

RENAISSANCE'15

CONTRAPTION

Organizers:

Shailender Kumar: 8285582221

Kaustubh: 8447918067

THEME: - “Relive Recreate Innovate”

ABOUT

For all those who think the simplest solutions are the most powerful ones. We want you to rethink, defy all the logic and come up with the toughest and most complex solution to the given problem statement. The more complex your solution gets, the more points you earn and please keep this in mind, number of steps do matter.

We welcome you to showcase your talents and give you the license to display the most chaotic, complex and convoluted means to the end (without tearing the hall down of course). Throw in all the energy conversions you are aware of as one continuous routine without physically engaging yourself at any stage.

PROBLEM STATEMENT

COMPULSORY TASK

- Balloon Bursting: Burst a **balloon** (at least one) in your contraption.

Points distribution:

- 60 points for this task and additional 60 points, each for bursting extra balloon.
- Bonus 20 points will be deducted if balloon is burst with the help of fire.
- Maximum 120 points will be awarded for this task.

- Caption display: Display the alphabet “**R**” at any one stage of your contraption.

Points distribution:

- 60 points for this task.

- Additional 20 points if this task performed in first 10 seconds of your contraption.
- Come to me: Place a **ball** in the provided box (cylindrical) at a distance of 50 cm and height of 30 cm.
Points distribution:
 - 60 points for this task.
 - Bonus 60 points will be awarded to that contraption machine in which the ratio of radius of ball and radius of circumference of box is not more than 0.5.

FINAL TASK

- Smash hit: To break a pile of 5 **tin cans** in a single hit.
Points distribution:
 - 60 points for this task (If all cans fall).
 - No bonus points in this round, instead if all cans will not fall then 10 marks will be deducted for each can.

BONUS TASK

- Check mate: Move any chessman 3 squares on your chess board.
Points distribution:
 - 100 points for this task.
 - Chessman selected should move according to its respective valid moves.
 - Bonus 20 points if knight is used as a chessman
- Angry bird: Have a **ball** jump over a **wall** and hit a target.
 - 60 points for this task.
 - 20 points as bonus if the wall height atleast 20 cm.

RULES

- 230V supply will be provided to each team.
- Only 1 human intervention for the entire 2 attempts will not be penalized. Each further human intervention will lead to deduction of 20 points.
- The working time of contraption should not be more than 3 minutes. 2 points will be deducted for each extra second.
- Maximum 5 members per team/group are allowed.
- Number of Unique steps will contribute to 50% of the final score.
- 10 marks will be awarded as bonus for each step in which music is played (this step will not be included in total number of steps).
- Each group will be given 20 minutes time limit for performing their contraption.
- The participants will have to send their abstract of their contraption at least 7 days prior to the event.
- Abstract should contain the diagrammatic representation of their contraption showing the links, energy conversions and intermediate tasks performed.
- A few changes in the contraption after the submission of abstract will be allowed. However, the team/group will have to inform the event managers about it before their performance.
- Use of fire and hazardous chemicals in the contraption should be avoided at all cost.
- The decision of the judges shall be final.

COLOUR CODE (for materials)



To be brought by the team



Provided on the spot