



A NATIONAL LEVEL TECHNO-MANAGEMENT FEST
AARUUSH'15

...rising in the spirit of innovation



SRM
UNIVERSITY
(Under section 3 of UGC Act 1956)

ROBOGYAN

sumo slammers



rule book



ROBOT SPECIFICATIONS :

<i>LIMITATIONS</i>	
<i>DIMENSIONS</i>	<i>30X30X30</i>
<i>MAXIMUM VOLTAGE</i>	<i>12V</i>
<i>MOTOR LIMITATIONS</i>	<i>1000 RPM, 10KG.CM TORQUE</i>
<i>MAXIMUM WEIGHT</i>	<i>10KG</i>
<i>CONTROL</i>	<i>MANUAL</i>

- ⦿ *A team of maximum 4 members.*
- ⦿ *Team members need not be students of the same college.*
- ⦿ *Robot should be completely manual.*
- ⦿ *Any violation of rules may lead to reduction in points/disqualification.*
- ⦿ *Decision of the organizer's is final.*
- ⦿ *Same robot to be used in all rounds.*



LIMITATIONS :

- ⦿ *Jamming devices, such as IR LEDs intended to saturate the opponents IR sensors, are not allowed.*
- ⦿ *Parts that could break or damage the ring are not allowed. Do not use parts that are intended to damage the opponents robot or it's operator. Normal pushes and bangs are not considered intent to damage.*
- ⦿ *Devices that can store liquid, powder, gas or other substances for throwing at the opponent are not allowed.*
- ⦿ *Any flaming devices are not allowed.*
- ⦿ *Devices that throw things at your opponent are not allowed.*
- ⦿ *Devices to increase down force, such as a vacuum pump or magnets, are only allowed in the 3 kg robots.*



- ⦿ *Sticky substances to improve traction are not allowed.*
- ⦿ *Tires and other components of the robot in contact with the ring must not be able to pick up and hold a standard 3"x5" index card for more than two seconds.*
- ⦿ *All edges, including but not limited to the front scoop, must not be sharp enough to scratch or damage the ring, other robots, or players.*
- ⦿ *In general, edges with a radius of greater than .005", as would be obtained with a unsharpened .010" thick metal strip, should be ok.*
- ⦿ *Organizer may require edges that they deem too sharp to be covered with a piece of tape.*



ROUND 1 : ANGRY BIRDS

- ⦿ Rectangular shaped bricks of different heights are topped with a ball are placed in arena.
- ⦿ The robot has to push brick in such a way that only the ball placed above should fall down.
- ⦿ Points are given based on which ball is made to fall and height of brick.
- ⦿ If the brick falls it leads to -5 points

ARENA SPECIFICATIONS	
ARENA DIMENSIONS	4*4 SQ.M
POINT ZONE DIAMETER	0.5 M
PILLAR SIZE	10X10X20-10CM =10POINTS(BLUE) 10X10X15-20CM =15POINTS(YELW) 10X10X10-30CM =20POINTS(RED)
TIME LIMIT	3MIN



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- ☉ *Robot should not touch the border of arena.*
- ☉ *Ball dimensions 229 mm in circumference.*





ROUND 2 : SHAOLIN SOCCER

- ◎ *Four balls are placed randomly in a soccer field.*
- ◎ *The robot can kick each ball for maximum three times into goal post.*
- ◎ *Goal post has two zones - one red zone and green zone.*
- ◎ *If ball falls in red zone robot gets 20 points.*
- ◎ *If ball falls in green zone robot gets 10 points.*

ARENA SPECIFICATIONS:	
FIELD LENGTH	8M
WIDTH OF THE FIELD	4M
TIME LIMIT	5 MIN



ROUND 3: TEMPLE RUN

- ⦿ *The robot has to pass a track with obstacles at regular intervals.*
- ⦿ *If a robot stops in between the track (due to any technical issues), time will be paused and it is resumed once the robot starts again.*
- ⦿ *The team who reaches the end of path in less time will gain more points.*
- ⦿ *If the robot hits a obstacle it will get -5 points.*
- ⦿ *Timing of all teams is calculated, the least will be given maximum points.*
- ⦿ *Speed breakers, flyovers, oil, sand etc are the obstacles used.*
- ⦿ *Dimensions :*
- ⦿ *Length - 8 M*
- ⦿ *Width - 4 M*
- ⦿ *width of path - 0.5 M*



ROUND 4 : MAZE -RUNNER

The robot should complete the 3D maze passing through different stages.

Time is noted down and maximum points are given to the robot which completes maze in minimum time.

If the robot touches the walls of maze it will get -5 points.

Top four teams will be qualified to next round based on cumulative points of all four rounds.

Dimensions :

Length : 7 M

Breadth : 7 M

Height : 1 M

Width of path :



ROUND 5: CLASH OF CLANS

ARENA SPECIFICATIONS	
DIAMETER OF THE CIRCLE	3 M
TIME	5 MIN

The earlier points of all four teams are cancelled and are not taken into account.

Three matches are held between two teams (Set A).

Three matches are held between another two teams (Set B).

Random pits are included in the arena.

If the robot falls into the pit, 5 points are deducted.

Whichever robot goes out of the circle loses the round and winner receives 100 points.

Final clash will happen between winner of both sets.