Digital Quiz Competition

Description: - Digital Quiz Competition

The Digital Quiz Competition Event is held as a part of Genero 2017's Technical Event. This event comprises of Three ROUNDS out of which First round will be Elimination Round in which 30 questions will be given from various topics including Logical Reasoning, Quantitative Aptitude and basic domain question on Elementary learning.

The participants who qualify for it goes in the qualifying Round TWO which consists of 20 question based on above domains, digital logic designs and basic C programming as well.

The Final Round Three consists 10 questions covering the entire field up to post matric and general knowledge. Also the shortlisted students will go through a surprise round to decide the winner and runner up.

Rule Book- Digital Quiz Competition

- Individual or team entries are eligible. No participant can be common for two teams at a time.
- A team shall consist of max two persons.
- There will be cash prizes to the first three runner ups.
- The decision of the quiz-master will be final and will not be subjected to any change.
- The participants shall not be allowed to use mobile or other electronic instruments.
- The questions shall be in the form of multiple choice, True / False statement, Specific-answer question etc.
- Replacement of any participant of a team is not allowed after registration
- Teams selected for the final rounds will be allowed to give themselves an appropriate name related to the competition by which they may want to be known.
- Participation certificate will be awarded to all the participants.

- The quiz will have three rounds which is mandatory for all to clear to win the final cash prize.
- In first round there will be 30 questions of 2 marks each with no negative marking.
- In second round there will be 20 questions of 3 marks each with a negative marking of (-1).
- The final round consists of 10 questions of 6 marks each with multiple correct answers and a negative marking of (-2).
- After the final round there will be a surprise round to decide the final 3 runner ups.

LINE FOLLOWER ROBOT

Event Description:

The objective of this contest is for a robot to follow a black line on a white background, without losing the line, and navigating several 90 degree turns and sharp curves. The robot that complete the task in the shortest period of time while accurately tracking the course line from start to finish wins.

Specifications:

- The robot must be strictly autonomous.
- The width of track will be 3cm at each and every point.
- Dimensions of the robot should be less than 20cm X 20cm X 15cm (l*b*h).
- The participants should ensure that room lighting does not affect the functioning of

the sensors.

- If none of the robots finishes the course, then the one which covers the longest distance in less time will be considered as winner.
- Maximum voltage should not exceed 12V at any time.

Rules and Regulations:

- The bot completing the track in the shortest time will be declared as winner.
- Maximum of four members are allowed in each team.
- For each touch done by hand, the team will be penalised by +5 seconds.
- If the bot get deviated from its track, the bot will be penalised by +5 seconds and it will have to start from the same point from where it was deviated.
- The Judge's decision shall be considered as final and indisputable. Any team involved in any type of argument with the judges will be disqualified.
- The organizers reserve the rights to disqualify any team indulging in any kind of misbehaviour.
- The tracks will be revealed at the time of competition.

MINI ROBO WAR

Description :-

All pirates get to know that there are two hidden treasures in the TORTUGA Island, so they came here with their crew members to capture this treasure. All pirates have almost 3-4 fellows with them. Now this island contains volcano (fire pit) and big rock (hammer) which will act as obstacles in the island [square table]. Now as

pirates keep coming and fighting with each other, the two pirates who will remain undefeated will get the treasure (prize money).

Robot Specification

- Max. 24 volt DC motor will be allowed.
- 220 volts A.C. supply will be provided.
- Maximum size of the robot can be 30cm x 25cm x 20cm (± 2cm tolerance).
- The maximum permissible weight of the robot is 7 kg (± 0.2 kg tolerance).The weight of external compressor in case of pneumatics or hydraulics will also be included.
- No movable weapons are allowed in the robot.
- The size of weapon however should not exceed the size of the bot.
- No fire weapon will be allowed.
- Remote controls both wired and wireless are allowed
- The wire should be properly protected and insulated
- The wire should be sufficiently long as to remain slack at all time during the competition.
- In case of wireless remote controls, the remote should have at least two frequency operations to prevent interference with other team.

Mobility:

- All robots must have easy visible and controlled mobility in order to compete.
- Jumping, hopping, flying or any other method of mobility which leads the robot to lose contact with the ground is not allowed.
- If robot is unable to travel at least 10 cm for 15 seconds would lead to disqualification.

Judgement Specification

- The basic criterion is strength, power, control and design of the robot.
- The bot which drags other bot in death zone will be consider as a winner.
- If the robots in a particular round are unable to eliminate each other and no clear winner emerges, then the decision of the winner will be left to the discretion of the judges.
- The winner will be decided on the basis of dominance over other robots in the arena.
- The robot will be awarded with points for each attack and the utilization of the weapons.

RULES:

- A team of maximum four members can participate.
- Inter-college teams are allowed to participate.
- At any point of time, only one robot is allowed to enter into the arena with only

two team members, if necessary.

- The last robot surviving in the arena will be declared as the win

ROBO RACE

Rules & Regulation:

- The team should not consist of more than 4 members.
- Each member from same college is not mandatory.
- The robot should follow the robot specifications provided. Any deviation from the mentioned specifications will lead to disqualification.
- Once the race begins, three hand touches are allowed, if your taking hand touch you have to start from last check point.
- No test practice will be allowed on the main arena.
- Terminals for charging the battery will not be provided in the college.
- The arena may subject to change before the commencement of any round.
- If the Robot crosses a checkpoint, and moves off track, then the Robot would be placed back on the previous checkpoint crossed.
- The decision of the judges will be final and abiding. Argument with judges in any form will lead to the disqualification of the team.
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GENERAL RULES:

- The structure of the robot should not be changed during the competition.
- If the robot by any chances falls from the bridge, the robot will be kept back to the previous checkpoint crossed with a penalty.
- During the game play, if any part of a robot is destructed/ dismantled/ damaged the participant will be given a timeout to repair at an expense of a penalty, while the next participant for will be called the play.
- Only 1 timeout will be given for any participant and the participant will repair it without the help from the mentor.
- A total of 5 minutes run time (arena time) will be given to every participant.
- A maximum of 3 attempts will be allowed in this 5 minutes, the commencement of the second attempt will be on request of the participant and consent of the judge.
- The better of 2 scores will be considered as final.
- If the total time taken by the robots exceeds 10min's the participant would be disqualified.
- No readjustment is allowed during the run

ROBO SUMO

Rules And Descriptions:-

- Robots per event- 2.
- Two robots compete in a head-to-head match following the basic system of traditional human sumo matches. No weapons are allowed on robots. The sole purpose is a pushing match between the two robots to force the other out of the arena. The one which leaves the arena first loses.
- Robot control- autonomous.
- Robots are not allowed to flip each other.
- Only pushing is allowed.
- Only one member of each team will approach the ring.
- Length of event- 3 rounds of 1 minute each.
- The winning team gets 2 points after winning every round .

Dimensions Of Ring:-

- BORDER

Height.	Diameter
5.00cm from ground	120.0cm

- STARTING LINE

Width	Length	Seperation b\w lines	Border
2.0cm	20cm	20cm	5cm

*2cm tolerance may be considered at the expense of some points.

Material Used:-

- Normal Wood or Not decided.

Robot Description:-

- Robot must be in single piece.
- Falling of nuts, screws from the body part will not be taken as an excuse to pause the match. The match will only be ended after the ringing of final bell after 3 minutes of starting of match.
- Dimensions and weight.

Height	Width	Length	Weight
30cm	20cm	20cm	1kg to 1.5kg

- Any method of control may be used, as long as it is fully contained within the robot and receives no external signals or directions.
- Jammer devices should not be used.

- Robots must be properly designed that they may not destroy the ring or the arena. Organizers have the full authority to disqualify the team if any robot is found damaging the arena.

Robo Match:-

- A match will constitute of three rounds according to the rule.
- In case of match draw ,
    - The judges have the authority to extend the time of the match to decide the winner
    - The team which scored the first point of the match wins .
    - If both the teams couldn't score any point in the given time, they would be given an extra time to score against each other then both teams will be awarded point each.

Note: Final decision will be in the hands of judges.

ROBOWAR

Description:-

To rule on the entire ocean is desired by everyone, become a legendary pirate captain and plan out assaults against millions of other pirates from all around the world in the most original pirate war game. Prepare for the rough pirate battle royale. Rally forces to battle against each other and other sea rovers on the vast open seas. Plunder your enemies to become the one and only pirate captain of the Caribbean.

ROBO WAR RULES

Team Specification:

A team may consist of a maximum of 4 participants, all from the same institute or may be from

different institute.

General Rules:

The competition will be played on a knock-out basis consisting of 2-3 players at a time .

The maximum duration of each round will be 5 minutes. Any team that is not ready at the time

specified will be disqualified from the competition automatically.

1. The machine would be checked

Specifications: 30kg (±3kg) including all weapons.

Problem statement:

Design and construct a remote or wired controlled bot capable of fighting a one on one tournament.

Dimensions and Fabrications:

• The bot should fit in a box of dimension 35cm x 35 cm x 35 cm (lxbxh) with all

mechanisms fully executing motions. Length and width is measured to the extremities of

the Robot, i.e. includes any overhanging bodywork, weaponry or protrusions. The

external device used to control the bot is not included in the size constraint.

Mobility:

All bots must have easily visible and controlled mobility in order to compete. Methods of

mobility include:

• Rolling (wheels, tracks or the whole robot).

• Jumping and hopping is not allowed.

• Flying (using airfoil, helium balloons, ornithopters, etc.) is not allowed.

Robot Control Requirements:

• If the bot is wired then the wire should remain slack under all circumstances during the

competition. All the wires coming out of the bot should be stacked as a single unit. The

wires should be properly insulated. Teams are suggested to use only rated wires such as

ISI marked. Loose connections or improper wiring may lead to direct disqualification

even before the event.

• If the bot is controlled wirelessly, the bot must at least have a four frequency remote

control circuit or two dual control circuits which may be interchanged before the start

of the race to avoid frequency interference with other teams. The case of any interference

in the wireless systems will not be considered for rematch or results.

• Remote control systems from toys might be used. Remote control systems available in

the market may also be used.

Battery and Power:

• The machine can be powered electrically only. Batteries must be sealed, immobilized-

electrolyte types (such as Li-ion, NiCad, NiMH or dry cells).

• Working voltages must not exceed 24V DC (mean voltage) at any point of time.

• All power connections must be of an adequate grade and adequately insulated. Cables

must be routed to minimize the chances of being cut. M

• All efforts must be made to protect battery terminals from a direct short and causing a

battery fire, failure to do so will cause direct disqualification.

• Battery Eliminators are allowed and power source would be available at the venue for the

Eliminators.

Motors:

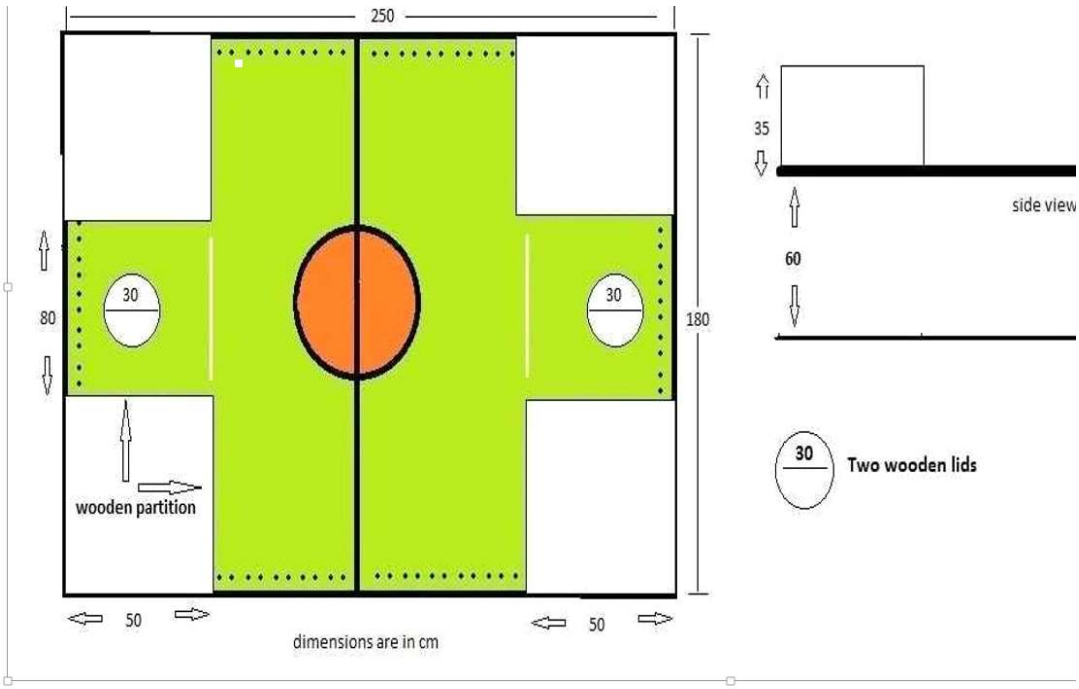
The robot should move as fast as possible around the arena with the help of motors.

- DC motors and stepper motors (12V-24V) can be used as per the design of bots

Robo soccer

Problem Statement:

Design a robot which plays soccer. The robot would compete against others in 1-1 matches.



Rules:

- Each team will have to defend the goal on its side as well as score the goal on the opposite side.
- Each team can have a maximum of 4 team members.
- The weight limit of the robot for this competition is 5 Kg.
- Each robot should not exceed by maximum 30cm.
- A team can make a either one robot or at max, 2 robots(manually controlled) taking into consideration that the total weight of 1 or 2 robots, the controller and batteries should not exceed 5 kg. (This means that whatever components the participants enter on to the field should not be more than 5 kg.)
- The start zone for the single or both robots is 500mm x 500 mm. (Single or both the robots must be able to remain completely inside the start zone before the start of the game).
- The game will start at the count of 3 given by referee followed by whistle. In case a team starts its robot before the whistle, the game will be restarted and a team making this mistake for more than 3 times will be disqualified.
- The field diagram will be uploaded on the website soon.
- The ball can be either dragged or pushed by the team.
- A robot can extended to a dimension of 500mm x 500mm x 500mm maximum (independently) once it crosses the start zone.
- Each goal scored by a team by rolling the ball on the ground will fetch the team 1 point.

- The goal post will have a hole on the top. Any team scoring the goal from above will fetch 5 points.
- The voltage at any point on the electrical connections should not exceed 12 V DC.
- The game will last for 5 minutes.
- The detailed dimensions of the goal post and D line will be uploaded on website soon.
- Maximum 2 members per team will be allowed to remain close to field for operating the robots.
- In case of jam up of robots for more than 30 seconds the robots will have to kick-off again at the order of the referee.
- In case of any discrepancy the final decision rests in the hands of co-ordinators.
- Any act of misbehaviour or misconduct will lead to immediate disqualification of the team.
- The robots are not allowed to use grippers or actuations which are intended to harm the opponent's robot.

TRANSPORTERS

DISCRIPTION:

- In this event, a line follower manual control robot with a gripper will be used.
- Bots have to start from starting point and pick up different object (as each object

has some points) and then have to place that object at destination.

- There will be 4 shapes of objects: cubes, cuboid, pyramid and sphere of different colours.
- Each participant will get 5mins to complete the task.
- Size of robot will be informed later.

RULES:

- Robot will be caged during the caging session.
- The game start with two participants at the same time, once whistle is blown.
- The maximum runtime allowed would be 5 min.
- The objects will be equally spread over the arena.
- Pushing or disturbing opponent's object or robot will not be allowed and will be considered as foul.
- Each shape carries different point : cube : 5 points cuboid : 10 points pyramid :15 points sphere :20 points
- 4 different coloured blocks will be there and objects are to be placed on boxes of their respective colours.
- There will be deduction of 1 point, if robot collides or deviates out of arena.
- No points will be awarded if object is placed in different colour box.
- Robots should be returned to the caging area.
- Participant is not allowed to take back his/her robot before the whole competition is concluded.
- Participant who finishes the match with highest score will qualify for second round.

- Participant who argues with judges and violates the above rules is liable for disqualification.
- The plugs and extension boards will be provided to participants. Ø The clearance between each object will be 60 cm so that the robots can move around without any disturbance to the objects