

Science & Technology Council **TAKNEEK'1-I** Innovation At Its Best August 28-31

Aviator

Team Event, y14 only

Points: 25

"When it comes to RC flying there are only two words that come to mind 'FUN' & 'REWARDING'. Flying plane for the first time is always exciting and unique, but this event will also test how fast you develop flying skills. So pull up your socks, and FLY HIGH!"

Problem Statement:

Round 1: Simulator Flying

Participants will need to practice flying planes on real flight simulator software. They need to develop flying skills to perform certain maneuvers in a given time.

Rules and Regulations:

- It is a team event with maximum of 4 teams from each pool. Each team must have at least 2 members. The points of both the tasks on simulator will be added cumulatively.
- It is a qualifying round and hence will have no weightage in second round and final ranking.
- One participant must not disturb other participant while performing on simulator, this will invite **-20 points** penalty for that team.
- All team members of the team must be present at event venue to register their team, if not present their team will be eliminated from the event.

Task:

- Participants need to practice on these four specific plane models on real flight g4: Cessna 182, NexStar, Yak 54(3D) and Piper Cub.
- **2.** Any one of these models will be selected in the event, and that will be same for all participants from all pools.
- **3.** They need to perform

Deadstick: You need to take off plane and land (perform both in 45 sec.), engine will be killed (i.e. throttle stick will not work) as you attain 200 ft. altitude **automatically**, then you need to control it and land in specific zones. Points are based on zone you land in like zone A **100**, zone B **60**, zone C **30**, zone D **20**, and zone E **10**

** In case you don't attain 200ft. height throughout 45 sec. and engine is working, then even if you land in any zone you won't get any point. So you must attain height soon, then engine will get killed and then spot land.





Limbo: You need to repeatedly take off plane, then pass beneath a limbo within 45 sec. and land without crash (crash eliminates you from this task). Limbo height will decrease from 20ft. to 4ft. (with fixed difference of 4 ft.) Scoring will be 1st limbo **5**, 2nd Limbo **10**, 3rd Limbo **20**, 4th Limbo **30** and 5th Limbo **35**

** Only one attempt for each limbo pass.

Scoring:

For each participating team **Deadstick score** and **Limbo score** will be cumulatively added, and accordingly top 8 teams will qualify for round 2.

Round 2: Powerless Flight

Design a powerless aircraft (no throttle source) and then control it using transmitter. Designing is a very crucial part of this event. While it also includes flying skill to ensure good time of flight.

Task:

- 1. Each team qualified from 1st round need to make one single plane for this task.
- 2. They need to use hand launch mechanism, however skills like discuss launch, high start mechanism etc. are encouraged but it must not include any spring or rubber band or any launch equipment.
- **3.** Once your model is launched you need to control it using transmitter/receiver and try to get maximum time of flight.
- **4.** One member of the team will launch the plane from a particular height to be decided by event coordinators later.

Rules and Regulations:

- 1. Each team will get 2 attempts to fly their plane.
- 2. Best out of the 2 time of flights will be used for scoring.
- 3. Each team will be given one trial run before the event.
- 4. Club will provide basic fabrication material like styrofoam, tape, etc. to the qualified teams.
- 5. After first round, top 8 teams need to make plane during Takneek itself or if they want they can start work early as well.
- **6.** Each qualified team will be provided 3 servos after result declaration of round 1.
- 7. Team members of a particular team must be the same in both the rounds i.e. team must remain **unaltered.** If found that team will be eliminated from participation.





Scoring:

Entirely based on time of flight (T). Ranking will be based on 'T'.

Note:

** If, at any point of time coordinators feel that the aircraft is going out of control or out of the field then the transmitter will be immediately taken from the flyer and clock will be stopped. The time only upto that point will be considered.

** In case of any disputes, the decision of the coordinators would be final and binding to all.

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