



ABINITIO 2K17



**GOVERNMENT COLLEGE OF
ENGINEERING AND
RESEARCH, AVASARI
KHURD, PUNE**

Represents **ABINITIO 2K17**

On 17TH & 18TH March.

RULE BOOK

Energized persona with the world...



ABINITIO 2K17



GOVERNMENT COLLEGE OF ENGINEERING & RESEARCH, AVASARI(KH) , PUNE



ABINITIO 2k17

"Energized persona with the world" on 17th & 18th March

Techno Trendz

Vipul

(9156818124)

Robo sapiens

Rushikesh Y

(8380806213)

softonica

Aniket

(7040062986)

Citymenza

Rushikesh M

(8857845575)

Innovata

Swapnil

(8793201019)

Evolution

Ganesh

(8600860069)

CIRCUIT DESIGNING

ROBO SOCCER

TRICKY TRICKS

TOWNSHIP PLANNING

CONTRAPTION

BOTTLE ROCKETRY

PAPTRIX

LINE TRACING

CAD-GEEKS

BRIDGE-O-MANIA

LATHE WAR

PROJECT COMPET.

DEBATE

ROBO RACE

CODE CHEF

LINING UP

ENGINE 360

CLICK IT

QUIZ

ROBO WAR

LAN GAMES

CONCUBE

VEHICLE TROUBLE -

BLIND BOT

(NFS, CS, FIFA,
MINI MILITIA)

SHOOTING

Contact Us :

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facebook.com/abinitio2k17/



twitter.com/abinitio2k17

**Prizes worth
more than
1.5 Lakh**

Prathamesh Sawant

Event Head

Dr.M.J.Pabale

Co-Coordinator

Dr. P.K.Deshmukh

Coordinator

Dr. D. R. Pangavhane

Convener

Dr. A. S. Pant

Principal



As circuit designing is playing a vital role in day today life. It has captured all the business and ruling the electronics world. So, for all the beginners in Electronics....!Now is the time to put your theoretical knowledge into action, bring out your passion for electronics. This is the place to test your skill on real height. Bring your ideas, skill into the real world.

RULES:-

- Judges reserves the right to disqualify any team for the misbehaviour or the cheating by any means.
- Any team that is not ready at the time specified will be disqualified.
- In case of any dispute, decision of the judges will be the final decision.
- Participants should report to coordinators on specified time.
(Time will be informed later).
- Participants should use provided components and lab equipment carefully.

Round 1: Technical Test

A technical test of 50 questions for 30 min. Out of this round only 30 participant teams will be selected as per the marks and will be eligible for next round.

Round 2: Circuit Solving

It's a paper work. Circuit diagrams will be provided and the participant teams will have to solve it. As per correct solution of circuit, marks will be given. Students with the high score will be eligible for the final round. For final round eligible 10 students only will be selected as per performance of teams. In any case of tie, teams need to give extra quick test for eligibility.

Round 3: Design the Circuit.

- a. Design the circuit (on paper) based on the problem statement.
- b. Testing the same circuit on the breadboard.
- c. Components required for the implementation will be provided.

ENTRY FEE: - 100/- per team (max two participants)

COORDINATOR: - SHEELWANT JAISWAL- (9768813084)



TOPICS FOR PAPER PRESENTATION:-

- Latest trends in embedded technology.
- Advancements in Mechatronics.
- Artificial intelligence in machine.
- Smart sensors.
- Image processing.
- Network Security.
- Grid computing.
- Semantic web.
- Recent trends in Automobile.
- Modern manufacturing Technologies.

RULES:-

- An entry can have a maximum of 2 authors per paper. Abstract should not exceed 500 words
- One participant can be an author in more than one entry.
- Proper references and citation should be given on the last page
- Ten (10) minutes will be given for the presentation and five (5) minutes for the interactive session.
- There will be one bell after 10 minutes indicating only 5 minute left to complete presentation.
- All abstract and paper should be in IEEE format.
- Submit one Soft copy through mail and 2 hard copies at time of competition.
- Carry two hard copies of paper (slides).
- Candidate must be dressed in formals. College ID is compulsory.
- Judges' decision will be final.



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NOTE:-

- Participants are needed to send in the abstract of their presentation at: **paptrix.abinitio@gmail.com** with all details (accordingly format).
- All abstract and paper should be in IEEE format.
- Submit one soft copy through mail and 2 hard copies.

Format:

Name:

Mobile:

College:

Email Address:

Topic:

Attach file to email. (.doc or .docx) only.

Registration fee:-50/-

Presentation fee: - 100/-

Total fee: - 150/-

COORDINATOR:- Sonali Rupanwar (7410721491)

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SUBJECT: - Effect of Demonetization on Indian economy.

STRUCTURE:-

- Participants must pre-register their team to coordinators before due date.
- Each team will be made up of two students (of any year).
- Participants should be prepared for both the sides of the topic.
- There will be 3 rounds which will decide the winner and Runner-up teams.
- Rounds to be conducted will be declared at the time of Competition.

RULES:-

- The teams will be assigned to defend or oppose the topic at the time of debate.
- No change in teams will be accepted.
- The same two students must participate in all rounds.
- Each team is questioned as soon as he concludes his constructive speech.
- Each team will be judged equally on the quality of their arguments and their ability to defend the argument of opposite team.
- Points (marks) of judgement will be announced at the time of competition.
- Teams will be given 10 mins to prepare their argument after distribution of their sides (positive or negative).
- Participants can use any of three languages (English, Marathi, and Hindi). Mixing of any language not allowed.
- Any kind of misbehaviour will be penalized by judges.
- Decision of judges will be final.

ENTRY FEE: - 100/- per team (max two participants)

COORDINATOR: - Vaishnavi Kapare (9130082697)



Quiz competition is a pursuit of trivial knowledge, encourage students to improve their knowledge and their awareness of the world around them.

OBJECTIVES AND BENEFITS:-

- Aptitude test – 50 questions based on historic, geographic, general science, basic mathematics and English have to be solve in 30 minutes.
- Aptitude with negative marking – 25 questions based on intelligence and grammar has to be solved in 30 minutes.
- Buzzer round –
 1. Rapid Fire Round
 2. Visual/Audible Round.

NOTE:- Decision taken by quiz-master will be final.
Maximum no. of participants allowed – 2

REGISTRATION FEE:-

Team of 1 = Rs.100

Team of 2 = Rs.150

COORDINATOR:-

Supriya Lahare:-9881258272

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From all corners they come through flame and fear, flipping, cutting, hurling maces-the messiahs of destruction, all fighting for the crown...

The carnage will be veiled, the damage catastrophic.....

All at the Inter-Collegiate combat Robotics Championship, promising a wilder, fiercer competition this year. You could be forgiven for thinking that the machines you will see are from outer space or the depth of hell, but they are the wild, weird and wacky creations of skillful Rooters from all around the country. Equipped with the fiercest weaponry and toughest armor, gears will grind and sparks will fly, much more is at stake as the robots battle it out in a bid to be the best.

Robowar is manufactured mayhem of the highest order. It's big...its better...It's back...Let the wars begin...

PROBLEM STATEMENT:-

Design and construct a remote control robot capable of fighting a one on one tournament.

TEAM SPECIFICATION:-

A team may consist of a maximum 6 participants, all from the same institutes.

ARENA:-

The play area is 12*12 feet. Walls are 6 ft. high made of metal net. The entire arena will be cover by a wire mesh cage. The base will be layered by plywood. The grip of wheel will be sufficient at all times.

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SPECIFICATIONS:-

DIMENSIONS AND FABRICATIONS:-

- The machine should be fit in a box of dimensions 600mm x 600mm x 1000mm (lxbxh) at every given point of the race. The external device used to control the machine or any external tank is not included in the size constraint.
- The machine should not exceed 40 kg of weight including the weight of pneumatic source or tank. If the tank is external, its weight would be considered 1.5 times its actual weight. Weight of the external power source (batteries & adaptors) will not be counted. Weight of wireless wheeled robots will be counted as 0.8x the actual weight.

MOBILITY:-

All robots must have easily visible and controlled mobility in order to compete.

Methods of mobility include:

- Rolling (wheels, tracks or the whole robot)
- Non-wheeled robots having no rolling elements in contact with the floor and no continuous rolling or cam operated motion in contact with the floor, either directly or via a linkage. Motion is “continuous” if continuous operation of the drive motor(s) produces continuous motion of the robot. Linear-actuated legs and novel non-wheeled drive systems come under this category.
- Jumping and hopping is not allowed.
- Flying (air foil, using helium balloons, ornithopters, etc.) is not allowed.

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ROBOT CONTROL REQUIREMENTS:-

- The machine can be controlled wirelessly or with wires. Off board power supplies are allowed. Refer below for further details on battery and power.
- If the machine is wired then the wire should remain slack under all circumstances during the competition. All the wires coming out of the machine should be stacked as a single unit. The wire should be properly insulated. Teams are suggested to use only rated wires. Loose connections or improper wiring may lead to direct disqualification even before the event.
- If the machine is controlled wirelessly, the machine must at least have a four frequency remote controlled circuit or two dual controlled 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 power electrically only. Used of an IC engine in any form is not allowed. On board batteries must be sealed, immobilized-electrolyte types (such as gel cells, lithium, NiCad, NiMH or dry cells).
- The electric voltage between 2 points anywhere in the machine should not be more than 36 V DC at any point of time. If a team is using AC voltage in any of its parts then the voltage should not be exceed 36 V AC at any point of time as well.



- 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.
- All efforts must be made to protect battery terminals from a direct short and causing a battery fire.
- Use of damaged, non-leak proof batteries may lead to disqualification.
- Battery Eliminators are allowed and power source would be available at the venue for the eliminators.

PNEUMATICS:-

- Robot can use pressurized non-inflammable gases to actuate pneumatic devices. Maximum allowed outlet nozzle pressure is 8 bars. The storage tank and pressure regulators used by teams need to be certified and teams using pneumatics are required to produce the Safety and Security letters at the Registration Desk at the venue. Failing to do so will lead to direct disqualification.
- Participants must be able to indicate the used pressure with integrated or temporarily fitted pressure gauge. Also there should be provision to check the cylinder pressure on the bot.
- The maximum pressure in the cylinder should not exceed the rated pressure at any point of time.
- You must have a safe way of refilling the system and determining the board pressure.
- All pneumatic components on board a robot must be securely mounted. Particular attention must be made to pressure vessel mounting and armor to ensure that if ruptured it will not escape the robot. The terms “pressure vessel, bottle and source tank” are used interchangeably.

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HYDRAULICS:-

- Robot can use non-inflammable liquid to actuate hydraulic devices e.g. cylinders.
- All hydraulic components on board a robot must be securely mounted. Particular attention must be made to pump, accumulator mounting and armor to ensure that if ruptured direct fluid streams will not escape the robot.
- All hydraulic liquid are required to be non-corrosive and your device should be leak proof. Maximum allowed pressure is 8 bars.
- Participant must be able to indicate the used pressure with integrated or temporarily fitted pressure gauge.

WEAPONS SYSTEMS:-

Robots can have any kind of magnetic weapons, cutters, flippers, saws, lifting devices etc.as weapons with following exceptions and limitations:

- Liquid projectiles.
- Any kind of inflammable liquid. Flame based weapons.
- Any kind of explosive or intentionally ignited solid or potentially ignitable solid.
- Nets, tape, glue, or any other entanglement device.
- High power magnets or electromagnets.
- Radio jamming, Tasers, tesla coils, or any other high-voltage device.
- Un-tethered projectiles.
- Tethered projectiles in any direction with each having a maximum tether length of 4 feet are allowed.
- Spinning weapons are allowed.

In no case should the arena be damaged by any bot.

The competition will be played on a knock-out basis.



RULES:-

CRITERIA FOR VICTORY:-

- A Robot is declared victorious if its opponent is immobilized.
- A Robot will be declared immobile if it cannot display linear motion of at least 1 inch in a timed period of 30 seconds. A bot with one side of its drive train disabled will not be counted out if it can demonstrate some degree of controlled movement.
- In case both the robots remain mobile after the end of the round then the winner will be decided subjectively.
- A robot that is deemed unsafe by the judges after the match has begun will be disqualified and therefore declared the loser. The match will be immediately halted and the opponent will be awarded a win.
- Points will be given on the basis of aggression and damage.

GENERAL RULES:-

- The competition will be played on a knock-out basis.
- 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.
- The machine would be checked for its safety before the competition and would be discarded if found
- unsafe for other participants and spectators.
- The name of your machine must be prominently displayed on the machine.
- The organizers reserve the rights to change any or all of the above rules as they deem fit.

Change in rules, if any will be highlighted on the website and notified to the registered teams.

- Violations of any of the above rules will lead to disqualification.
- Judge's decision shall be treated as final and binding on all.

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SAFETY RULES:-

- Compliance with all event rules is mandatory. It is expected that competitors stay within the rules and procedures of their own accord and do not require constant policing.
- If you have a robot or weapon design that does not fit within the categories set forth in these rules or is in some way ambiguous or border line, please contact this event. Safe innovation is always encouraged, but surprising the event staff with your brilliant exploitation of a loop hole may cause your robot to be disqualified before it even competes.
- Each event has safety inspections. It is at their sole discretion that your robot is allowed to compete. As a builder you are obligated to disclose all operating principles and potential dangers to the inspection staff.
- Proper activation and deactivation of robots is critical. Robot must only be activated in the arena, testing areas or with expressed consent of the event coordinators.
- All weapons must have a safety cover on any sharp edges.
- All participants build and operate robots at their own risk. Combat robotics is inherently dangerous. There is no amount of regulation that can encompass all the dangers involved. Please take care to not hurt yourself or others when building, testing and competing.

ENTRY FEE: - 500/- (per team)

COORDINATORS:-

1. Mahendra Thorat (7387470869)
2. Deepak Patole(7720924406)
3. Krishna Bhusari(9860335092)
4. Shantanu Dharashilkar(9767387284)
5. Rohit Ombase(7350060350)
6. Reshma Waghchavare(9552817314)

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CHALLENGE:-

More Speed, More Power, With Minimum Time

Design a manually control robot that has capacity to cover maximum distance in shortest possible time, challenging the hurdles and be the one of the best opponent. And must bear in mind that maximum RPM does not make you winner but winners are those who have good presence of mind, sharpness and more practice.

ROBOT SPECIFICATIONS:-

- The maximum dimensions of robot can be $25 \times 25 \times 25$ cm (l **\times** b **\times** h)
- The robot may be wired or wireless.
- Maximum weight must not exceed 5kg.
- The power supply provided up to 12volts.
- Robot must not contain pneumatics & hydraulics system, IC engines.
- Readymade toys car are not allowed.

ARENA:-

- Track width is 40cm.
- The track surface and coerce lines may have unevenness.
- Arena will consists of abrupt angles, marble pit, slippery path, certain obstacles, seesaw etc.

Note:-Arena will be displayed on the spot.

RULES:-

- This is racing event so fastest and most balanced robot will win.
- Robot should be as per given specifications.
- Each team can have maximum 4 members. Students from different institutions can form a team.

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- Each member of team must be with identity card of his/her respective institute.
- The robot should not damage arena.
- The robot must not leave behind any of its parts during run; else it will result in disqualification.
- Faculty coordinators have all rights to take final decision for any matter during the event.
- **Judge's decision will be considered final.**

PHASES IN THE EVENT:-

- The competition is based on time trial system. There will be qualifying round for each team.
- The top teams from qualifying round makes it to final round on basis of time trial.
- Three hand touches are allowed with penalty of 10 sec for each hand touch.
- If any of robots starts off before start up call, the counter would be restarted and the robot will get second chance. If repeated again then team will be disqualified.
- Your robot must be ready when call is made for your team.
- All about the next rounds will be notified on the event day.

BONUS POINTS:-

You will be given several opportunities while racing to gain bonus point and it will be declared on the time of event.

SPECIAL OFFER:-

- The teams which are participated in Robo-Soccer & Blind-Bot will get discount of Rs.50

ENTRY FEE: - 200/- (per team)

COORDINATORS:-

Anil Bhashte - (8600492128)



It is very easy to operate a bot manually. But if we say that you have to do the same, blindfolded! Can you do that? Thinking? Don't just think. Come and Check this out. We will make this a bit simple. Instructor from team will guide blindfolded manual operator to reach the destination.

RULES:-

- There will be two rounds:

Round 1:

- It is a Robot race on arena.
- Robot must move with the ball without holding it throughout the race.

Round 2:

- Reaching the given destination on puzzle.
- Robot must move with the ball without holding it throughout the puzzle.
- 12 volt power supply will be provided.
- A team should contain only two members.
 1. Manual Operator.
 2. Instructor.
- Any technical fault during the match will not be accepted and that team has to continue the game.
- A bot having dimensions more than the specified dimensions will not be allowed to play.

DIMENSIONS:-

Bot- 25*25 cm (Initial).

Ball- 7cm to 10 cm (dia.)

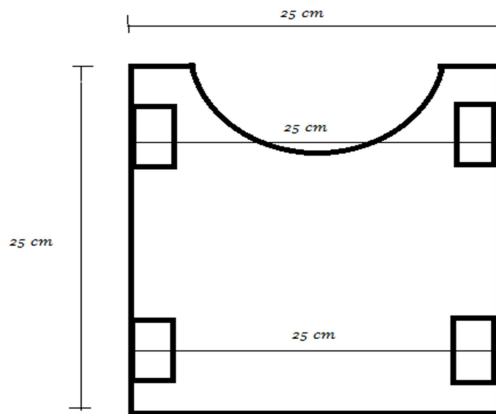


ABINITIO 2K17



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ARENA:-



NOTE: - Maximum team size is 2 members.

ENTRY FEE: - 300/- (per team)

COORDINATOR: - Akshay Ponde-(9527596907)



You might have created your own player when you play FIFA. Now try this out in the real world by creating your own robot and score as much as you can. In Robo-soccer, two teams will play a match of football against each other using a manual bot.

RULES:-

- 7 min match with 3 min half and 1 min break.
- Each Goal will carry 10 points.
- Each bot has to score goals from his opponents half or the goal will not be counted.
- **Rounds:-**
 1. Elimination Round
 2. Quarterfinal
 3. Semi-final
 4. Final
- Max. 16 top scorer teams will be selected from first round.
- Max. 12 volt dc power supply will be provided.
- If any technical fault occurs, then that team will be given max. 2 min for recovery. There are no other timeouts in the game.
- A bot having dimensions more than the specified dimensions will be disqualified.
- During the match if there is any type of interruption, then match will be started from **neutral points** as given in arena (there are 4 neutral points).
- In case of tie, the game will be played by **golden goal**.
Golden goal – time limit 1 min. bot scoring first goal will be winner. (All rules will be considered strictly)

VIOLATION:-

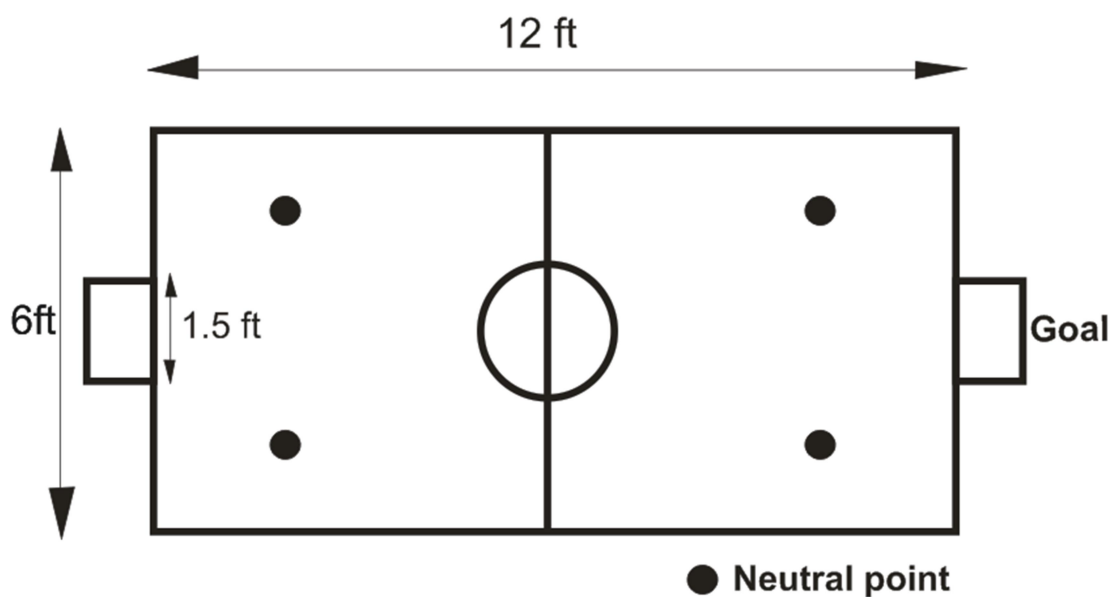
- 2 points will be deducted any kind of damage to the Arena.
- 3 points will be deducted for grabbing or lifting the ball.
- 5 points will be deducted for any intentional damage to the opponent's bot.

DIMENSIONS-

Bot-25×25×25 cm (initial)

Weight- up to 5 kg.

ARENA-



NOTE: - Decision taken by the coordinator will be final.

TEAM MEMBERS- Max. 4

ENTRY FEE: - 300/- (per team).

COORDINATOR:-

Akshay Pawar- (9689713081).



1. THE CHALLENGE:-

The challenge of the competition is that robot should follow black lines on a white background and white lines on a black background (vice versa) to reach the finish line in short time.

The competition area has is a special place defined for the robot's operation (hereafter COMPETITION FIELD).

The ROBOT need to start from START point and reach the FINISH point block by following the black lines in the shortest time will be nominated the winner.

2. PREPARATION:-

Each team should be present before 30 min on the location of the event, after reach then all team should do own trials and preparation (maximum 3 trials are allowed). After the trial time is over, the TIME-UP BUZZER will sound and the team will be asked to remove the robot from the COMPETITION FIELD. Then the task or competition of line follower will be start.

3. TEAM MEMBERS:-

- All the team members must be college students.
- Max. 4 members are allowing in each team.

4. THE ROBOT:-

Dimensions:-

The following size limitations apply for each robot

Length – 200mm max.

Width – 200mm max.

Height – no limit.



5. POWER SOURCE:-

a) The robot must be powered by a power source such as a battery fixed on the robot. External power supply will not be provided.

6. CONSTRUCTION:-

Any robot kit or building material may be used, as long as the robot fits the above specifications and as long as the design and construction are primarily the original work of the team.

7. GAME PLAY:-

a) Pre-Game setup

On the day of the competition each team has PREPARATION TIME which is 30 minutes. All the preparation should be done during this time (adjusting the sensors, reprogramming the robot etc.).

b) Game Zone

An area around the field will be designated as the GAME ZONE. No one is allowed inside the game zone except for the robot handlers and the referees.

8. START AND RESTARTS:-

- The robot will be placed at the START point and checked by one of the referees.
- The restart can be requested from current location only if the robot doesn't follow the line, has stopped on half way or has lost the directions. If the robot has reached the FINISH, the time is saved for that current tracing and the team cannot request another run.
- Robot can restart to follow tracks from current location.



- d) It is not allowed to reprogram the robot or to add/remove parts on the robot during competition but allowed to adjust the sensors
- e) A robot must restart if:
 - The robot does not start until 10 sec.
 - The robot moves off of field.
 - The referee orders to restart.

9. SCORING METHOD:-

- a) There are THREE rounds in the competition.
 - * 1st round (Simple -Black tracks)
 - * 2nd round (Moderate-black tracks)
 - * 3rd round (Complex-Black and white tracks)
- b) The scores will be given by judges as per the performance of robot and judge's decision will be final. The teams will qualify for the next round as per the judge's decision.
- c) RACE TIME is the time considered for tracing the route from START to FINISH. RACE TIME is calculated by the timer watch which is present on the judge's table. The robot that will have the fastest run will win the round.

10. FOULS:-

- a) The robot violating any of the rules described below will be disqualified from the competition or forced to restart the robot from the START position.
- b) It will cause reduction in score as per number of hand-touch. (Max. 3 hand touch will be allowed)



11. CODE OF CONDUCT:-

a) Fair Play:-

- Robots that cause deliberate interference with other robots or damage to the field will be disqualified.
- Participants that cause deliberate interference with other robots or damage to the field will be disqualified.
- It is expected that the aim of all teams is to play a fair and clean game.

b) Behaviour:-

- Participants who misbehave may be asked to leave the competition area and risk being disqualified from the contest.
- The rules will be enforced at the discretion of the referees, officials, and local law enforcement authorities.

12. ORGANIZERS:-

- Organizing Committee: - The organizing Committee is a union that consists of few communities and associations. The organizer of this competition is Govt. College of Engg. Avasari (khurd).
- All decisions about scoring, game play and timing are made by the juries. Teams should respect their vote and decisions. Members of the jury will be from different fields of the robotic science.

NOTE: - All the participants hereby informed that all the team members should report before starting the competition to the Event Head.

ENTRY FEE: - 250/- (per team)

COORDINATOR:-

Shubhsangi Wankhade-(8551902602)



EVENT DETAILS:-

We provide you an amazing opportunity to show us your CAD skills.

**Two events : 1] AutoCAD
2] Catia**

1] AUTOCAD

Rules and Regulation:

Round 1:-

- Duration: 1 hrs.
- Design will be given on the spot.

10 participants will be shortlisted from Round 1.

Note:-Depending upon number of participants in Round 1, no. of participants in Round 2 may change.

Round 2:-

- 1) Duration: 1 hrs.
- 2) Design will be given on the spot.

MARKING SCHEME:-

- 50 Marks are allotted for completion within time.
- 30 Marks are allotted for accuracy in part designing.
- 5 marks deduction for each mistake.



BONUS MARKS:-

- 20 Marks are given if Drawing is completed within 20 min.
- 10 Marks are given if Drawing is completed within 30 min.

2] CATIA

Rules and Regulation:

Round 1:-

- Duration: 1 hrs.
- Design will be given on the spot.

10 participants will be shortlisted from Round 1.

Note:-Depending upon number of participants in Round 1, no. of participants in Round 2 may change.

Round 2:

- 1) Duration: 1 hr. 30 min.
- 2) Design will be given on the spot.
- 3) Assembly design is compulsory.

MARKING SCHEME:-

- 1) 50 Marks are allotted for completion within time.
- 2) 30 Marks are allotted for accuracy in part designing.
- 3) 30 Marks are allotted for correct Assembly.
- 4) 5 marks deduction for each mistake done.



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BONUS MARKS:-

- 1) 20 Marks are given if Drawing is completed within 45 min.
- 2) 10 Marks are given if Drawing is completed within 60 min.

IMPORTANT NOTE:-

- College ID card and Registration receipt is compulsory during reporting.
- All the Participants should provide their valid emails as medium for further communication.
- Decision given by Judge will be final.
- Any arguments with the co-coordinators and judges will lead to disqualification.
- In case the timings of events clash please contact the respective co-coordinators.
- Cad geek is an Individual event.

ENTRY FEE:-₹80/-

COORDINATORS:-

Sudhendra S. Sonawane - (Mo.: 9767570730)



CODE CHEF:-

Here following the culture of computer era, we present the fight for the glory of coding standards. Combat your logic and arm your algorithms for this trendy battle of code chef.

Round 1: Qualifying round and mcq test on OOPS.

Round 2: C++ and C blind coding on given problem. Applicants are necessary to execute given problem and explain logic to the coordinator.

RULE:-

- Team of two would be allowed to solve MCQ questions on C++ and C in given time.
- Provided MCQ would be final and no exchange for question set would be permitted.
- Participants are expected to solve the given problem of C++ and C blindly on Ubuntu 14.2 OS in given time.
- Decision by judges would be final and not flexible.
- If any participant is found breaking the rules, he/she will be disqualified
- Prizes would be delivered to the winner on next day.

ENTRY FEE: - 70/-

COORDINATOR: - Pritesh Shahare (9698825775)



TRICKY TRIKS

Test what you know and what you don't about the computation ethology of Linux as Ubuntu and make your brain work for my investigation and trace what is true and the tricky tricks of hacking interfaces.

RULES:-

- It would be mandatory for all candidates to perform the problem on terminal itself by commands on Ubuntu 14.02 OS, display and explain to the coordinator.
- Report on the forensic investigation as well as demonstration on the investigation to the coordinator would be mandatory for all participants in given time.
- Decision by judges would be final and not flexible.
- Prizes would be delivered to the winner on next day.

ENTRY FEE:-70/-

COORDINATOR:-

Shweta upadhay- (8149541138).



LAN GAMES (NFS, CS, FIFA, MINI MILITIA)

NEED OF SPEED:-

Be the first to rule the road by skills and excite to inspire the world to play, ride on to make your tires shine the most. There is need for speed.

EA Need for Speed competition amongst two of the competitors till the brightest comes up.

RULES:-

- Participants are not allowed to carry their equipment during the game. Necessary equipment would be provided by the coordinators.
- Participants are expected to follow the game rules and timing provided by the coordinators. Participants are mandatory to leave the workplace as soon as they finish the game.
- Decision by judges would be final and not flexible.
- Prizes would be delivered to the winner on next day.

ENTRY FEE: - 50/-

COORDINATOR:-

Swapnil Panchal (8857844732)



COUNTER STRIKE:-

Make your team and come up to fight with our best. Hit the mighty to rule the game and play with the best we have. Let the click be your shots, plan for Counter Strike with us.

Counter strike gaming competition between two teams with 5 players each team to fight against another team till the single comes up.

RULES:-

- Participants are not allowed to carry their equipment during the game. Necessary equipment would be provided by the coordinators.
- Participants are expected to follow the game rules and timing provided by the coordinators. Participants are mandatory to leave the workplace as soon as they finish the game.
- Version provided for the game would not be questionable.
- Decision by judges would be final and not flexible.
- Prizes would be delivered to the winner on next day.
- Maximum team size is 5.

ENTRY FEE: - 230/- per team.

COORDINATOR: - Tushar Ithape (9657608257)



FIFA:-

Enhance your football skill to score more because all you are known is with your score. Hit your goals to the extreme.

RULES:-

- Participants are not allowed to carry their equipment during the game. Necessary equipment would be provided by the coordinators.
- Version provided for the game would not be questionable.
- Decision by judges would be final and not flexible.
- Prizes would be delivered to the winner on next day.

ENTRY FEE – 50/-

COORDINATOR:-

Sagar Nirmal- (9156800302)



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MINI MILITIA:-

- Any cracked versions or higher level accounts would not be allowed. It is mandatory for all participants to play a game on the version and level provided by the coordinators.
- It would be mandatory for the team of maximum 6 participants to complete their game in time given by the coordinator.
- Round qualification for each team would be taken while defeated team is out.
- Decision by judges would be final and not flexible.
- Prizes would be delivered to the winner on next day.

ENTRY FEE:-50/-

COORDINATOR:-

Nikhil Korde- (8698338968)



PROBLEM STATEMENT:-

To Achieve 7 days strength of cement concrete cube using crushed stone sand as FA nearer to the given problem statement.
(Least deviation should be consider)

RULES AND REGULATIONS:-

- Cube shall be casted on 16th Feb 2017
- Age of concrete cube at the time of testing shall be 7 day.
- Size of cube 150mm x 150mm x 150mm
- Average of compressive strengths of cube will be considered
- Use of super plasticizer is allowed.
- Use of any type of steel fibers, reinforcement and Epoxy polymer is not permitted. If found so the team will be disqualified.
- A brief 1 page report with details of following should be submitted-
 - Ingredients used- CA, FA, CEMENT and WATER & SUPER PLASTICIZER.
 - CONCRETE Mix Design as per BIS.
 - W/C ratio.
 - Super plasticizer dosage.
- Report should be authenticated by Head of the Department or Principal.
- Steam curing of the cube is not allowed. Method of curing shall be immersed water curing.
- Any sign of steam curing is found the team will be disqualified.
- Decision of judges will be final and binding to all.
- Clue will be provided on 16th Sept by email or SMS which should be grooved on each and every cube.
- Video while cube casting must be submitted.



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- Group code should be marked on cube after demolding.
- Variation in compressive load of three cubes is not more than 5KN.
- Surprise round will be conducted if the groups have same compressive strength.

WINNING CRITERIA:-

- Achieved strength should be nearer to $\pm 67\%$ of given Grade in problem. (least deviation would be considered)
- Uniformity of strengths.
- Max. Ratio of Avg. strength to cement content

ENTRY FEE:-150/-

No. of Participants:-Maximum 3 members per team.

COORDINATOR:-

Akshay Sapate. : - 8888900267 (akshaysapate0@gmail.com)

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RULES:-

- The problem statement will be given on the spot.
- Required materials will be provided by the organizer.
- The testing of bridge will be on the 24rd feb.2017
- The time provided for bridge making is 4 hrs.

JUDGING CRITERIA:-

- The best estimated loaded capacity will be calculated I, e (Load /self-weight)
- Aesthetical view will be given credit.
- Bridge should be according to the problem statement.

ENTRY FEE: -200/-

No of participants: - maximum 4 members per group

CO-ORDINATOR:-

Prasad sanganwar-7387436356 (prasadsanganwar@gmail.com)



ABINITIO 2K17



Surveying is an important branch in Civil Engineering. Surveyor has to use his skills and accuracy in determining the useful information about given plot and construction site.

Lining Up is a great opportunity for surveyors to upgrade their surveying skills.

RULES AND REGULATIONS:-

There are three rounds:-

- **Round 1:-**
Dumpy level surveying.
- **Round 2:-**
Theodolite Surveying.
- **Round 3:-**
Surprise Round.

ENTRY FEE: - 150/-

NO. OF PARTICIPANTS: - Maximum 4 members per team.

COORDINATOR:-

Rahul Mali - (8796246835) (rahulmali011@gmail.com)

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This event comprises of innovative Town Planning Ideas to find perfect designing minds.

EVENT SCHEDULE:-

- **ROUND 1: (APTITUDE ROUND)**

Aptitude Test based on Town Planning and Building Bye-Laws. It will give on spot. (30 questions/40 marks)

- **ROUND 2: (PAPER PLANNING)**

Teams are expected to design a town on given A1 sheet as per problem statement.

Problem statement will be given 4 days before event on email ID.

- **ROUND 3: (FINAL ROUND)**

PPT presentation of respective town in front of judges

RULES AND JUDGING CRITERIA:-

- Maximum 3 members per team.
- Presentation time is 10 min (warning bell will be given at 7 mins.)
- The decision of judges is final and binding to all.
- Judging is done on the basis of perfect planning without future conflicts. (City should be perfect in every aspect.)

On spot registration may or may not be available as entries are limited to 50.

ENTRY FEE:-150/-

COORDINATOR:-

Saurabh Patil -8624008616



STRUCTURE:-

A Contraption is a chain of different 'ENERGY CONVERSION' steps, in which one step triggers the next one leading to completion of final task. This event requires simple class room ideas along with innovation that can make the solution as complicated and fascinating as possible.

Contraption is all about making most complicated solution to a simple problem.

This contraption is designed to pull students away from conventional problem solving and push them into the endless chaos of imagination and intuitive thought.

TASK :- Your aim is to move a toy car, placed at the destination point to the farthest distance you can make it go on a straight path, by providing it energy. (Distance between initial line and final line is 60 cm)

MAX. PARTICIPANTS PER TEAM: 5

Trials: 2

**Maximum dimension of the contraption- 8*8 (l*b) foot,
Distance between toy car and end of mechanism is 1 ft.**

RULES:-

- 1) Setup should be eco-friendly
- 2) Maximum 2 trials are allowed, in second trial 50 points will be deducted.



3) Maximum **3 interventions are allowed**, after that points will be deducted for each intervention.

4) **IMPORTANT**

Teams have to submit a report at the time of the competition which will contain a detailed description of each of the steps and energy conversions.

After going through the report and seeing the working arrangement, the judges will decide the correct number of steps and energy conversions in the arrangement.

5) How to prepare Abstract -

Follow the format:-

- Total number of energy conversions.
- Explanation of each and every step.

NOTE: - Explanation must be clear and simple.

E.g. Chemicals reacts burns matchstick

Energy conversion - chemical energy to heat energy.

6) Formula Used:-

A = Marks given for abstract, aesthetic simplicity. Out of 30 (Presenting style will be considered).

B = for each energy conversion, 30 points will be awarded.

C = for each repeated energy conversion 10 points will be given.

D = for each intervention 25 points will be deducted.

E = for achieving the goal, points will be rewarded as per toy carcrosses lines such that first, second, third having 40, 50, 60 points.

F= points for innovation points out of 50 (decided by judge)

G = 30 points for each parallel contraption

H= 70 points for completion of task

$$\text{Total Points} = [A+B+C+E+F+G+H]-[D]$$



7) Only following pure form of energies will be considered

- a. Mechanical energy
- b. Electrical energy
- c. Chemical energy
- d. Heat energy
- e. Magnetic energy
- f. Sound energy
- g. Light energy (Radiant energy)
- h. Elastic energy (potential energy)
- i. Wind energy

NOTE:

Above content is liable to change and the changes will be uploaded on the website.

Decision of judges will be final.

ENTRY FEE:-300/- (per team)

CORDINATORS:-

Pitekar Kiran- 9766888036



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Lathe war is a competition, which will put your knowledge of all the machining processes or manufacturing processes which are generally carried on the lathe machine to the test.

We invite you students from every branch of every institute to be a part of the lathe war!

RULES AND REGULATION: -

- All participants should carry workshop aprons and wear shoes.
- Participant should carry ABINITIO'17 receipt & their college ID-card.
- Experience of working with a lathe machine.
- Only one member in a team (open for all branches).
- Accuracy of up to is 5% expected.
- Not more than 2 tools would be provided. Fine will be levied if any damages to tool, lathe machine and surrounding equipment.
- Any kind of malpractices like use of cell phone during the competition is completely banned. Anyone found so will be disqualified.
- Judge Decision will be final.
- No extra work piece will be provided and carrying of any extra material is banned.
- After completion of task all accessories must be returned.
- Every participant will be awarded with certificate.
- Do not bring your own tools (cutting tool, measuring tool etc.).

NOTE: - spot entry will be accepted.



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COMPETITION STAGES: -

Round no. 1:

Technical Aptitude test will be conducted.

Round no. 2:

Profile cutting, which is to be completed in 40 min.

Round no. 3:

Profile cutting, which is to be completed in 20 min.

Note: Participants will be shortlisted after round 1 & 2.

ENTRY FEE:-150/-

COORDINATOR: -

ABHINAY DIGHE: - 7030509304
(abhidighe143@gamil.com)

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RULES AND REGULATIONS:

- College identity card and apron is compulsory.
- Spot entries are allowed up to 10A.M.
- All needed tools are provided by organizer.
- Coordinators' decision is final decision.

EVENT STRUCTURE:-

Round 1:-

Aptitude test- 50 marks.

Time limit - 30min.

One mark for each question.

Round 2:-

Engine parts identification and viva.

Round 3:-

Engine dismantling and assembly.

Turn by turn competition between two groups

Time limit- 20 min

NO OF PARTICIPANT – A team of 2 or 3 members.

ENTRY FEE:-150/- per team.

COORDINATOR:-

Dunbale Amol – 9730754886



Vehicle troubleshoot is a competition, which will put your knowledge of all the automobile components and troubleshooting of vehicle systems.

We invite you students from AUTOMOBILE & MECHANICLE ENGG. branch of every institute to be a part of the Vehicle troubleshoot.

RULES: -

- All participants should carry aprons and wear shoes.
- College ID-card and registration fees receipt are compulsory.
- Three or two members in a team
- Any kind of malpractices like use of cell phone during the competition is completely banned. Anyone found so will be disqualified.
- Judge Decision will be final.
- After completion of task all accessories must be returned.
- Every participant will be awarded with certificate.

NOTE: - spot entry will be accepted.

COMPETITION STAGES: -

Round no. 1:

Technical Aptitude test will be conducted. (50 marks)

Round no. 2:

Vehicle part identification and simple viva.

Round no. 3:

To find out troubles in vehicle.

NOTE: - Participants will be shortlisted after round 1 & 2.

ENTRY FEE: -100/-

COORDINATOR: - Piyush Kothavale: - 9730623066

(kothavalepiyush10@gmail.com)



GENERAL INSTRUCTION:-

- A single member or a team of at the most three members can take part in the event.
- Participants must bring the material required to make the bottle rocket with following specifications –

Bottle – Two bottles .Each of volume 1lit

Nozzle – As per requirement.

Fin – No metallic part being used.

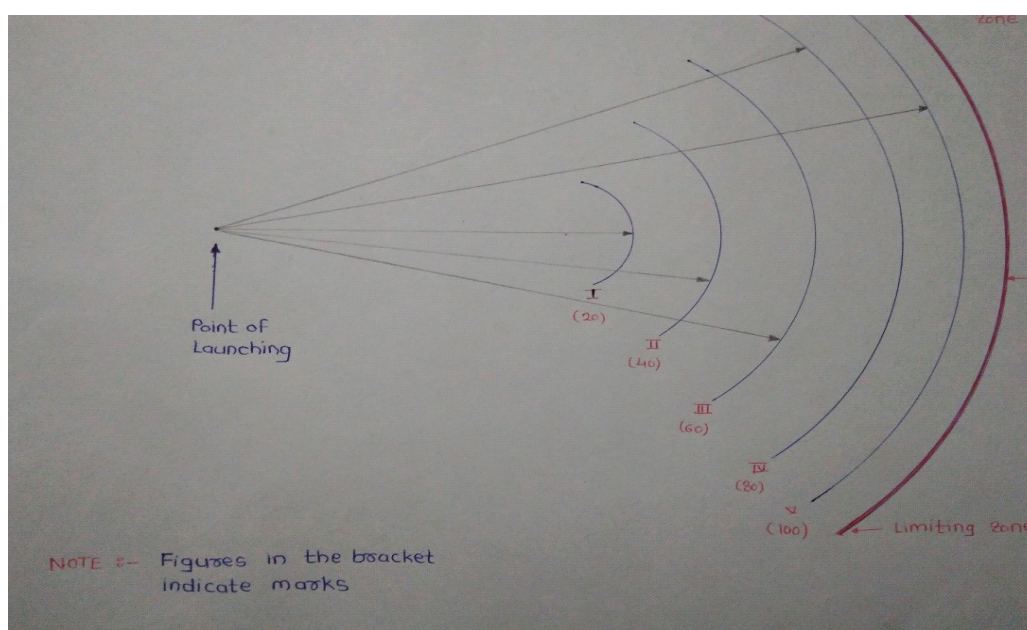
Decorative material – sticking tape, and other excluding any metallic part.

Air blowing pump - As per requirement.

- A self-designed rocket launching mechanism must be brought by a participant at the time of competition. No material will be provided at the place.
- The energy required to launch the rocket must be originated from water / air pressure or combination. Use of explosive gases other than air, chemical reactions, pyrotechnics, electric devices, etc. is strictly prohibited.
- Only sticking tape is allowed to join the fins. Glue must not be used.
- Participants are advised to make two rockets; one as main and other as a backup one.
- Water will be provided at the time of competition.

MARKING SCHEME:-

ROUND NUMBER	DISCRIPTION	MARKS
1.	Aesthetics and appearance	Out of 50 (Based on performance)
	Material specification and technical description	
	Conversation with judges	
2.	Vertical Launching	50 marks will be given for successful launching and extra credit of marks will be awarded to the three participants based on height achieved.
3.	Horizontal zone launching	Points of corresponding zone will be given as soon as the rocket crosses it. The point details are as shown in the image below.





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NOTE: - Only landing point is considered while giving marks.

No marks will be given if the rocket crosses the limiting line as shown.

ZONE NO.	DISTANCE FROM POINT OF LAUNCHING
1(18m)	
2(20m)	
3(23m)	
4(25m)	
5(28m)	
Limiting zone (30m)	

JUDGES DECISION WILL BE TREATED AS FINAL.

SAFETY FIRST:-

- Competitors must wear safety glasses for eye protection.
- Team members will not be allowed to touch the setup once it is pressurized.
- Management will be irresponsible for any damaging issue related to the event such as blasting due to excessive pressure, etc.
- Rocket nose should not be very sharp

ENTRY FEE:-200/-

COORDINATOR:-

MOHIT DIGHE :-(8007687712)



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Participation in this competition is voluntary. The following must be met to avoid disqualification from the Competition. Participant should present at place of competition before provided time to avoid disqualification. (Time and date will be informed later)

POSTERS:-

DIMENSION AND CONTENT:-

1. Posters must be handmade, two-dimensional (one single sheet) and one-sided. Maximum size is A1 (841mm x 594 mm or 33.1 in x 23.4 in).
2. Should a poster contain any form of potentially offensive material or be otherwise inappropriate for public display it will be excluded from presentation and will take no further part in the competition.
3. Any topic is permissible but must reflect or illustrate clear aims, methods, analysis, interpretation and communication of statistics or statistical information and findings.
4. Posters can be presented in any language. (English, Hindi, Marathi)
5. Posters must be the original design and creation of participant and must cite any content obtained from existing sources using appropriate footnotes and references.
6. Poster content should be able to be viewed from a distance of approx. 2m (7 feet).

JUDGEMENT:

- Judges will be appointed by the competition organizers.
- Judges will give marks on the basis of topic of poster and its proper explanation.
- The judges' decision is final.

ENTRY FEE:-300/- (per team)

COORDINATOR:-

NITIN KABALA- (9730982026)



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Taking pictures is saving that moment of life permanently, every hundredth of a second. Life goes on but photographs are like freezing that moment whole life. We celebrate photography as an art and provide you the opportunity to compete with the best in this genre and showcase your talent.

Direct Finals, no rounds.

RULES:-

- DSLR, SLR or mobile phones or any other device to click photograph is allowed.
- Photographs taken within the college campus would only be accepted.
- Minimum pixel size is 3.2 MP.
- Participants can submit their digital photographs to the coordinators as well.
- Photographs will not be judged on the clarity but by the angle, exposure, dynamic view and creativity.
- Decision by judges would be final and not flexible.
- Prizes would be delivered to the winner on next day.

ENTRY FEE:-50/-

COORDINATORS:-

Atharva Kulkarni- 8329664452