PHASE SHIFT 2019

ELECTRICAL AND ELECTRONICS ENGINEERING

TEAM

HEAD OF THE DEPARTMENT
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Make-a-thon

EVENT DESCRIPTION

There's a few that possess the mettle and maven for a race against time. Engage on a 36 hour journey to innovate ,design and discover.

RULES AND REGULATIONS:

- It will be a 36 hour event that will happen in both days of Phase Shift.
- Problem statement will be given to the participants by the industry.
- Participants have to submit the solution 2 days prior to the Phase Shift. It will be evaluated and the best ones will be selected.
- The 6 selected teams will get a chance to implement their solution during the 36 hrs.
- The winners will be given the decided cash prize and get a chance to intern with ELECTRONO SOLUTIONS.
- All participants will get e-certificates
- The winners and the runner-ups will get printed certificates with company logos
- No of people in one team: 2 to 3
- Registration: Rs. 200 per team
- Winner : Rs 2000 + internship offer by Electrono Solutions.
- Expected Footfall: 6 teams for the final round , max 30 teams for idea submission
- Date: 14th and 15th September
- Time: from 9:00 am to 3:00 pm next day
- Venue: Measurements Block, PG block 1st floor (Industry Collaborator: Cymbeline)
- Food and refreshments will be provided by the hostels.

Tech-Junk

- 1st round would be an exercise to win virtual money
  2nd round would be a 4.5 hour event where participants would have to use the virtual money they've won and buy components and build their final model. Participants will be given internet access for this round.Participants will be judged based on:-
  1.Complexity of the model.
  2.Relevance to the theme.
  3.Percentage of E-waste used.
- Rules :-
  No internet access in the first round
  Participants will be given 5 mins to present their models
  Laptops have to be brought by the participants
  4.Each team will be provided with a list of components and their respective costs.
  Judges decision is final
  5.Each team gets a total of 4.5 hours to discuss, buy components and come up with a working model.
  6.Judges decision is final
- Registration Fee:-150/team
- Team of 2-3
- Prize: 1st prize:Internship , 2nd Prize:1000 INR
- 15-18 teams
- Venue Requirements:- 6006

(Industry Collaborator: Meatech for all)

ARE YOU AN ARDUINO NINJA?

Bring out your katanas and put your Arduino skills to test.

This event consists of two rounds that will test the participant's Arduino and problem solving skills pertaining to the theme 'Energy and Sustainability'

ROUND 1 : The participants will compete in an eliminator round.They will be given a sequence of tasks to execute on the Arduino. Top 4 teams to complete the tasks move on to the next round. Tasks:(led blinking patterns/buzzer patterns)

ROUND 2 : The participants will have to build a prototype of a system that can be made more 'energy efficient' using sensors and Arduino. The participant will roll a die and pick his sensor from a bucket of that he can use in his prototype. Other necessary components will be provided.

- Teams of 2
- Registration Fee: 150 INR/Team
- Prize Money: 1st - 1500 INR ;2nd-800
- Date:15/09/19
- Timings-10:00-15:00
- Venue-Measurements Lab
- Footfall-30 participants

RULES OF THE EVENT:

1. Participants will have to bring their own laptops.
2. Participants cannot use the internet for round 1
3. Top 4 teams proceed to round 2

PLAN P

ROUND 1: You think only coders can debug? Should the medicos be that proud of debugging people? Come, let us prove them all wrong. Presenting Electrical Debugging, where the EEE geeks bring out their debugging powers.

ROUND 2: Tired of the 'P's around you - Plastic, Pollution and People. It’s time to turn all of it into a viable source of energy. Coz why not? One day you might use plastic to power your car or just dance to heat a building.

- **RULES OF THE EVENT:**

1.The first round consists of practical debugging of the circuits.

2. Use of internet is not allowed in the first round. However, internet can be used for a maximum of 30 minutes in the second round.

3.Each team will have to bring their own laptops to prepare the presentation (if any) for the second round.

4.Judges decision is final.

- Registration fee: 100 INR/Team
- Teams of: 2
- Prize money: 1st - 1500 INR/Team ; 2nd - 1000 INR/Team
- Expected footfall: 30
- Venue: Measurements lab & 6th floor EEE classroom (with projector)

WEEK TO PEAK

Students are supposed to go to the industry and meet company officials (any one of the eight) and talk to them about INDUSTRY 4.0 and get the problem statement.
Work on the problem statement till the Phase Shift (Sep 14).
Round 1: A panel discussion between the 8 industry officials and students. (Q & A round)
Round 2: A group discussion between students which will be judged by the company.
Round 3: Solutions of the problem statement they got from the industry (in the form of a working model or prototype)

- Registration Fee: 150-200
- Team of:
- Prize Money :1st Prize=3000 INR, 2nd Prize=2000 INR
- Expected Footfall: 30
- Venue Requirements :

(Industry Collaborator: Electrono)

PSYCHIC'S SURVIVAL

•E**VENT DESCRIPTION:** Do u think your PSYCHIC skills are great? Come unlock the psychic in you to solve some outrageous real world problems in energy and sustainability.

• **RULES:**

1. Eliminator round: Participants will be made to play a game called "PSYCH" where in their knowledge regarding to energy and sustainability will be checked through various questions. They get points for guessing right, and for each other players they PSYCH! into choosing their fakes.
Round 2: based on the points obtained in previous round top 10 teams gets a chance to solve a problem statement that is related to current situation in the field of sustainable energy to which they have to give a solution write up on a POSTER.
Round 3: Top 5 creative poster will be selected whose teams get to present it to the judges panel. where they explain it as to how their method is efficient compared to the already existing methods. The two most creative teams with convincing solutions bag the prizes.
2. Top 10 teams of 1st round qualifies to second round in which top 5 teams get to present their ideas in the last round.Internet usage in 1st round is not allowed. Solution write up should be in specified format only. Coordinators and judges decision is final.

•**REGISTRATION FEE:** 100 INR

•**TEAM OF** 2

•**PRIZE MONEY :** 1000 INR(1st Prize), 700 INR (2nd Prize)

•**EXPECTED FOOTFALL:** 20 - 30

•**VENUE REQUIREMENTS:** 6005, PG Block 6th floor

Electro Shuffle

ROUND 1

- The first round will require the participants to find and circle the electrical components that are hidden among other objects on a sheet . They will then have to write down the names of these components and each name will have certain letters circled. On rearranging all of these letters from each name, they get a word which is their clue to the next round.

ROUND 2

- They'll have to figure out a phone number . The 10 numbers of the phone number can be obtained by solving adders , multiplexers , logical gates , colour coded resistors and circuits and so on...

ROUND 3

- In this round the participants have to solve kmaps to get a 8 bit binary number which should be converted to form a letter. These letters then form a word. The number of Kmaps to be solved will be same as the number of letters in the word.

- The fastest to text the correct word to the correct phone number WINS!
  Reg fee: 50 (individual) 1st Prize: 1000 2nd prize: 500

Electric Vehicles Workshop

- Event Description : Electrical Vehicles workshop conducted by a resource person from Ather Energy and our Alumni. Ather Energy is an Indian Electric Vehicle Company and has also established electric vehicle battery charging infrastructure AtherGrid.
- In the workshop our speakers will teach about different types of motors used by Tesla, ather ,reva and also about selection of different types of batteries and their cooling system in Electric Vehicles.
- The participants will be taught about the technicalities of the EV(Mechanical, Electrical, Electronics) and also aesthetics of EV's i.e. design.
- Expected Footfall 20-30 participants.
- Registration fees INR 50.
- Venue Requirements :
  A class room with projector 6001.

Workshop on Solar energy conducted by Cares Renewables

- Event Description: Workshop conducted by Cares Renewables regarding the selection and design of solar panels followed by demonstration of the use of equipment present in the Centre of excellence of renewable energy.
- Registration fee: Rs. 150 per head
- Expected Footfall: 30-40 people
- Venue Requirement: 6008

Workshop by DesignTech on designing Electric Machines

- Event Description: Workshop conducted by DesignTech regarding designing of electric machines in a 3D designing software developed by DesignTech.
  The students attending the workshop can take part in a follow up event on the next day which will require them to utilize the skills developed during the workshop to showcase their innovative skills.
- Registration fee: Rs. 150 per head
- Expected Footfall: 30-40 people
- Venue Requirement: Computer lab with good systems i3 or above, 8GB RAM and LAN connection

PHASE SHIFT

THANK YOU!