09/02/2014,
Nuzvid.

To
The Director,
RGUKT-Nuzvid.

Sub: Submission of tentative schedule for organizing state level Techno-mgmt fest at our campus.

Req-Reg.

Respected sir,

This is in continuation to the draft proposal submitted earlier on 31st January, 2014 regarding techfest, and also discussions with our vice-chancellor sir on 1st February, 2014. After wide consultation with the students of E3, E4 and also with the faculty it was suggested to have a state level techfest during March 8/9/10 in our campus, as we didn't had any techfest so far. We were working on that from long back and we collected many ideas from all the students and out of that some of the best ones are picked and proposed in the final list. Few students because of financial problems weren't attending workshops at IIT's , we are planning to have workshops also organized by student teams where students will be giving hands-on experience to their friends(which needs some financial support from institute).

We the coordinators of SDCAC successfully organized COMIENZO-2014 with 1200 participants in the campus. We have been working on the formation of SDCAC since November 28th and finally came out with a strong team having around 80-120 organizers in the cell who are responsible, can manage studies with this activities and overall of good behavior, selections were based on statement of purpose (S.O.P), Group Discussions, Personal Interviews. Now we have a strong team and we were planning a yearlong schedule.

Sir, we cordially request you to allow us to organize state-level techno-mgmt fest on March 8/9/10 in our campus and support us regarding the same, we will start our preparation regarding that from now onwards as it is the first ever Techno-mgmt fest organized by RGUKT right from its inception.

Thanking you in anticipation,

Yours sincerely,
SDCAC Coordinators

P.SHYAM
Department of E.C.E.

RAVI GEDELA
Department of Bio science

Attachments:

1. Tentative schedule of tech fest
2. Tech fest events and workshops draft

TECH FEST EVENTS SCHEDULE

CHEMICAL EVENTS SCHEDULE					
S.NO.	**Event title**	**venue**	**Time**	**Day**	**Round**
1.	Paper presentation	A2 (TT-1)	10:00 A.M. to 12:00 P.M.	Day 1	prelims
		A2 (TT-1)	10:00 A.M. to 12:00 P.M.	Day 2	finals
2.	Chem Gale	HT LAB (A2- behind TT-1)	3:00 P.M. to 5:00 P.M.	Day 1	
3.	Chem Gloss	A2- TT-5 to TT-10	1:00 P.M. to 2:00 P.M.	Day 1	Prelims
			Submissions before 12 P.M.	Day 2	finals
CIVIL EVENTS SCHEDULE					
S.NO.	**Event title**	**venue**	**Time**	**Day**	**Round**
1.	Concreting concrete	DCS lab (A2)	8:00 A.M. to 9:00 A.M.	Day 1	
			4:00 P.M. to 6:00 P.M.		
2.	Paper presentation	A2- TG-6 & TG-7	9:15 A.M. to 11:15 A.M.	Day 1	
3.	Tumult free city	A2- TG-8 & TG-9	11:30 A.M. to 1:00 P.M.	Day 1	
4.	Brycg conception	A2-TG8 & TG-9	2:30 P.M. to 4:00 P.M.	Day 1	
5.	Aerial tramline	A2- TG-01,02 & 04	4:30 P.M. to 6:30 P.M.	Day 1	
6.	Poster presentations	Workshop-seminar hall	8:00 A.M. to 10:00 A.M.	Day 2	
7.	Technical quiz	A2-TG-06,07 & 08	10:15 A.M. to 11:00 A.M.	Day 2	
8.	Beat-D-Euclid	A2- TG-01 & 02	11:30 A.M. to 1:00 P.M.	Day 2	
9.	Conception of multi-piano	A2- TG-06,07 & 08	2:00 P.M. to 3:30 P.M.	Day 2	

10.	Design of auditorium block	A2- TG-09 & 10	4:00 P.M. to 5:00 P.M.	Day 2	
CSE EVENTS SCHEDULE					
S.NO.	**Event title**	**venue**	**Time**	**Day**	**Round**
1.	CTF(Ethical hacking contest)	A3- SF-06 & 10	1:00 P.M.. to 4:00 P.M.	Day 1	Prelims
			8:30 A.M. to 1:30 P.M.	Day 2	Finals
2.	Logal wits	A3- SF-01 to SF-05	8:30 A.M. to 10:30 P.M.	Day 1	Round 1
			2:00 P.M. to 5:00 P.M.	Day 1	Round 2
			3:30 PM to 5:30 PM	Day 2	Round 3
3.	Brain box	A3- SG-01 to SG-05	10:30 A.M. to 12:00 P.M.	Day 1	Round 1
			5:30 P.M. to 7:00 P.M.	Day 1	Round 2
			1:30 P.M. to 3:30 P.M.	Day 2	Round 3
4.	Competition for developing games	A3- SS-06 to SS-10	5:00 P.M. to 6:00 P.M.	Day 1	Round 1
			5:30 P.M. to 6:30 P.M.	Day 2	Round 2
5.	Gamesmanship	A4- CS-01 to CS-05	3:30 P.M. to 5:00 P.M.	Day 1	Round 1
			10:00 A.M. to 12:00 P.M.	Day 2	Round 3
ECE EVENTS SCHEDULE					
S.NO.	**Event title**	**venue**	**Time**	**Day**	**Round**
1.	Paper presentation	A3	2:00 P.M. to 5:00 P.M.	Day 1	Round 1
					Round 2
			10:00 A.M. to 12:00 P.M.	Day 2	Round 3
		Prefab L-1 to L-9	8:30 A.M. to 9:30 A.M.	Day 1	Round 1

2.	Electronics avenue	Prefab L-1 to L-4	1:45 P.M. to 2:45 P.M.	Day 1	Round 2
		Digital Electronics lab	10:30 A.M. to 12:30 P.M.	Day 2	Round 3
3.	Circuits casino	Prefab O-5 to O-12	9:15 A.M. to 10:15 A.M.	Day 1	Round 1
		Prefab L-6 to L-10	2:45 P.M. to 3:45 P.M.	Day 1	Round 2
		A3 – behind SF-02 (AC lab)	12:30 P.M. to 2:00 P.M.	Day 2	Round 3
4.	Matlab master	Prefab M-01 to M-05	10:00 A.M. to 11:00 P.M.	Day 1	Round 1
		Prefab M-01 to M-05	3:45 P.M. to 4:45 P.M.	Day 1	Round 2
		A3 – ST-04 (DSP lab)	9:30 A.M. to 10:30 A.M.	Day 2	Round 3
5.	Bomb detector	Prefab L-01 to L-09	10:45 A.M. to 11:15 P.M.	Day 1	Round 1
		Prefab L-01 to L-04	4:45 P.M. to 5:45 P.M.	Day 1	Round 2
		Out door	3:30 P.M. to 6:00 P.M.	Day 2	Round 3
6.	Circuit explorer	Prefab O-05 to O-12	11:00 A.M. to 12:00 P.M.	Day 1	Round 1
		Prefab L-06 to L-10	5:45 P.M. to 6:45 P.M.	Day 1	Round 2
		Digital Electronics lab (A3)	2:00 P.M. to 3:30 P.M.	Day 2	Round 3
7.	Technical talk	Prefab M-01 to M-05	12:30 P.M. to 1:30 P.M.	Day 1	Round 1
		A3- SG-08	8:00 A.M. to 9:30 A.M.	Day 2	Round 2
8.	Case study		One day time	Day 1	Round 1
		A3- G-09	Submit before 12:00 P.M.	Day 2	Round 2
MECHANICAL EVENTS SCHEDULE					
S.NO.	**Event title**	**venue**	**Time**	**Day**	**Round**
1.	Action-Reaction	A3 block ground	10:00 A.M. to 4:00 P.M.	Day 1	Round 1
				Day 2	finals

2.	Paper presentation	A3- ST-02 to ST-05	9:00 A.M. to 5:00 P.M.	Day 1	Round 1 &Round 2
				Day 2	finals
3.	Change the industry	A3- ST-07, 08 & 09	9:00 A.M. to 12:00 P.M.	Day 1	Round 1& Round 2
				Day 2	finals
4.	Technical talk	A3- SS-01,02&03	9:00 A.M. to 12:00 P.M.	Day 1	Round 1& Round 2
				Day 2	finals
5.	Design your dreams	A3- SS-05(submissions)	9:00 A.M. to 12:00 P.M.	Day 1	Round 1
		A3 – SS-05		Day 2	finals
6.	Think and Draw	Drawing lab (A4)	9:00 A.M. to 5:00 P.M.	Day 1	Round 1& Round 2
				Day 2	finals
7.	Mechanica	Mechanical sessioning lab(CG-08)	9:00 A.M. to 3:00 P.M.	Day 1	Round 1 & Round 2
				Day 2	finals

MME EVENTS SCHEDULE

S.NO.	Event title	venue	Time	Day	Round
1.	Paper presentation	A2- TS-01 & TS-02	10:00 A.M. to 12:00 P.M.	Day 1	Prelims
				Day 2	finals
2.	Metallography	A2 (PM lab)	2:00 P.M. to 3:00 P.M.	Day 1	prelims
				Day 2	finals
3.	Poster presentation	A2 block	3:30 P.M. to 5:00 P.M.	Day 2	submission
4.	Metal tracking	A2- TS-04 & 05	9:00 A.M. to 10:00 A.M.	Day 1	Prelims
			4:00 P.M. to 5:00 P.M.	Day 2	finals

MANAGEMENT EVENTS SCHEDULE

S.NO.	Event title	venue	Time	Day	Round
1.	Start ups	A3 ST-09	One day time	Day 1	Round 1
			Before 12:00 P.M.	Day 2	Submission
			10:00 A.M. to 11:30 A.M.	Day 1	Round 1

2.	Business quiz	A3 ST-01 to ST-04	2:30 P.M. to 4:00 P.M.	Day 1	Round 2
			10:00 A.M. to 12:00 P.M.	Day 2	Round 3
3.	Add colors to your life	A3 ST-09	One day time	Day 1	Round 1
			Before 12:00 P.M.	Day 2	Submission
4.	Product launch	A3 ST-09	One day time	Day 1	Round 1
			Before 12:00 P.M.	Day 2	Submission
5.	Case study	A3 ST-09	One day time	Day 1	Round 1
			Before 12:00 P.M.	Day 2	Submission
6.	Idea to impact	A3 ST-09	One day time	Day 1	Round 1
			Before 12:00 P.M.	Day 2	Submission
7.	Eco friendly business product	A3 ST-09	One day time	Day 1	Round 1
			Before 12:00 P.M.	Day 2	Submission

ROBOTICS EVENTS SCHEDULE

S.NO.	Event title	venue	Time	Day	Round
1.	Holo race	A3 ground	8:00 A.M. to 10:00 A.M.	Day 1	Round 1
			5:00 P.M. to 7:00 P.M.	Day 1	Round 2
			8:00 A.M. to 10:00 A.M.	Day 2	Final
2.	Arm rover	A2 ground	8:00 A.M. to 10:00 A.M.	Day 1	Round 1
			5:00 P.M. to 7:00 P.M.	Day 1	Round 2
			8:00 A.M. to 10:00 A.M.	Day 2	Final
3.	Robo cricket	A3 ground	8:00 A.M. to 10:00 A.M.	Day 1	Round 1
			5:00 P.M. to 7:00 P.M.	Day 1	Round 2
			8:00 A.M. to 10:00 A.M.	Day 2	Final

4.	Line follower	A3 first floor	8:00 A.M. to 10:00 A.M.	Day 1	Round 1
			5:00 P.M. to 7:00 P.M.	Day 1	Round 2
			8:00 A.M. to 10:00 A.M.	Day 2	Final
5.	Arcade run	A3 first floor	8:00 A.M. to 10:00 A.M.	Day 1	Round 1
			5:00 P.M. to 7:00 P.M.	Day 1	Round 2
			8:00 A.M. to 10:00 A.M.	Day 2	Final
6.	Speech controlled robot	A3 first floor	8:00 A.M. to 10:00 A.M.	Day 1	Round 1
			5:00 P.M. to 7:00 P.M.	Day 1	Round 2
			8:00 A.M. to 10:00 A.M.	Day 2	Final
7.	Jal vahan	A3 ground floor	8:00 A.M. to 10:00 A.M.	Day 1	Round 1
			5:00 P.M. to 7:00 P.M.	Day 1	Round 2
			8:00 A.M. to 10:00 A.M.	Day 2	Final

OPEN TO ALL EVENTS SCHEDULE

S.NO.	Event title	venue	Time	Day	Round
1.	Technical quiz	A4 ground and first floor	10:00 A.M. to 11:00 A.M.	Day 1	Round 1
		A4- CG-01	2:00 P.M. to 4:00 P.M.	Day 1	Round 2
		A4- CG-01	10:00 A.M. to 12:00 P.M.	Day 2	final
2.	Mind game puzzle	A4 CG-01, 02 & 03	11:00 A.M. to 12:00 P.M.	Day 1	Round 1
			4:30 P.M. to 5:30 P.M.	Day 2	final
3.	Mathematica	A4- CG-04,05,06	8:30 A.M. to 9:30 A.M.	Day 1	Round 1

		& 07	8:30 A.M. to 9:30 A.M.	Day 2	finals
4.	Rubix cube	A4-CG-08	1:00 P.M.to 3:00 P.M.	Day 1	All rounds
5.	Online and offline gaming	A4- CF-01& 02	3:00 P.M.to 5:00 P.M.	Day 1	Round 1
			3:00 P.M. to 5:00 P.M.	Day 2	final
6.	Photography submission	A4- CF-05	9:00 A.M. to 11:00 A.M.	Day 1	Submission
7.	Technical Jam	A4 CF-07	8:00 AM to 12:00 PM	Day1	Round 1
			1:00 PM to 2:00 PM	Day 1	Round 2
			3:00 PM to 4:00 PM	Day 1	Final
8.	Elocution	A4 CF-10	8:00 AM to 12:00 PM	Day2	Round 1
			1:00 PM to 3:00 PM	Day 2	Round 2
			3:00 PM to 5:00 PM	Day 2	Final
9.	C Programming Mind	A4 CT-01	8:30 AM to 12:00 PM	Day 1	All Rounds
10.	Test your Vocab	A4 CT-01&02	1:00 PM to 4:00 PM	Day 2	All Rounds

WORKSHOPS

S.NO.	TITLE	VENUE	TIME	DAY
1.	GLIDER WORKSHOP	Seminar hall at lab complex	9:00 A.M. to 3:00 P.M.	Day 1
2.	ENGINE THESIS	WORKSHOP	9:00 A.M. to 3:00 P.M.	Day 1 and Day 2
3.	3D -ANIMATION	Prefab K1 to K-4	9:00 A.M. to 12:00 P.M.	Day 1 and Day 2
			1:00 P.M. to 5:00 PM	
4.	ANDROID app	Prefab K-5 to K-10	9:00 A.M. to 12:00 P.M	

	development		1:00 P.M. to 5:00 PM	Day 1 and Day 2
5.	PROGRAMMING LANGUAGES (PYTHON)	Prefab O-1 to O-4	9:00 A.M. to 12:00 P.M 1:00 P.M. to 5:00 PM	Day 1 and Day 2

RGUKT

CHEMICAL-EVENTS

Paper presentation

- Green Tech- Way to Sustainable Development
- Multiphase Flow and Complex Fluids
- Polymer Science, Advance Materials and Membranes
- Catalysis and Chemical Reaction Engineering
- Bio-fuels and Bioengineering
- Conventional and Non-Conventional Energy
- Process Control and Optimization
- Environmental Engineering and Interfacial Phenomena
- Thermodynamics, Molecular Simulation and Nano Sciences

CHEM GALE:

ABOUT:

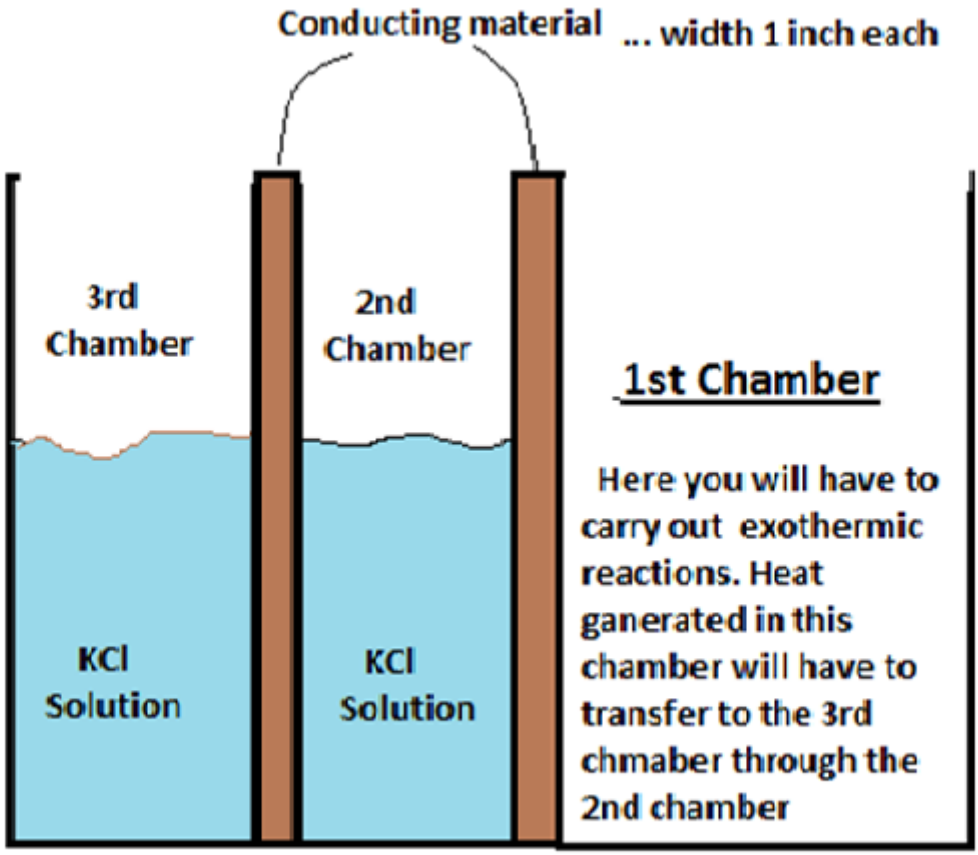
Energy is a scarce commodity and expensive resource. In future, we see that energy will become scarce. It will be a source of friction in human affairs unless the supply of energy is increased or optimized. Thus, in promoting today's technology CONSERVATION and OPTIMIZATION will be an asset for upcoming generations.

CHEM GALE is a platform which pushes one to conserve and optimize. This event requires creativity and focused thoughts that lead to the judicious use of 'ENERGY'.

PROBLEM STATEMENT:

- The setup should consist of three chambers. Total base area of the set up should not exceed 2ft2.
- In the first chamber, you are required to produce heat using a chemical reaction(obviously exothermic).

- The participant will be provided with KCL solution (at approx. 12 o C) to fill the second chamber i.e. the middle chamber and the other last chamber. Capacity of each of these two chambers must be at least 1 lt.
- Minimum of 1 inch gap should be maintained uniformly between all the chambers (i.e. between 1st and 2nd; 2nd and 3rd). And it must be filled with a conducting medium. The selection of conducting medium depends on you.
- The challenge of the event lies in effectively transferring the heat from first chamber to the third one through the second one.



Side view of the expected set up.

RULES & REGULATIONS:

- Usage of fuels, hydrocarbons, electricity (battery cells) in the heat production is strictly not allowed.
- It is required that no hazardous or explosive environment is created.
- Heat is to be produced within the chamber and no external heat source is allowed.
- Duration of the event: 30 Minutes.
- Equipment setup and chemicals for heat source must be brought by the participant. Only aq. KCl solution will be provided.

- There should not be any intermixing of solutions in the apparatus. In case of such suspicion the team may be asked to open the whole apparatus to prove no mixing, failing in which will lead to disqualification.
- Amount of KCl provided will be 2 litres. One litre of KCl each in the second and third chamber.
- Open for all the branches.
- Maximum number of students per team is 3.
- Event manager decision is final.

Team which doesn't follow the rules and regulations will be ELIMINATED.

JUDGING CRITERIA:

- The team which raises the temperature to the maximum in the last chamber will bag the first prize. Importance will be given to the temperature rise in the second chamber also.
- The means of heat synthesis.
- Effectiveness and Heat Transfer mechanism.
- Equipment and its design.
- Eco-Friendly.
- More Economic.

CHEM GLOSS:

Introduction:

"A lot of people in our industry haven't had very diverse experiences. So they don't have enough dots to connect, and they end with very linear solutions without a broad perspective on the problem. The broader the one's perspective, the better the design they will have."- Steve Jobs

But the broader perspective doesn't come as a cakewalk. It is achieved by hard working, innovative thinkers and pioneers who overcome the problems of industries. As an engineer, we too need to have firsthand experience on how industry devises its solution. With this motive, "Chem gloss" brings to you an Industry Defined Problem which will get you close to the working and thinking of an Industry. A case study is presented which would require you to find the optimized solution with proper strategies. You are given a chance to apply your technical skills and come up with the "right solution".

CIVIL- EVENTS

1. CONCRETING CONCRETE

Concrete is the second most consumed product on earth, after water. Concrete is a versatile construction material which explains why concrete can be used to build Sky scrapers, bridges, dams, airports, highways and more.

In this event one has to cast a concrete cube which can give desired strength, better slump and compaction factor value.

2. PAPER PRESENTATION

-Boggle the minds of your spectators with your presentations

An arena to expose your talent and in-depth knowledge on your interested areas. Mesmerize and magnetize your innovative presentation.

Topics:-

1. Ground Improvement Techniques
2. GIS/remote sensing for natural resources management
3. Modern construction materials and techniques
4. Solid and Liquid waste management
5. Green Concrete
6. Under Water Turbines

3. TUMULT FREE CITY

In the modern era, a contemplative problem of traffic hassle is excessively leading to clashes in the society. Among the difficulties are freight vehicles, dwelling for citizens. Here, the participants will be provided with a map of the city suffering from traffic problems and it's upto them how they shape their dream city.

4. CONCEPTION OF MULTI-PIANO

The major challenge faced by today's Indian industry - Small & Medium Enterprises in particular is space for setting up. These industries form the back bone of economy but land being a scarce commodity there is not much progress in these enterprises. The solution lies in development of Multi-storey Standard Design Factory. Thus the goal is to define some design procedures and project plans for the establishment of this Multi-storey Factory.

5. POSTER PRESENTATION

We provides excellent opportunity for undergraduates to elucidate their ideas and think beyond boundaries, giving a platform for undergraduates to present innovative and unorthodox ideas which may not be feasible presently, but may become a reality in time to come.

Topics:

1. Waste Water management
2. GPS (global positioning systems) and its applications.
3. Ground water extraction
4. Submerged Floating Tunnel
5. Pre-stressed concrete products and its applications
6. Metro rail (Soil Testing)
7. Green Buildings
8. Significance of Nanotechnology in Construction

6. TECHNICAL QUIZ

In this event the participant's technical ability in Civil engineering stream will be tested. For all the quiz enthusiasts, we are organizing a technical quiz contest. The contest will involve questions related to civil engineering field.

7. AERIAL TRAMLINE

Our aim is to prepare a rope system. We have to design and construct two self-supporting vertical structures of different heights so as to support the string of the ropeway.

8. BEAT-D-EUCLID

Imagination is the greatest gift man has got, but unfortunately we haven't been gifted to perceive others' imaginations. Therefore you will have to show what you feel is vertical is actually vertical. Beat-d-Euclid is an on-spot event which tests the perception and modelling abilities of the participants. It is the 2d visualization of a given 3d structure in a given time span. Knowledge of AutoCAD is required. The participants will have to complete the task within a given time limit.

9. BRYCG CONCEPTION

In our real life we are come across various types of utilitarian bridges. Participants will design and fabricate their own bridge and test for the maximum load. Now you have a chance to design a most innovative, efficient and fabricated Truss bridge. The bridge model made by them can take up to 1000 times the self weight. You don't believe that is possible? Participating in our event will make you believe that it is possible!

10. DESIGN OF AUDITORIUM BLOCK

Design an auditorium block in a given area, to accommodate 6000 people. By using software's that are needed. The design should be in 3d.

CSE - EVENTS

1.CTF(Ethical Hacking Contest):

CTF is a challenge-based secure coding contest which will give the hands on experience on solving different type of challenges.

i) It will create awareness about information security
ii) Participant Requirements:-
    i) Basic knowledge on Linux
    ii) Web technologies
    iii) Programming languages

CTF Requirements:-

i) Unrestricted INTERNET connection
ii) Laptops for individual team.

2.Logic wits

Round 1:- C-programming & Aptitude

The round contains 40 questions

15-aptitude, 25-C-programming

Round 2:-Logical & Data structure

The round contains logical questions and some questions on Data structures.

Round 3:- case study

This round contains real time problems. Participants have to give respective solutions to particular problems.

3.BRAIN BOX

1ST ROUND:

- Aptitude test (Picture Reasoning and logical reasoning …..etc)

2nd ROUND: (Crack the password)

- Here we provide the login form and we give the user name. Participant should find out the password.
- For that we provide the parts of the picture in random manner and participant arrange the picture in proper manner in less moves within the given chances.
- If participant succeeded then he/she done with their 2nd round.

3rd ROUND: (Capture the Key Word)

- Here we give some logical reasoning and arithmetic problems.
- If participant solve those problems then they will get an alphabet for every question.
- Finally if he/she arranges those alphabets in proper manner then the required answer will be the outcome.

Rules and Regulations:

- For each round time is limited so the participant should complete that round with in the given time.
- The person who completes the 3rd round in less time will be declared as winner of the game.

ECE- EVENTS

1. **Paper presentations:**

   VLSI design
   Artificial Neural Networks & Artificial Intelligence
   Satellite communications
   Wireless Communication Techniques
   Embedded Systems Design & Microprocessors
   Bluetooth Based Smart Sensor Networks
   Digital Image Processing
   Microwave engineering and broadcasting
   Innovative circuit synthesis and system design
   Application based sensors
   Wireless USB
   Recent advances in LED technologies
   Radiation effects on human life

2. **Circuit avenue:**

   Round1: Aptitude and Reasoning and questions on Basic electronics, network theory

   Round2: A circuit on paper will be given and the participants should make it on the breadboard. Elimination will be done based on time taken to implement the circuit.

   Round3 (Final Round): A problem statement will be given, participants are supposed to design a circuit for the problem and should implement it on breadboard. Both Time & Design accuracy are taken into account in judging criteria

3. **Digitrix:**

   Round1: Aptitude and Reasoning and questions on Digital Electronics…
   Round2: A circuit which contains errors will be given on the paper. The teams those identify maximum number of errors will be qualified for the next round.
   Round3: A problem statement will be given on digital circuits and based on the time taken by the participants for designing the solution and implementation on breadboard, the results will be declared.

4. **Multisim Master:**

   Round1: Aptitude and Reasoning and questions based on multisim basics

   Round2: A circuit printed paper will be given to the participants, they should implement the given circuit in multisim. Time and accuracy will be taken into account for judgement.

   Round3: A problem statement will be given. The participants should design and develop their circuit using multisim.

5. **Matlab/Scilab- signal Processing**

   Round1: Questions on basics and keywords of MATLAB.

   Round2: Basic questions on signal processing. Participants should perform the given task on MATLAB

   Round3: Generation of required signals. Question for this round will be announced onspot.

6. **Technical Talk:**

Round1: Questions on ECE

Round2(Final round):
A topic related to ECE department will be given to the participants on the spot. They should talk about the given topic in not more than 3 minutes. Effectiveness and content of the topic will be taken into account while judging.

7.Circuit casino:

Round 1:
This is screening round, and we will conduct an objective type of exam for the participants. All Questions are meant to test the Practical knowledge and Circuit solving skills of the participants. In this round the participants have to attempt the exam individually.

Round 2:
Eligible candidates for round 2 are divided into groups of one E3 and one E2 student before starting round2. And one of the people has to be at circuit solving table and other one is at some distance from it. We reveal the circuit for the second person and He have to make the first person to implement the circuit by giving hints…the teams who implement the circuit in less time are selected for third round..

Round 3:
This round checks the accuracy and speed of the participant towards solving the circuit. This round involves the concept of Cards game. The teams are arranged in proper way in the lab and table assigned for each group. First we distribute the 6 cards for each group and each card contains a circuit and that may be Analog or digital or pure passive network. First group have to solve one of the cards in two minutes. If they succeeded then no need of pass the card, Otherwise they have to pass the card to the next group that is right to them. And the second team also have follow the same procedure. And the process will continues. And the aim of each group is to collect 9 card(6 are given , extra 3 have to gain) and that too 3 of them are analog and 3 digital and 3 pure passive networks.. The team which gets the 9 cards mentioned above are winners. If nobody got in time we decide the winners on the basis of the cards and no of sets (set is consists of 3 same type of cards).

8.CIRCUIT EXPLORER:

ROUND1:
This is to test your logical ability, speed .In this round you will be given questions based on logical thinking .Top teams will be qualified for next level.
ROUND2:
This is to test your thinking power and circuit making power .In this round you will be given a circuit and you have to identify the wrong in that circuit .Top teams will be selected for next round.
ROUND3:
This is to test your theoretical knowledge in circuit solving. Here you will be given some circuits and logical questions (clues). You have to choose a character from answers you get by solving the logic question as they will be useful in finding result of your given circuit. (Eg. If answer is 2 then the character you have to consider is 2nd one). Using all those characters you have to find the word.

MME - EVENTS

1. METAL TRACKING:

   In this event the game master will drop various metals around campus. Players will have stipulated time to locate those treasure troves.

2. ENTERPRISE & EXPERTIZE :

   Ready to articulate your thoughts. Rearing thrust your mental crafts. Test your knowledge in research field.

3. METALLOGRAPHY:

   Test your knowledge in identification of microscopic structures of various materials.

4. JUGGLE ROUND:

   It's a multitasking round. We will give a present research on the spot, give your thoughts and ideas.

5. PAPER PRESENTATION:

   Topics:

   1. Materials for green technology.
   2. Energy storage materials.
   3. Super conducting materials.
   4. Metal failure analysis
   5. Electronic, Optical & Magnetic materials
   6. Nuclear materials
   7. Extraction process
   8. Nano Science & Technology.

6. POSTER PRESENTATION:

   1. Micro-structural & Micro-chemical characterization of materials
   2. Magnetic materials & Devices
   3. Developments in protective coatings for metallic alloys
   4. Advanced materials & processing
   5. Principles & practice of TEM.
   6. Importance & Application of carbon Nano-tubes
   7. Electronic materials & its applications.

Mechanical - Events

Action-Reaction

Thrust is the water rocket event where you have the chance to show case your rocketry skills and your practical talent.

The purpose here is to design and manufacture a water Rocket. A water rocket is a type of model rocket using water as its reaction Mass. The pressure vessel-the engine of the rocket-is usually a used plastic soft drink bottle. The water is forced out by a pressurized gas typically compressed air. It is an application of Newton's Third Law.

Paper Presentation

Rapid Prototyping

Fluid Flow on outer surface of Vehicles

Green Manufacturing

Emissions in Automobiles

Hybrid Energy systems

Alternate Fuels

Change the Industry

The technology or modification in technology that can enhance the existing technology(in any field) or innovation of any new type. Your idea can change the Industry and company. Spot on Ideas.

Technical Talk

You need to talk about your selected topic for 5 min. And you will be selected based on topic and your speaking ability

Design Your Dreams

Are you passionate about designing your own vehicle. Now design your car of your own interest in any CAD. Best Design is awarded

Think & Draw

Now just sharpen Your Drawing & logical skills. Listen to the Task and draw the sketch (Includes Machine Drawing, Isometric Views).

Mechanica

Create a new mechanism with any number of links. Your Mechanism should have some physical structure and it should give some specified output motion. And the output motion should have some real time application.

The selected candidates have to Design and generate the animation of it in Altair Hyperworks Motion solve

Robotics Events

Holo Race:

INTRODUCTION:

A wired remote controlled robot should be made to complete the race in minimum time by avoiding obstacles.

TASK:

Participants should make a wired remote controlled robot. In arena, the bot should
hold/ roll the balls into holes. The holes may be located at any place in the arena with different points awarded. There will be obstacles in arena, the bot should cross the obstacles. Different paths will be provided with different points. It should complete the race in minimum time. Time is main judging criteria.

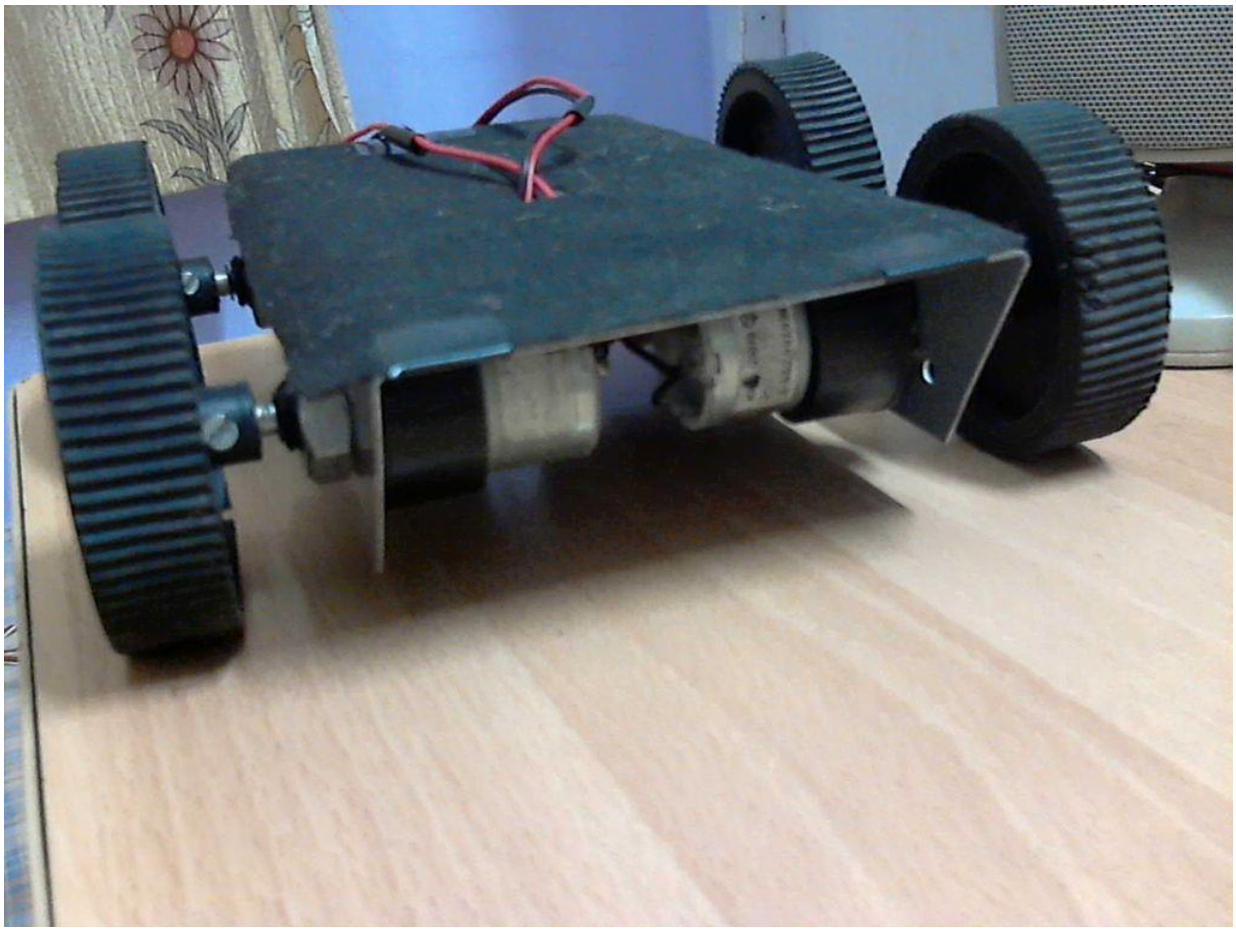
ARENA:

Arena may contain ups and downs, curves, bridges, holes and may be combination of these and check points also.

Path may be in the shape of RGUKT.

BOT SPECIFICATIONS:

Robot should be wired remote controlled.
Max. dimensions : 15*15*15



Arm Rover

Game:

It will take place in two stage: first will be Elimination Round and those selected will play in the Main Event. The bot has to

- Pick balls from block, pits and transfer it different pits/ boxes.
- Traverse over different terrains and complete the task.

Gameplay and Rules:

- Total time is 5 mins. You can take infinite number of re-tries, clock will keep ticking.
- In Elimination Round path will be straight and there will be no slopes, but it can be rough or smooth or both.
- The bot has to pick ball from the blocks (having different heights) and put them into the corresponding pits.
- There will be two check points. If the bot collects a ball which is before the checkpoint and fails to drop it into the pit and if the team desires to attempt it again, then they have to restart from the starting line. For the balls which are placed after the checkpoint, the bot have to start again from the checkpoint-both front wheels must be behind the line of check point before the restart. Time will not be stopped for the restart.

- The organizer will put back the dropped ball again on the respective block on the request of the team. Team members are not allowed to enter into the arena.
- The bot is allowed to carry only one ball at a time.
- Depending upon the no of participants, the judging committee will decide how many teams will qualify for main event.
- In Main Event the track will have one slope (less than 30degrees), terrain can be rough or smooth. It can also have balls in pits which the bot has to collect.
- In this there will be balls of different color which have to be deposited in the box of corresponding color.
- Total time provided for this event also is 5 min only.
- There will be blocks at different positions on which the ball will be kept, on slope and few balls will be kept on ground also. The points will be different for different positions.
- Two teams will play at a time and track specifications and positions of ball will be same for both.
- In main event also there will be two check points and it will have the same rule as given in the elimination round above.

Scoring and Judging:

Elimination round:

For each ball collected and deposited in the respective pits 20 points will be awarded, i.e. for 4 balls total points will be 80. Time provided is 5 min. Bonus points will be awarded for the bots which will complete the task in less than 5 min.

Main Event:

- For the ball placed on the block closer to the starting line, points allotted for them after depositing is 40.
- For the ball placed over the slope, points provided is 100.
- Point for the ball over the block placed beside the slope is 30.
- Ball on the block near the collecting box has 60 points.
- If balls are present in pits the points for them will be 50.

Total score= Total points+ Time left (if all the balls in arena is collected and deposited)

Bot Specifications:

1. Bot must not exceed 300mm x 300mm x 400mm as l x b x h in dimensions at all times.
2. The weight of the robot must not exceed 10kg.
3. The size of the robot can change during the match but it should not exceed the given limits.
4. The robot may be wired or wireless. In case of a wired robot, the wires must remain slack at all times during the Game.
5. The machine will be checked for its safety before the race and will be discarded if found unsafe for other participants and spectators.
6. The organizers reserve the rights to change any of the rules as they deem fit.
7. The machine must not be made from Lego parts, or any ready-made assembly kits. Readily available chassis layouts are not allowed. Any machine having a ready-made chassis will be disqualified.

Batteries and Power:

1. Each team must have their own batteries to power their bots.
2. The battery will be taken into consideration for the measurement to be made for the machine dimension and the weight.
3. Voltage must not exceed 24 volts between any two points.

Controls:

1. The bot must be completely manual.
2. Radio systems must have a way to change frequencies to prevent radio conflicts.
3. If you have any other control system, you must first consult with the coordinators.

Resources:

Grabbing Mechanism

ROBO CRICKET

To find the robot with the best skill in batting and bowling. The robot has to be specifically designed and built for this purpose. Batting and bowling are defined below.

Bowling: Bowling here means hurling the ball into a specified region using the robot.

Batting: Batting here means hitting the ball after being hurled by the bowling robot.

Details:

To design a manually controlled robot with the best skills in batting and bowling. Batting and Bowling are defined below:

Bowling: Bowling means the action of propelling the ball towards the wicket defended by a batsman.

Batting: Batting means the skill of hitting the ball to score runs or prevent the loss of one's wicket.

Note: Batting can be done in any form.

Testing Procedure:

The testing procedure will be in three rounds

- Bowling test
- Batting test
- One to One

Bowling test:

In this round, only bowling skill of the robot will be tested. The participant will be given limited overs to bowl at the target. The scoring criterion is how closely the ball hits the

target.

The maximum height of the target is 12cm, and the width of the target region will be 50cm with 5 equal divisions as shown in the figure. The score will be given based on the region of hit according to the points specified to the region as shown in figure.

Note: All the dimensions in figure are in cm.

Note: Points corresponding to red and green color are awarded only if the 1st bounce of ball falls in that region.

Batting test:

Here, the participant's robot will be bowled a fixed number of deliveries by our robot and the scoring criterion is the number of hits by the participant's robot.
Note: balls hitting the bat are only considered and remaining other cases will be considered as invalid in all rounds.

One to One:

Here, in each match, two teams will be playing which are selected according to their aggregate scores. Numbers of teams for this final round will be decided based on the number of teams participate. One robot will be batting and other participant's robot will be bowling in this round.

A fixed bowling region will be given and deliveries in those regions are only considered, and others will be given a negative score. The batting team will be allotted scores as follows:

- Six runs –if the ball directly crosses 300cms circle without bounce.
- Five runs-if the ball directly lands in region 2 (area between two circles) and crosses 300cms circle.
- Four runs-if the ball crosses 300cms circle.
- One run-if the ball touches the bat.

Note: only one of the above cases will be considered.

It is a limited over match. The bowler (bowling) team can stop the ball after a hit if they want; thereby reducing the score of other team. The final winner will be decided by repeating the same procedure till we end up with one team.

Specifications :

- Bat dimensions: length x width (15cmx6cm) (any thickness)
- Ball diameter: 3cm. (dancing ball)
- Robot dimensions: 50 x 30 x 30 (L x B x H) (in cm)
- Wicket dimensions: 12cm x 9cm

Bowling Region:

- First round: 50cm x 12cm
- Second and Third Rounds: 30cm x 12cm
- Field area in third round: A circle of 4 metres radius
- Maximum angle of inclination for ball:delivery: 10deg
- The distance between two wickets: 1.5mts

Materials Required:

1. 8 motors,(recommended: 2 high torque and medium rpm, 2 high torque and high rpm, 1 high torque and low rpm).
2. Bowling mechanism
3. Base plate of required strength and as per specifications
4. Bat (of any material as per specifications)
5. 12V battery
6. Switches and wires
7. Wheels

BOT MAKING:

- Attach wheels with motors to base plate.
- Fix the batting equipment to base plate.
- Fix the bowling mechanism to the base plate
- The size of robot should be within the specifications (50x30x30)
- Make proper connections to control robot (wired or wireless)

Rules:

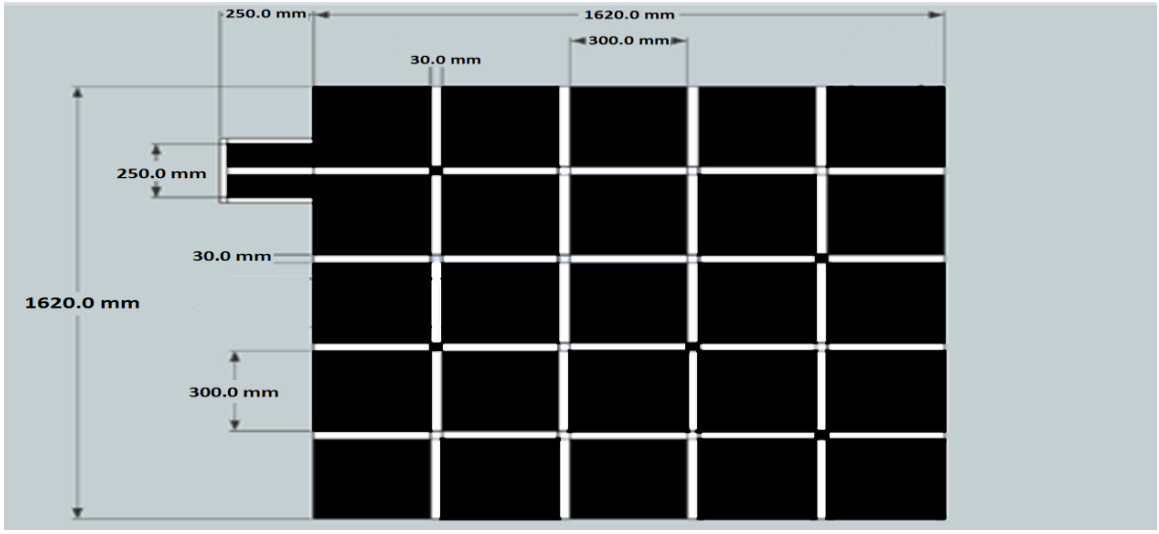
- No motor should have more than 200 rpm.
- Ball should reach the target without rolling.
- Electronic circuits in any form are not allowed.
- Bowling and batting mechanisms should be controlled with the remote only.
- Balls hitting the target are only considered and all other cases are invalid.
- Power Supply should be less than or equal to 15 volts.
- Violation of any specifications leads to elimination.
- A team may consist of at least 2 members and should not exceed more than 5 members. It is not mandatory for all the members of a team to be from the same educational institution.
- The students must carry valid student ID cards of their college which they will be required to produce at the time of registration.
- Teams may participate with only one robot. Only team members can operate the robot. Participants shall not be allowed to be part of more than one team.

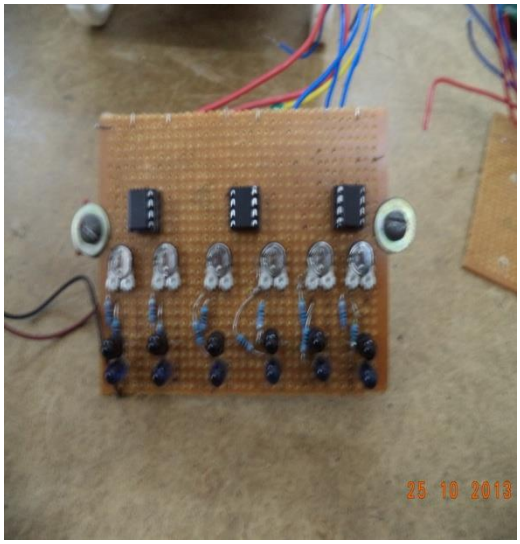
There is no restriction to the number of teams participating from same educational institute. Any change in rules and specifications will be informed as soon as possible.

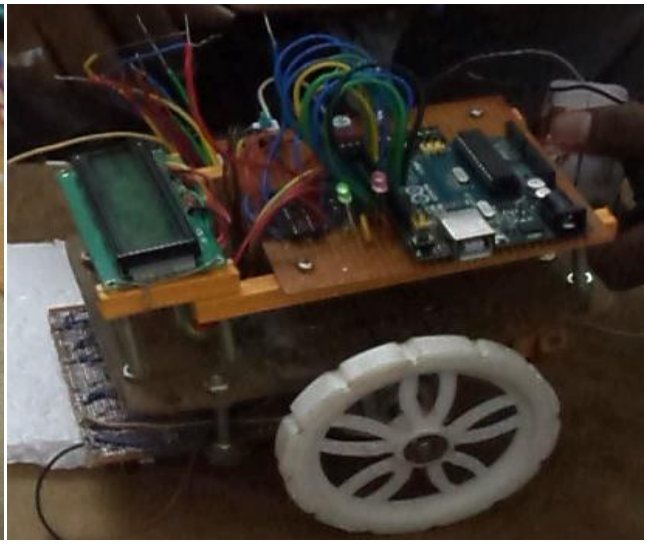
Arcade Run

Task :

In this event, a grid of paths and junctions shall be given to the partipants. Paths will be of white colour. Some junctions will have black colour and starting and end zones will be diagonally opposite. The bot should be completely autonomous. It should find all the black colored junctions in the arena and whenever it detects the black junction it should glow the LED. When it reaches the end zone it should show the total no. of black junctions it encountered in its path. If It shows all black junctions in the arena, then that team will be the winner. If more than one teams show the correct answer then the bot that completed the job fastest will be the winner







Bot Specifications Dimensions and Fabrication :

Autonomous Bot

1. Only one autonomous grid solving bot per team is allowed.
2. The autonomous bot must fit within a cube of dimensions 200mm x 200mm x 200mm (l x b x h) at the beginning of the game. 3. Bot must be started individually by only 1 on-board switch. However, a team may have separate on-board switch for restart.
4. Teams must use an on-board power supply.
5. The autonomous bot must be stable and must be able to stand on its own at the beginning. Bots not fulfilling this criterion will be disqualified.
6. During the run, the autonomous bot can expand itself provided it does not damage the arena in anyway. However, it is not allowed to leave anything behind or make any marks while traversing the grid. Any bot found damaging the arena will be immediately disqualified. The final decision is at the discretion of the organizers.
7. The bot should have 2 LED to confirm that it has reached the black node.

8. The autonomous bot should not separate or split into two or more units. All bots/units which are touching each other or are in the starting point will be considered as one bot.
9. Machine cannot be constructed using readymade Lego kits or any readymade mechanism. But they can make use of readymade gear assemblies. Violating this clause will lead to disqualification of the team.
10. The starting procedure of the bot should be simple and should not involve giving bot any manual force or impulse in any direction.

Controls

1. The bot must be completely autonomous.
2. It should not receive any input from outside the arena.

Power Supply

1. The machine must use an on-board electric power supply.
2. When using the electric power supply, the voltage at any point on an individual component must be lower than or equal to 24 V at any point of time during the game.

Gameplay :

1. The bot will start from the left most projection.
2. Teams must build an autonomous bot.
3. During the run the bot has to count the number of black nodes in the 5x5 grid. There will be any number of black nodes on the grid and position of black nodes will be declared just before the match.
4. Bot should have 2 LEDs(1 Red,1 Green) to display the detection of Black Nodes.
5. When the bot moves to any of the black node it has to show that by lighting one LED on that coordinate and it should continue glowing the led until next black node is detected .At that point it has to flip to another LED and switching off the previous one .Continue the same procedure till end of the run.
6. After the completion of task, the bot has to stop somewhere and it should display black nodes present in the arena on its LCD screen. LCD should display only two digit number.
7. The bot shall continue to show the total number of black nodes present after completion of the run on the LCD screen till the time organizer ask to switch it off.

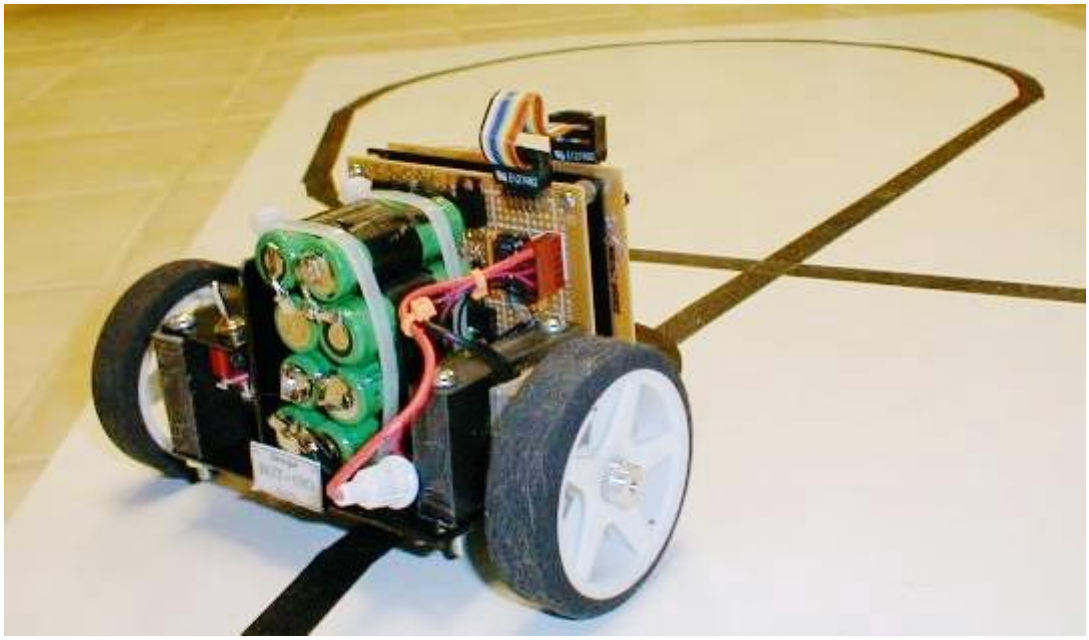
Game Rules :

The teams will have to submit their bot before the start of the competition. Only those teams which submit their bots will be allowed to participate. The bot will be handed back to the team during the time of their run. They'll be given 3 minutes to do any hardware changes if they wish. If the teams are found to alter their code after depositing their bots, they'll be disqualified. They are however allowed to make any other hardware changes. 1. At the start of the task, the bot will be placed at the starting point. Only 1 member from the team is allowed to be near the game field while starting the bot.
2. Starting Procedure – The bot must be started by only 1 on-board switch. The starting procedure of the bot should be simple and should not involve giving bot any manual force or impulse in any direction. Teams can have a separate on-board switch for restart. This switch should be shown before the run; to the organizers.

3. Timer will start when the organizer gives the signal to start.
4. Restarts – A maximum of 3 restarts will be given to a team. No penalty will be awarded for a restart. During a restart, the bot will have to be restarted by putting it back on the starting point and turned on again on the signal of the organizers. In a restart, the timer will not be set back to zero and will not be paused. During a restart, a contestant must not feed information about the grid to the bot. However, contestants are allowed to: adjust sensors (gain, position etc.) and make repairs. A contestant may not alter a bot in a manner that alters its weight (e.g. removal of a bulky sensor array or switching to lighter batteries to get better speed). The organizers shall arbitrate.
5. The LEDs should be strictly of high intensity and visible to naked eye.
6. Only 1 member of the team is allowed to handle the bot.
7. Participants are not allowed to keep anything inside the arena other than the bot.
8. Laptops/personal computers are not allowed near the arena. Other Wi-Fi, Bluetooth, etc. devices must be switched off. The organizers hold the right to check for these devices and their usage and disqualify the team.
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.

LINE FOLLOWER

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. The robot to complete the course in the shortest period of time while accurately tracking the course line from start to finish wins.



1. Size and Weight Limits: dimensional and weight limits for robots shall be strictly enforced. Robots must have passed inspection prior to competing.

2. Course Time: time is measured from the time the robot crosses the starting line until the time it crosses the finish line. A robot is deemed to have crossed the line when the forward most wheel, track, or leg of the robot contacts or crosses over the line.

3. Time Limit: a maximum of 3 minutes is allowed for a robot to complete the course. A robot that cannot complete the course in the allotted time shall be disqualified.

4. Timekeeping: time shall be measured by an electronic gate system or by a judge with a stopwatch, based on the availability of equipment. In either case the recorded time shall be final.

5. Autonomous Control: once a robot has crossed the starting line it must remain fully autonomous, or it will be disqualified.

6. Arena Edges: a robot that wanders off of the arena surface will be disqualified. A robot shall be deemed to have left the arena when any wheel, leg, or track has moved completely off the arena surface.

7. Losing the Line: any robot that loses the line course must reacquire the line at the point where it was lost, or at any earlier (e.g. already traversed) point.

8. Second Attempt: any robot that loses the line course and fails to reacquire it will be allowed a single reattempt. The robot must start the course again from the beginning, and if it loses the line course on its second attempt it will be disqualified.

9. Power of Officials: the decisions of all officials regarding these rules and the conduct of the event shall be final.

SOUND CONTROLLED ROBOT

My idea is that participants have to design a robot that is to be controlled by making some sounds.

In this we arrange some line with some turning and obstacles the robot has to follow the path.

The participant have to guide his robot to reach the destination within time and without error's.

The robot which complete the task without error's will be the winner

I have knowledge of the microcontroller's and their programming in both assembly and embedded c

Hardware

Participant has to design their own hardware without using any inbuilt kits

Participants can use micro controllers (any of 8051, avr, arm)

It should be only sound controlled

I thought most of the people in our college didn't have more knowledge on robotics and this is at basic level only.

People who have gone workshops in other colleges can participant in these type events

In order to this participant's must require knowledge of micro controllers, motors, and sound sensors.

We might find hardly very few people having knowledge in this area.

JAL VAHAN

Introduction:

In Sanskrit “JAL” means “WATER” and “VAHAN” means “TRANSPORT”. So “jal vahan” means “water transporter”.

Problem Statement:

Build a manually controlled robot capable of traversing an arena and takes water from source and transfer it to sink.

Task:

- Participants should build a wired/wireless remote control robot.
- Robot should collect water from one bucket (or something else) and transfer it to another bucket.
- You can design any mechanism to collect water and to transfer it.

Game will be in 2 rounds.

ROUND-1(Qualifying Round):

- In this round, there will be no water. It is just like a race with some hurdles, ups & downs, curves.
- Based on TIME taken to complete the race, Bots will be qualified for further Round-2.
- Starting & Ending positions will be automated, so that time will be calculated by computer.

ROUND-2(Final Round):

- In this round there will be 2 buckets, one will be with water and another will be empty.
- Robot should collect water from 1st bucket and transfer it to 2nd bucket in limited time.
- Winner will be decided by quantity of water in the 2nd bucket after end of the time.
- Robot may contain arm with any number of joints.
- It may collect water with bottle or mug or anything else. It is your choice only.

Bot Specifications:

- It may wired or wireless.
- Max. weight is 2 kg.
- Max. dimensions: 20*20*40 (l*b*h)
- Dimensions should not exceed the limit even during the game also.
- Bots found extra dimensions or extra weight will be eliminated.

Scoring & Judgement:

Round-1:

- In Round 1, different paths will be provided with different points awarded.
- There will be checkpoints each with 10 points.

Total points = (500-T)+P

Where T is time taken to complete the race(seconds),
P is Points awarded.

Round-2:

- In round-2, there will be no checkpoints. There may be ups& downs, curves.
- Based on QUANTITY of water transferred to 2nd bucket, winner will be decided.
- In case of any discrepancy, organizers' decision is final.

2. Course Time: time is measured from the time the robot crosses the starting line until the time it crosses the finish line. A robot is deemed to have crossed the line when the forward most wheel, track, or leg of the robot contacts or crosses over the line.

3. Time Limit: a maximum of 3 minutes is allowed for a robot to complete the course. A robot that cannot complete the course in the allotted time shall be disqualified.

4. Timekeeping: time shall be measured by an electronic gate system or by a judge with a stopwatch, based on the availability of equipment. In either case the recorded time shall be final.

5. Autonomous Control: once a robot has crossed the starting line it must remain fully autonomous, or it will be disqualified.

6. Arena Edges: a robot that wanders off of the arena surface will be disqualified. A robot shall be deemed to have left the arena when any wheel, leg, or track has moved completely off the arena surface.

7. Losing the Line: any robot that loses the line course must reacquire the line at the point where it was lost, or at any earlier (e.g. already traversed) point.

8. Second Attempt: any robot that loses the line course and fails to reacquire it will be allowed a single reattempt. The robot must start the course again from the beginning, and if it loses the line course on its second attempt it will be disqualified.

9. Power of Officials: the decisions of all officials regarding these rules and the conduct of the event shall be final.

Open to all branches

Technical Quiz

For all departments, 6 per team, Only for E2,E3,E4

A Quiz to check out you knowledge on latest technological advancements and present trends.

Mind Game (Puzzles)

Fun Games Like Sudoku and Mines and other puzzles games that can check the alertness in you.

Mathematica

It is an event where only one member can form a team and 3 rounds will be organized where in each round different types of questions from engineering mathematics will be given to the participants.

Rubix Cube (3*3/4*4):

This event consists of the two rounds prelims and finals .In prelims an individual is given an opportunity to set any one color in the specified time and screened off on that basis.

The screened individuals is allowed to participate in finals where an individual who set maximum sides in the given time is declared the winner.

Offline/Online gaming:

An event where you can play your favorite games like counter strike, Moto GP.e.tc…

Brain Box:-

1st Round:

Aptitude test (Picture Reasoning and logical reasoning….. etc.)

2nd ROUND: (Crack the password)

Here we provide the login form and we give the user name. Participant should find out the password.

For that we provide the parts of the picture in random manner and participant arrange the picture in proper manner in less moves within the given chances.

If participant succeeded then he/she done with their 2nd round.

3rd ROUND: (Capture the Key Word)

Here we give some logical reasoning and arithmetic problems.

If participant solve those problems then they will get an alphabet for every question.

Finally if he/she arranges those alphabets in proper manner then the required answer will be the outcome.

Rules and Regulations:

For each round time is limited so the participant should complete that round with in the given time.

The person who completes the 3rd round in less time will be declared as winner of the game.

Innovative ideas:

Idea To Impact:

Any New idea which can change the near future in any field like Technology, Industry, etc.. are accepted and awarded.

Product Launch:

Participants have to come up with innovative advertisement and promotional ideas to perceive consumers to buy a product.

Photography:-

This is a platform to show off your photography skills by capturing the events happening at techfest. Particpant is required to submit the total report on last day and the Best report will be awarded.

Chess:-

All chess maniacs can grab this opportunity to show off that you're the braniac around here.

JAM(Techincal):-

An event to prove that a minute is enough to indulge into the audience what you want to express.

Elocution:

Speak out your mind on a pre-assigned topic. Your presentation skills, thoughts, Fluency will make your way to the top.

Programming skills ("C"):-

A program where a person has to prove his programming skills in C language for a given program.

Eco-friendly business product:-

Bring in a product which fulfills its main objective and at the same time doesn't harm the environment and go out with appreciation and attractive prizes.

Test your "VOCAB"

A group of events to which will check your verbal ability and your fluency with English. Spell-bee, Word-building are some of the attractions.