AISSMS
COLLEGE OF ENGINEERING
ज्ञानम् सकलजनहिताय
(Accredited by NAAC with grade A+)

Engineering Today-2019

Department of Electronics & Telecommunication Engineering

(SILICON FUSION)

CODE	EVENT
EX-1	Air-O- Task (Drone)
EX-2	Robo Revolution 2.0
	1.Robo - Soccer
	2.Robo - Wrestling
EX-3	Digimania (Elex., E&TC, Comp, IT, Electrical)
EX-4	Electro- Trade

EX-1 AIR-O-TASK (DRONE)

Venue: AISSMS COE CAMPUS

Max Participants per team: 4

Entry Fee: Rs. 200/- (Team)

Date of Event: 18/09/2019 and 19/09/2019

Prize Amount- 1st-10,000/-

2nd -5000/-

Name of the Student Event Coordinator

1) SiddheshwarKaddukar :9766923997

Problem Statement:

The event is based on finding the agilest and fastest drone.

Pass through given levels and the team with a maximum number of points wins.

Path:

The path will consist of pillars, loops, bends, underpass, turbines placed in random Sequence along an aerial track. It will end with landing pad for testing Maneuverability skills.

Drone Specifications:

1. Machine should fit into the dimension box of maximum 50cm x 50cm x 30cm and minimum 20cm x 20cm x 30cm.

2. Machines should be powered/propelled by a non-hydrocarbon engine.

Game Rules:

1. The Drone should fit into dimensions.

2. Student should carry Identity cards of their respective Institutes.

3. Team should be of maximum 4 members.

4. One participant/pilot can't be part of more than one team.

5. Maximum time is of 10 minutes to complete task.

6. Time will start at the moment the multi-rotor starts.

7. The timer will stop only when the drone finally lands on the landing zone.

8. Maximum 3 attempts will be given in case of ground touch and you have to start from initial point.

9. The time measured by the organizers will be final and will be used for scoring the teams.

10. Time measured by any contestant by any other means is not acceptable for scoring.

11. Obstacles points will be given to you at the time of competition.

12. Result will be based on total obstacles cleared within minimum time.

13. The Second round will be a surprise spot round wherein the problem statement will be disclosed at the venue. The finalists of the Level 1 are eligible to compete in this Round. You need not bring any additional inventory for competing in this.

14. Automatic Drones(like GPS, RADAR, Sonar, Ultra Sonic sensors, etc) are not allowed.

15. In case of any disputes/discrepancies organizers decision will be final and binding.

16. The organizers reserve the right to change any or all of the above rules as they deem fit.

EX-2 ROBO REVOLUTION 2.0

Robo Wrestling and Robo Soccer

Venue: AISSMS COE CAMPUS

Max Participants per team:4

Entry Fee: Rs. 200/- (Per team per event)

Date of Event: 18/09/2019 and 19/09/2019

Prize Amount-	**I. Robo Soccer**	**II.Robo Wrestling**
	1st-10,000/-	1st -10,000/-
	2nd -5,000/-	2nd -5,000/-

Name of the Student Event coordinator

1) Tejas Wade: 8999114310 (Robo Revolution 2.0)

2) Dattprasad More: 8605072249 (Robo Soccer)

3) Swapnil Pawar: 8149594912 (Robo Wrestling)

1. Robo wrestling

Bot Wrestling is basically a competition of two robots competing in an attempt to push the opponent out of the arena. These robots must be remote operated.

EVENT STRUCTURE:

The arena consists of two concentric rings- inner one blue surrounded by a red boundary. The aim of the robots is to push the opposition robot out of the outer circle. Robots gains points for pushing the opposition robot in the red zone.

Points are deducted from the teams score if it enters the red zone. The team that successfully completely pushes the opposition robot out of the red zone wins the match.

ROUNDS:

Knockout Round

1. Two teams will compete against each other.

2. Each round will have duration of 2 minute. The team which wins two rounds first (each of 2 min) will be declared the winner of the match.

3. The team that pushes the opposition robot out of the arena (i.e. out of the red zone) is declared as the winner of that round.

4. The scoring pattern will be uniform throughout and the scores will be considered only in case of a tie i.e. if no team is able to push the opponent's robot out of the arena in that round.

5. In case of a tie in a round (i.e. none of the team's robot is able to push the opposition robot out of the arena), the winner will be decided by the points earned by each team in that round.

6. In case of a tie in the match, the winner of the match will be decided by a tie breaker.

7. In case of odd number of teams qualified for next round, then team with the maximum points will get the benefit.

TASK:

1. Teams must build a robot which can be controlled using a remote (Wired/ Wireless).

2. The aim of the robot is to push the robot of the opposite team out of the arena. The team doing so wins the match.

ARENA:

1. The arena will be square in shape of side 3000 mm.

2. The main arena will be a circular in shape with a maximum diameter 2400 mm.

3. It will consist of two concentric circles of diameter 2000 mm and 2400 mm.

4. The inner circular area is blue in color and is called the “Blue Zone” while the outer circular area is red in color and is called the “Red Zone”.

5. A center white line of 30 mm width divides the arena into two equal halves. 6. There are white squares of 300 mm x 300 mm on the opposite sides of this line that indicate the starting zones of the two competing teams.

7. The arena will be made up of wood and the markings on it including all the zones will be drawn using paint.

MACHINE SPECIFICATIONS:

1. The machine should fit in a square of 300mm x 300mm. There is no height limit.

2. The weight of the robot must not exceed 5 kg(this is including battery, motors etc., except spare components and the remote to control).

3. The robot must be stable and must stand on its own at the beginning of the run when put in the starting point. Robots not fulfilling this criterion will be disqualified.

4. Any type of weapons (fire, spindle, hammer, etc.) is not allowed.

5. Readymade (market sold) robot with or without modifications will not be allowed in the competition.

POWER SUPPLY:

1. Machine must be completely self-contained and should receive no outside assistance. It should not use an energy source employing a combustion process.

2. Machine should have an on-board power supply. No external power supply is allowed.

3. Voltage on the machine at any point should not exceed 12 V DC.

POINTS:

1. Each team earns 10 points for pushing the opposition in the red zone and 50 points for pushing the opponent out of the red zone.

2. If a robot goes in the red zone on its own without being pushed by theopponent robot then 10 points will be deducted from the teams score entering the red zone.If a robot goes out of the red zone on its own without being pushed by theopponent robot then 20 points will be deducted from the teams score exiting the arena. No points will be given to the opponent in such a case.

3. If a robot is not in working state (i.e. no movement is seen) at the start of a round for any reason, 20 points will be deducted from that team.

4. If there is still a tie on the basis of the scores then a rematch of 1 minute will be played by the involved teams until we get a winner.

5. Judges" decision shall be treated as final and binding to all".

6. The organizers reserve the rights to change any or all of the above rules as they deem fit.

GENERAL RULES:

1. Any team that is not ready at the time specified will be disqualified from the competition automatically.

2. The machine will be checked for its safety before each match and will be discarded iffound unsafe for other participants and spectators.

3. Team members will not be allowed to step in the arena. Only organizers are allowed in any situation. The team will be disqualified if any of the team members steps on the arena without the approval of the presiding organizers.

4. Only one member of the team is allowed to operate and one member for handling the robot.

5. Participants are not allowed to keep anything inside the arena other than its robot.

6. No robot is allowed to use any flammable, combustible, explosive or potentially dangerous processes.

RULES:

1. Knockout Matches: Each match consists best of 3 rounds.

2. Before the match 1minute setting time will be given. The run time clock will commence after that 1minutetime limit even if the handler is still making adjustments to the robots.

3. 60 seconds setting time will be given in between the rounds.

4. The robot must start from the starting point. The operator may abort run at any time. In such a case, the opposite team will be declared as the winner.

5. No hand touches are allowed in between the matches unless both the operators of the respective robots want a restart.

6. Use of Jammers is not allowed. Participants found violating this rule will be disqualified from the competition.

7. There can be interference problems related to RF modules in case you are using them. It is the responsibility of the participants to overcome it. Organizers are not responsible for it.

8. In every match each team will be given 2 time-outs of 60 sec (each).

9. Judges‟ decision shall be treated as final and binding on all”.

2. Robo Soccer

TASK:

Build one bot according to the specification, so that bot can kick a table tennis ball into the opponent's Goal Post by following the rules.

Arena Specifications:

1. The soccer field is 4 feet x 8 feet.
2. Blue field is 40 cm x 40 cm.
3. Goal post is 40 cm in length and 20 cm in height.
4. Boundary of the field will be covered by 15 cm's high wall.
5. There are two regions in the field, green field and blue field.
6. Plastic or Tennis ball will be used.

Bot Specifications:

1. Each team is allowed to have only one bot.
2. Bot must fit into a cube of 30cm x 30cm x 30cm at all times. It may not expand beyond these dimensions during any point of the match. Violating this will cause immediate disqualification.
3. A battery with the voltage rating not exceeding 12 volts is allowed. This is an on- board power supply.
4. The weight of the bot should not exceed 5 kg's (this is including battery, motors etc., except spare components and the remote to control)
5. The remote control for the bot could be a wired or a wireless one. Grabbing the ball is not allowed. So, any such mechanisms are not allowed.

Rules for Game Play:

1. In first round, every match will be of 3 minutes. The duration for the matches in the next rounds will be decided by the organizers.
2. 10 point will be awarded per goal.
3. Team with maximum point will be declared winner for the match.

4. In case of a tie, an extra time will be given; the winner will be the one who first scores a goal. No time-outs will be given during extra time.

5. Match will start with the ball kept in the Red circle at center.

6. A goal will be considered only if the ball crosses the goal line completely.

7. Bot of each team can enter into the green field at any time, once the match is started.

8. At the starting of the match, bot should be in the blue field.

9. If the ball goes outside the field, then ball will be reset at initial position.

10. Grabbing the ball for more than 10sec is not allowed.

11. Any type of weapon is not allowed.

12. Standing inside the goal post is not allowed

13. The match will be 1 on 1(bot).

14. If the ball is stuck for more than 10 sec the match will be restart.

EX-3 DIGIMANIA

(Electronics, E&TC, Comp, IT and Electrical)

Venue: Central Computing Centre(2nd Floor), AISSMS COE

Max Participants per team: 1

Entry Fee: Rs. 50/- (Per Head)

Date of Event: 18/09/2019 and 19/09/2019

Prize Amount-	**I. Elex and E&TC**	**II. Comp & IT**	**III. Electrical**
	1st-10,000/-	1st -5000/-	1st -3000/-
	2nd -5000/-	2nd -3000/-	2nd -2000/-

Name of the Student Event coordinator

1) SahilVora: 7588842013

2) Swar Malu:9021090247

Syllabus: Totally based on first 4 units Syllabus of Digital Electronics.

General: Event is totally based on Syllabus of Digital Electronics first 4 Units of Electronics, E&TC, Comp, IT, Electrical and as per SavitribaiPhule Pune University Online Exam pattern. So your Students will benefit with online MCQ quiz (DIGIMANIA) which is strictly as per SavitribaiPhule Pune University Online Exam pattern. So send all the students from your Department for this Event.

RULES AND REGULATIONS

1. All Questions will be of MCQ type.

2. The Questions shall be in the form of “Multiple Choice”, “True/false Statements” or “Fill in the blanks” etc.

3. The decision of Judges will be final and will not be subjected to any change.

4. The Participants shall not be allowed to use mobile phones or other electronic instrument, non-programmable calculator is allowed.

5. Total 3 Rounds will be there, 1) Elimination 2) Semifinal 3)Final

6. Round 1 and Round 2 will be on the same day.

7. Final Round will be there on 19/09/2019 (9:00 am)

8. No Negative marking.

9. Every Participant will get Participation Certificate.

ELIMINATION (Round: 1)

1. Each candidate would be given a set of question paper online containing 25 MCQ type questions.

2. Time limit 30 Minutes.

3. The questions will be relatively simple.

4. 1 Mark will be awarded for each correct answer.

5. No negative marking.

6. Top 50% and above in the Elimination round will be selected for semifinals.

SEMIFINAL (Round: 2)

1. Questions posed in this round will be tougher and more demanding.

2. Each candidate would be given a set of question paper online containing 25 MCQ type questions.

3. Time limit 30 Minute.

4. 2 Mark will be awarded for each correct answer.

5. No negative marking.

6. Top 60% and above in the Elimination round will be selected for finals.

7. If Score is not 60% and above in Semifinals, Then only TOP 10 of Semifinalists will be selected for Finals.

8. This round will be there on 10 September 2019.

FINAL (Round: 3)

1. Final Round will be there on 11 September 2019.

Reporting time will be 9:00am, after 9:00am no studentwill be allowed for final round.

2. Questions posed in this round will be tougher and more demanding.

3. Each candidate would be given a set of question paper online containing 50MCQ type questions.

4. Time limit 60 Minutes

5. 2 Mark will be awarded for each correct answer.

6. No negative marking

7. First four prizes will be selected from Final Round.

8. The decision of Judges will be final and binding on all participants.

EX-4. Electro-Trade

Venue: Room No-432, AISSMS COE, PUNE

Max Participants per team: 4

Entry Fee: Rs. 200/- (Team)

Date of Event: 18/09/2019 and 19/09/2019

Prize Amount- 1st -4000/-

2nd-3000/-

Name of the Student Event Coordinator

1) Omkar Darekar: 7218902700

2) Rohit Jain: 9422226457

Problem Statement:

Design circuit using the provided problem statement with minimum costand time.

Game Rules:

1. Time for each round is 30 to 45 mins.

2. Syllabus is Basic Electronics Engineering.

3. Round 1: MCQ test of 20 Questions

4. Round 2: 15 Multiple correct answer question and 5 one word questions

5. Based upon round 2 one correct answer =100 virtual money.

6. Final round: Design circuit using the provided problem statement with minimum costand time.

7. Total 3 rounds Round 1 and 2 on 18th September and Final round on 19thSeptember.

8. If there is a tie in first 2 rounds both teams will be selected for next round.

9.Judges "Decision shall be treated as final and binding on all".