCX, BAXXXAC

The grid contains a set of dominos, using all combinations of zero through $N(N=4$ in the example below). The layout is shown with domino edges removed. Reconstruct the missing edges.


Answer key: Enter the contents of marked rows/columns (use H for horizontal domino and $V$ for vertical domino).
Example: VVVVVV,VVVHHV

Connect each of the numbered islands in the grid via horizontal and vertical bridges. Bridges are not allowed to cross each other. Each numbered island has that many bridges leading away from it, and at most two bridges are allowed to connect a pair of islands. There must be a sequence of bridges that links one given island to any other.
(1)



Answer key: Enter contents of marked row/column (use 0 for no bridge, 1 for 1 bridge and 2 for 2 bridges)
Example: 02,2

## Scrabble

Write all the given words into the grid to form a connected crossword. The names should be read from top to bottom or from left to right. Apart from the given words, there cannot be any other words in the grid consisting of two or more letters.


EVERGREEN
INDIA
LOGIC
MASTERS
PLACEMENT
PUZZLE
RAMAYAN

| P | U | Z | Z | L | E |  |  | R |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| L |  |  |  | O |  |  |  | A |
| A |  | M |  | G |  |  |  | M |
| C |  | A |  | I | N | D | I | A |
| E |  | S |  | C |  |  |  | Y |
| M |  | T |  |  |  |  |  | A |
| E | V | E | R | G | R | E | E | N |
| N |  | R |  |  |  |  |  |  |
| T |  | S |  |  |  |  |  |  |

Answer Key: Enter the letters in the marked row(s)/column(s), ignoring blank cells. Example: ESCY, ENR

## Scrabble Instructionless

The rules of this puzzle vary slightly from the Scrabble rules. One example with solution will be given in the puzzle booklet to demonstrate the change in the rules. It is part of solving process to determine the rule changes by exploring/solving the examples. There will not be any worded instruction in the puzzle booklet for this puzzle.

