## $\frac{\text { puzzle }}{\text { raलayan }}$

## \&



Episode-6<br>$23^{\text {rd }}-26^{\text {th }}$ January 90 minutes

## Shading by Swaroop Guggilam

Puzzle Ramayan rounds will also serve as qualifiers for Indian Puzzle Championship for year 2016. Please check http ://10gicmastersindia.com/PR/2015-16pr. asp for details.

## About this Episode

This episode has 22 puzzles, with 5 base puzzle types and 2 Instructionless puzzles based on two of the types.

- $4^{*}$ Paint By Number
- 4* Heyawacky
- $4^{*}$ Windows
- $4^{*}$ Lakes
- $4^{*}$ Crazy Pavement
- 1* Heyawacky Instructionless
- 1* Crazy Pavement 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 between Saturday to Tuesday, 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.
- You will have 90 minutes to solve and submit the puzzles, after your timer starts.
- 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.

## 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.

| Paint By Number | $1,2,2,6$ |
| :--- | :--- |
| Heyawacky | $2,3,4,10$ |
| Windows | $1,2,6,11$ |
| Lakes | $1,4,5,6$ |
| Crazy Pavement | $1,2,4,9$ |
| Heyawacky Instructionless | 9 |
| Crazy Pavement Instructionless | 9 |

## Points Table will be published later in the week, before the contest starts.

## Instant Grading

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 upto seconds.

Ranking will be based on following rules in order:

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

## About the Puzzle Booklet

The password protected Puzzle booklet will have $\mathbf{1 0}$ pages. We expect you to print and solve on paper, so you would need to have a printer accessible with enough paper.

The font sizes, cell sizes, colors, borders, shading, margin in the puzzle booklet and instruction booklet will be identical.

Also, we strongly advise you to save the pdf file on your computer, open the pdf (with the password) using Adobe Acrobat Reader and then print. If you print directly from the browser (for example Google Chrome), unintentional printing problems may arise (see this post for details http://logicmastersindia.com/t/?tid=1189).

## About answer keys

- All puzzles, including the instructionsless ones at the end, use the same answer mechanism in this test.
- Each puzzle will have some rows or columns marked.
- For each marked row, you need to enter the lengths of group of shaded cells and white cells, from left to right.
- For each marked column, you need to enter the lengths of group of shaded cells and white cells, from top to bottom.
- Ignore the outside clues while entering the answer keys.

For the example on the right, the answer key is 3211,31111


## Paint By Number

> Shade some of the cells to find out the hidden figure.
The numbers outside the grid indicate the sizes of consecutive shaded blocks in that row/column.
> Numbers are given in the order the blocks appear, first number describes the closest block.
> There must be at least one white cell between any consecutive shaded blocks.
Answer key: Enter the lengths of groups of shaded cells and white cells, for the marked rows/columns. For the example, the answer is 13111,5


## Heyawacky

Shade some of the cells so that the numbers in region indicates the number of shaded cells in that region.
$>$ Shaded cells cannot be orthogonally adjacent.
> The remaining white area must be connected to each other, horizontally or vertically.
$>$ The white area cannot span across 2 consecutive borders (thick lines).
Answer key: Enter the lengths of groups of shaded cells and white cells, for the marked rows/columns.
For the example, the answer is 13111,151


## Windows

> For each of the marked 2 X 2 areas (the Windows), shade exactly 2 of the cells.
> No 2X2 area can contain all shaded cells or all white cells.
> All shaded cells must be connected to each other, vertically or horizontally.
> There cannot be an island with white cells i.e. the shaded cells must not enclose any white areas.
Answer key: Enter the lengths of groups of shaded cells and white cells, for the marked rows/columns.
For the example, the answer is 312,33


## Lakes

> Shade some of the cells so that the grid is divided into white areas.
$>$ Each white area must contain exactly one number and that number must be the size of the white area it is included in.
> Cells with numbers cannot be shaded.
Answer key: Enter the lengths of groups of shaded cells and white cells, for the marked rows/columns.
For the example, the answer is 3211,31111


## Crazy Pavement

> Shade all cells of some regions.
> Numbers outside the grid indicate the number of shaded cells in that row/column.
Answer key: Enter the lengths of groups of shaded cells and white cells, for the marked rows/columns.
For the example, the answer is 11212, 12121


## Heyawacky Instructionless

> The rules of this puzzle vary slightly from the Heyawacky rules.
> Two examples with solutions will be given in the puzzle booklet to demonstrate the changes 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.
Answer key: Enter the lengths of groups of shaded cells and white cells, for the marked rows/columns.

## Crazy Pavement Instructionless

> The rules of this puzzle vary slightly from the Crazy Pavement rules.
> One example with solution will be given in the puzzle booklet to demonstrate the changes in the rules.
$>$ It is part of solving process to determine the rule changes by exploring/solving the example.
> There will not be any worded instruction in the puzzle booklet for this puzzle.
Answer key: Enter the lengths of groups of shaded cells and white cells, for the marked rows/columns.

