

PRELIMINARY ROUND

DESIGN DOCUMENT AND VIDEO SUBMISSION

Robotics for Good Youth Challenge India 2025

Prepared by: I-Hub Foundation for Cobotics (IHFC), TIH of IIT Delhi, New Delhi

Date: 19/08/2025

⚠ Disclaimer

This document is provided only as a reference to help teams prepare the Design Document and Video Submission for the Preliminary Round of the Robotics for Good Youth Challenge India 2025. Teams are advised to refer to the official Rulebook and AI for Good website for complete and updated guidelines.

Guidelines

A. Team Details

As a part of Design and Video Document Submission, all teams need to submit the following online (Google Form) by the deadline as specified on the IHFC website:

<https://forms.gle/A2TMGaDw2o256gTr6>

1. Kindly choose the appropriate field

a. Participation Type (Check the appropriate box):

<input type="checkbox"/> Individual Participation	<input type="checkbox"/> Team Participation
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b. Select the Category of the Team (Assigned according to year of birth) (Check the appropriate box):

<input type="checkbox"/> Junior (1st January 2012 to 31st December 2016)	<input type="checkbox"/> Senior (1st January 2008 to 31st December 2011)
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2. Team Details in the following format.

Sl. No.	Details	Write Your Information
1	School Name	
2	Team Name	
3	Team ID	
4	Number of Team Members	
7	Coach/ Mentor's Name	
8	Coach/ Mentor's Mobile Number	
9	Coach/ Mentor's E-mail ID	

A. Design Details of Robot (100 Points)

1. Points to be consider

The below-mentioned points need to be considered before developing the robot.

- a. Robot size: must fit within a **600 x 320 mm rectangle**.
- b. **Robots can be built with any kind of material and can be programmed with any desired platform.**
- c. Refer the “**Rulebook**” heading “**Robots**” to get the detail about the Robot design.

2. Design Document

The Design Document should detail the ideas proposed in the Solution Ideas form. It should be a comprehensive document describing the proposed mechanisms for achieving various tasks. The document must include relevant calculations and justifications for the proposed mechanisms, demonstrating a clear understanding of the objectives.

- **File Format: PDF file**
- **File name: RFGYC25_PRE_[Team ID]**
- **Maximum Length: 5 pages**
- **Font: Times New Roman, size 12).**

The PDF should include the sections mentioned in Table 1 and a design drawing of the autonomous robot. Drawings can be created by hand or using computer software. Each section is assigned specific points, as detailed in Table 1.

Table 1: Headings and Points for Design Document.

S. No.	Headings	Points
1	Clear Understanding of Objectives	20
2	Description of Proposed Mechanism	60
3	Relevant Calculations/Justifications	20
Total		100

The following points needs to describe in the heading “Description of Proposed Mechanism”.

Table 2: Points breakup for proposed mechanism while designing the robot (60 Points).

S. No.	Proposed Mechanism	Points
1	Overall dimensions (in mm) and estimated weight (in Kgs)	5
2	Type of Drive	5
3	Type of actuators integrated	5
4	Type of sensors integrated	5
5	Type of Power source	5
6	Mechanism used to make the Robot autonomous	5
7	Software and Algorithms	5
8	Material Selection	5
9	3 D drawing of the Robot (Software generated/Hand-drawn)	20
Total		60

B. Video Submission (100 points)

Submit a video (90 Seconds) of the working Robot by the deadline specified on the website (Google Form link for submitting the video will be sent to the registered email of team leader and Mentor). The video will be evaluated based on the marking criteria included in Table 3.

Table 3: Marking criteria for video submission

S. No.	Evaluation Criteria	Time in Sec.	Total Points
1	Complete 360 ⁰ view of the Robot	10	20
2	Indicate the measurement of Robot Length and Width in mm	15	10
3	Demonstrate the Robot forward, backward or any other direction	35	30
4	Demonstrate Mechanism used to make the Robot autonomous	30	40
Total		90	100

Note:1 Measurement of distances should be clearly shown in the videos.

Note:2 The robot design should be as per the design document. If there are any deviations, please justify the same in a separate PDF, which can be uploaded in the Google form.

1. *Additional instructions for video submission*

Additional instructions are given below for all the videos that should be kept in mind while preparing the videos:

- i. The file should be uploaded to a single Google Drive folder which will be accessible by the judges. Only the link should be submitted via a Google Form (to be released soon).
- ii. The size of the file should not exceed **100 MB**.
- iii. You may use multiple cameras for better visualization with one camera showing the complete view.
- iv. Ensure proper lighting conditions while shooting the videos.
- v. Compliance with competition rules will be considered during evaluation.
- vi. All videos should be named as “***Team ID***” to ensure proper evaluation and be in the .mp4 or .avi format only.



“The submission of above documents is compulsory for evaluation and shortlisting your seat for Robotics for Good Youth Challenge India 2025.”