## puzzle raलayan

and

Episode-5<br>$22^{\text {nd }}-27^{\text {th }}$ May 2020

Casual and Word
by
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Puzzle Ramayan rounds will also serve as qualifiers for Indian Puzzle Championship for year 2020. Please check http://logicmastersindia.com/PR/2028pr.asp for details.

Important Links
Submission Page : http://logicmastersindia.com/PR/202005/
Discussion Thread : http://logicmastersindia.com/t/?tid=2743
F. A. Q. : http://logicmastersindia.com/t/?tid=381

Registration, if required : http://logicmastersindia.com/register.asp

## About this Episode

This episode has 22 Puzzles from the following puzzle types:

- 3* Matchsticks
- 3* Mastermind
- 3* Curve Data
- 2* Letter Weights
- $3^{*}$ Letter Scrabble
- 2* Easy as Snake
- 2* Double Cross
- 2* Word Division
- $2^{*}$ Word Nurikabe


## 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 on or after $22^{\text {nd }}$ May (but on or before $27^{\text {th }}$ May), 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.

| Matchsticks | $2,5,7$ |
| :--- | :---: |
| Mastermind | $2,7,6$ |
| Curve Data | $5,4,5$ |
| Letter Weights | 1,5 |
| Letter Scrabble | $1,3,9$ |
| Easy as Snake | 1,3 |
| Double Cross | 2,9 |
| Word Division | 4,11 |
| Word Nurikabe | 2,6 |

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 submissions reduce 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 about 10 pages. We expect you to print and solve on paper, so you would need to have a printer accessible with enough paper.

## 1-3 Matchsticks

Move $\mathbf{N}$ matchsticks to create the smallest number possible. $\mathbf{N}$ will be provided next to each puzzle. The numbers should be formed using match sticks as shown below (2 match sticks high and one match stick wide).

There should be no arithmetic operators including negative signs in the final result and it should only contain a set of digits. Leading zeroes are not allowed. Digits can be repeated in the final answer. Digits cannot touch each other. Spacing between the final digits is not important. Also all the matchsticks need to be used. None of them can be discarded or overlapped.

Puzzles in the contest will use $\mathrm{N}=2,4$ and 7 . This example uses $\mathrm{N}=3$.

Numbers using match sticks:


Example:
?


Answer:


Answer Key: Enter the number.
Example: 104

## 4-6 Mastermind

$$
2+7+6 \text { points }
$$

Find out the correct series of characters with the help of the information given by the black and white markers. Black markers indicate correct character in the right position, while the white ones mark correct character in the wrong place. Each character can occur only once in the solution. A list of valid characters shall be provided for each puzzle.
Puzzles in the contest will be of lengths 4,5 and 6 . This example is of length 5.
List of valid characters: 1234567890
Example:


## Answer:



Answer Key: Enter the correct series of characters from left to right.

## 7-9 Curve Data

Make some figures by drawing lines through the centre of cells so that each figure goes through just one clue. All cells are visited by lines. A clue shows how the line passing through it turns and connects with itself, without any rotation or reflection. However, the clue does not specify length of each straight segment of the line in any way - the lengths of straight segments may vary, but must not be 0 .

Puzzles in the contest will be of grid sizes $6 \times 6,6 \times 10$ and $7 \times 8$. This example is of grid size $3 \times 4$.

Example:


Answer:


Answer Key: For each marked row, enter the lengths of horizontal segments from left to right. For each marked column, enter the lengths of vertical segments from top to bottom. Enter 0 if there are no segments. .

Example: 11, 2

## 10-11 Letter Weights

Write a number under each letter so that the numbers corresponding to the letters in each given word have the given sum. Different letters must correspond to different numbers. The range of allowed numbers is given below the puzzle. It is not necessary to use all numbers in the given range.

Puzzles in the contest will use 6 and 9 letters. This example uses 5 letters.

Example:


Answer:


Answer Key: Enter the contents of the cells, from left to right.
Example: 21945

Place all the listed words exactly once in the grid going across (left to right) or down (top to bottom). Each word intersects with at least one other word and all words are interconnected. No words of two or more letters can appear anywhere in the grid, except the ones listed. All instances of some letters are given.

Puzzles in the contest will be of grid sizes $4 \times 4,5 \times 7$ and $11 \times 10$. This example is of grid size $5 \times 4$.

Example:


Answer:


Answer Key: For each marked row (or column), enter its contents from left to right (or top to bottom), and ignoring any blank cells. If all cells in the row/column are blank, enter a single letter ' X '.

Example: AA, IRAM

## 15-16 Easy as Snake

Locate a word snake (a 1 cell-wide single continuous path) in the grid whose head and tail are indicated by grey cells. The snake does not touch itself, even diagonally. The snake should contain the words in the phrase given below the grid in the same sequence. The snake can start at any of the grey cells. Letters outside the grid indicate the first seen letter in that row or column when looking from that direction.

Puzzles in the contest will be of grid sizes $4 \times 4$ and $7 \times 8$. This example is of grid size $4 \times 4$.

## Example:



## UNO DOS TRES

Answer Key: For each marked row (or column), enter its contents from left to right (or top to bottom), ignoring any blank cells. If all cells in the row/column are blank, enter a single letter ' $X$ '.

Example: SER, UOS

There are pairs of words. In each pair, a word horizontal from left to right and a word vertical from top to bottom are entered so that they have exactly one letter in common. The fields of these common letters are given. Letters from different pairs of words do not touch each other, not even diagonally.

Puzzles in the contest will be of grid sizes $8 \times 8$ and $13 \times 13$. This example is of grid size $5 \times 7$.

Example:


UNO ONE
DOS TWO
TRES THREE

Answer:


Answer Key: For each marked row (or column), enter its contents from left to right (or top to bottom), ignoring any blank cells. If all cells in the row/column are blank, enter a single letter ' $X$ '.

Example: TREST, EONE

## 19-20 Word Division

Form the words from the given list by dividing the grid of letters into continuous regions of cells which are connected horizontally or vertically. All the letters in the grid must be used. Within a region, the letters can be in any order.

Puzzles in the contest will be of grid sizes $7 \times 7$ and $10 \times 10$. This example is of grid size $4 \times 4$.

Example:


Answer:


Answer Key: For each marked row/column, write the number of cells that belong to different regions - from left to right / top to bottom.

Example: 121,1111

Place the given words in the grid, so that the words can be read in horizontally and vertically connected cells. Different words can't touch each other horizontally or vertically. The remaining cells must form a single connected shape and can't have any $2 \times 2$ areas anywhere. Each word has one letter given in the grid.

Puzzles in the contest will be of grid sizes $9 \times 7$ and $7 \times 10$. This example is of grid size $6 \times 6$.

## Example:



Answer:


Answer Key: For each marked row (or column), enter its contents from left to right (or top to bottom), ignoring any blank cells. If all cells in the row/column are blank, enter a single letter ' $X$ '.
Example: MED, XULE

