



Template for DD-ROBOCON 2021 Solution Idea

As a part of Stage I, all teams need to submit the following online (Google Form) by the deadline

specified on the website:

1. "Solution Ideas (Form 1)" in the following format.
2. A pdf file titled "Design Details Document_team_name" with a **maximum of 5 pages** to expand their points/claims given in the Solution Ideas (Form 1).
3. A link to the repository with the CAD models of the robots in STEP **and** STL format must be provided. If the files are uploaded on a cloud-based drive, no passwords/special permissions should be enabled. In such a case where passwords/special permissions are enabled on the drive link, the files won't be evaluated.

No changes in the CAD models will be recognized after the deadline.

University/Institute/College Name:

Team Name:

Team Leader:

Mobile number of the team leader:

E-mail address of the team leader:

I. Design of Defensive Robot (DR) (2 points x 4 parameters = 8 points)

- A. Overall dimensions (in mm) and estimated weight (in kgs)
- B. Type of Drive
- C. Actuators and sensors integrated
- D. Arrow picking and passing mechanism

II. Design of Throwing Robot (TR) (2 points x 4 parameters = 8 points)

- A. Overall dimensions (in mm) and estimated weight (in kgs)
- B. Type of Drive
- C. Actuators and sensors integrated
- D. Arrow picking and receiving mechanism

III. Throwing Mechanism (2 points)



IV. Table Pushing Mechanism and Arrow Interception Mechanism (mechanism that allows DR to deflect other team's arrows) (2 points)

Evaluation Criteria

	Points
Solution Ideas	20
Design Document and CAD Models	80
Total	100

1. The Solution Ideas (Form 1) is worth a maximum of 20 points. It consists of 10 rows - each parameter is marked out of 2 points.
2. The Design Document should detail the ideas proposed in the Solution Ideas form. It should be a technical document that describes proposed mechanism for achieving the different tasks. The document should also include relevant calculations/justifications for the proposed mechanism and demonstrate a clear understanding of the task's objective. Design Document, along with the CAD models of the proposed mechanism, is worth a maximum of 80 points. The individual sections will be evaluated as follows:

Points breakup for Design Document and CAD Models

Task	Mechanism	CAD	Calculations/Justifications
Arrow pick and pass	5	10	5
Arrow receiving	5	10	5
Table Pushing and Arrow Interception	5	10	5
Throwing	5	10	5

3. For the shortlisted teams after Stage I, 1/3rd weightage of Stage I score and 2/3rd weightage of Stage II score will be used to select the teams for the final competition to be held at IIT Delhi.