



TECHFEST-2022



Rules & Regulations

DEPARTMENT: MECHANICAL ENGINEERING

NAME OF EVENT: AQUALIFT

EVENT TYPE: GROUP (MAX. 03 PARTICIPANTS PER TEAM)

EVENT CATEGORY: GROUP EVENT

NO.OF MAX. PARTICIPANTS: 80 teams (On first come first serve basis)

VENUE: MECHANICAL BUILDING, ROOM NO. 108

EVENT SCHEDULE: 11th OCT. 2022 10 AM ONWARDS

REPORTING TIME: 09:30 AM

EVENT DESCRIPTION: In this event students are introduced to fluid power, articulated robot arms and end effectors. Students will work with partners to design and construct an arm that allows them to move a number of small objects from one location and place them to another location precisely. It is a simple demonstration device for engineering education.

TEAMSPECIFICATION: This is a group event. Each Team can accommodate maximum 3 participants.



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REQUIREMENTS:

Sr. No	Item Description	Quantity
1	Card Board- A3 Size (double Corrugated)	1
2	Candy stick (color, big size)	1 Packet (20 pieces)
3	Tooth Pick	1 Packet (50 pieces)
4	Instant Adhesive (Fevikwick)	20 ml
5	Metallic Wire (GI)	0.5 m
6	Plastic wire tie lock	1 packet (20 piece)
7	White glue (Fevicol) adhesive	45 g
8	Syringe 10 mL	10
9	Transparent water tube OD-6mm, ID-4mm	2 m

All the above required material for the event will be provided by the host institute. Moreover **participants are allowed to use pencil, scale, scissors/cutter, dead battery cell AA size (if required) and calculator which should be brought along with them.**

EVENT GENERAL RULES:

- Use of batteries, electrical motors, springs, compressor and pressurized cylinders is prohibited.
- The fluid used inside the syringes should be water only. Mixing of salts or oils in water is prohibited.
- There is no restriction in the number of degrees of freedom used in arm.
- The control of the machine should only be done by syringes.
- All the joints of the arm must be operated hydraulically.



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- The hydraulic arm built in the first round is required to be used in all subsequent stages/rounds.
- Digital devices are strictly prohibited in competition. (Mobile, smart watch, laptop, tablet etc)
- Any participant/group of participants who is not ready/available at the event commencement time leads to disqualification from the event.
- Any kind of interference between participants or with judges (this also includes obstruction of sight line and destruction of equipment) leads to disqualification.
- All the detailed information pertaining to the task of the event will be provided at the beginning of the event.
- In case of any discrepancy, decisions of the Jury/ Committee members shall be treated as final and binding to all.
- Host institute reserves the rights related to modification and updating the rules for successful completion of the event.

EVENT STRUCTURE

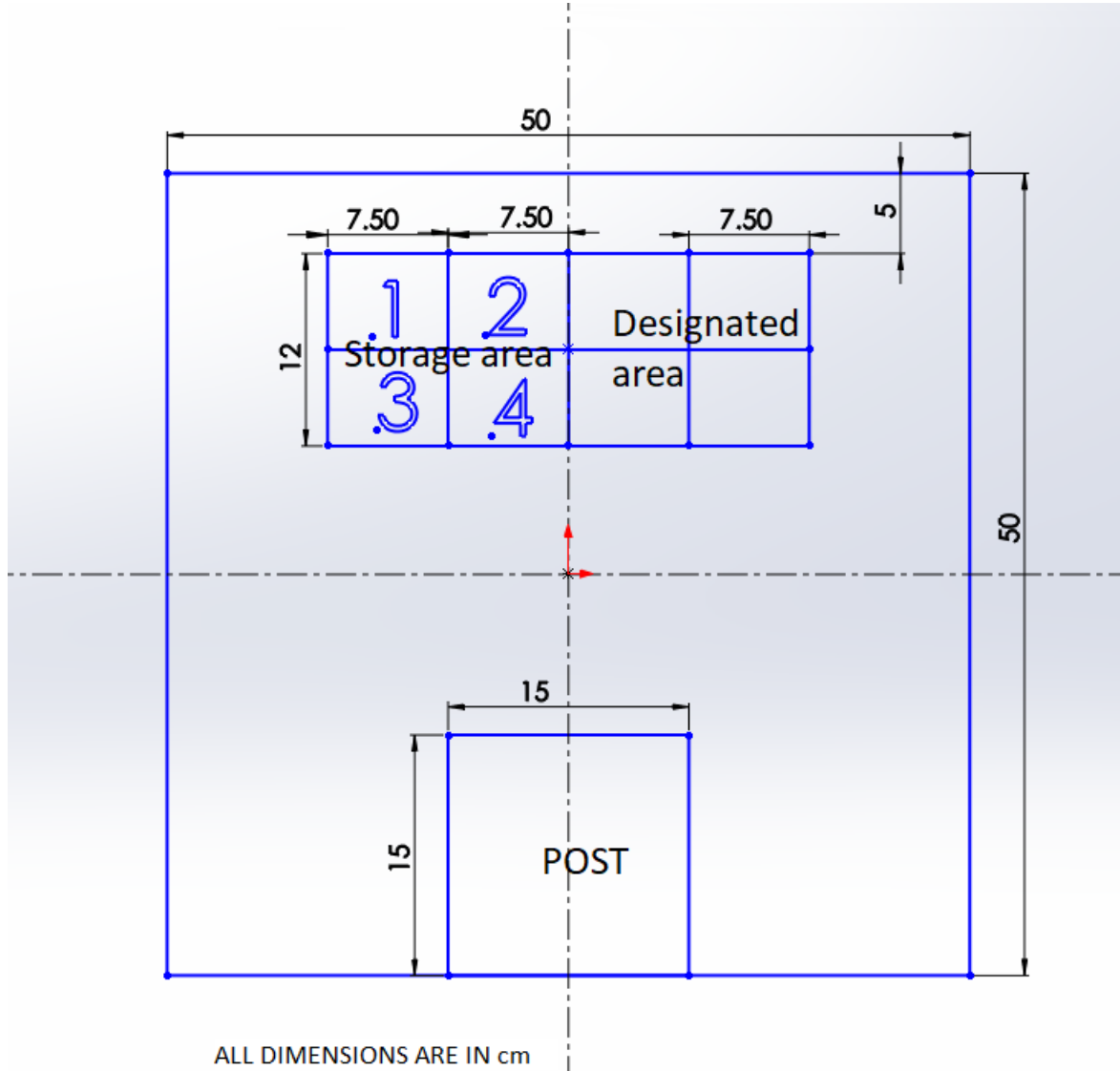
LEVEL DESCRIPTION:

Elimination Round or Round-1 :- (Dt-11/10/2022 , 4 Hours , 80 teams)

Challenge/task – Groups have to build fully operational hydraulic arm in specified time given and using the same hydraulic arm they have to pick up light weight cube (numbered on top face) from a storage area, move them to specified place and then place them precisely in designed area. The participants have to arrange cubes in the minimum time to become winner/ eligible for the next round.



ARENA DESIGN FOR ELEMINATION ROUND-1





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EVALUATION CRITERIA:

Judgement will be based on task completion, time taken for it & attainment of set target .

The decision of the judge shall be considered as final.

JUDGES:

Any one Industry Expert with minimum 10 years of experience in the relevant discipline

OR

Any one Academic Expert with minimum 10 years of experience in relevant discipline

AND / OR

Any one faculty from any other GTU affiliated college in the same zone

AND /OR

Any one faculty from the Host Institute

EVENT COORDINATORS:

You can contact the following coordinators if you have any query regarding the event.

Sr. No	Name	Faculty/ Student	Contact No	Email ID.
01	Prof. Jigish J Goswami	Faculty	9662623100	jjgoswami@gecrajkot.ac.in
02	Prof. R.L.Patel	Faculty	9998910340	rlpatel@gecrajkot.ac.in