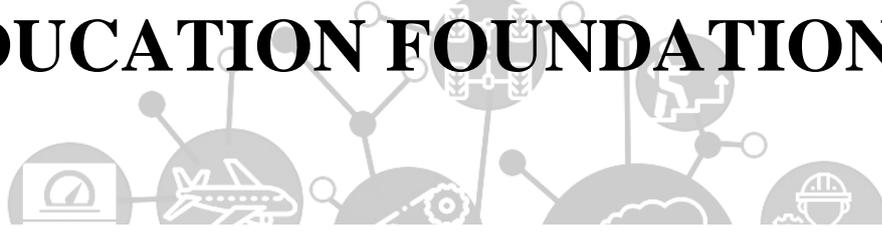


# BHAGWAN MAHAVIR EDUCATION FOUNDATION



**अव्ययम्**  
*Knowledge Infinity*  
**शेराड**





# (1) Town o planning:-

- **Price:-120/-**
  - **Maximum members per team:-4**
- Area:- 1 km sq. (1000mX1000m).
  - Scale:- 1cm=20m & 1:2000.
  - Pop:- 3000 to 4000.
  - Road network:-
    - Rectangular street system.
    - Rectangular with diagonal street system.
    - Concentric street system.
    - Radial street system.
    - Combination of radial and rectangular.
  - Residential:- 50% (Raw house, Apartment).
  - Commercial:- 5% (shops & walls).
  - Transportation:- 22% (Road network).
  - Public building:- 8% (Hospital, school & Police station).
  - Recreational:- 15% ( Garden & Play ground).

## (2) Dam O Mania:-

- Price:-100/-
- Maximum members per team:-4

**Problem Statement:** Earthen dam model made of sand & gravel, clay.

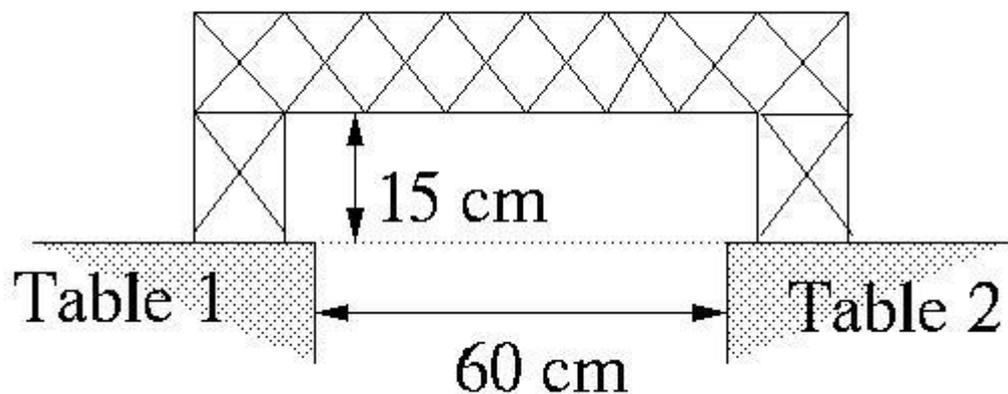
**Maximum number of persons per team:** 4

### Rules

- All the materials will be provided by us.
- Maximum height of dam : 20 cm
- Slope at U/S = 2:1
- Slope at D/S = 1.5:1
- Intermediate portion must be made of clay, for other part of dam you can use sand or gravel or both.

### (3) Bascule bridge:-

- **Price:-80/-**
  - **Maximum members per team:-4**
- **Building Materials:**
1. Popsicle sticks.
  2. favicol
- **Dimensions:**
1. Min Span Length - 1m - min. There will be a 1 meter "gap" which must be spanned by the bridge.
  2. Max Span Width - 10 cm - min.
  3. Min Span Height - 10 cm - min. There must be 15 centimetres between the table surface and the lowest point on the bridge span.
  4. **Rule update #2** Diagram presented for clarification:



5. The bridge must be able to stand on its own.
  6. The bridge must be able to support the load at the loading points. There will be one loading point at the centre of the span.
  7. No limit on use of pop
  8. sticks
  9. Max. 3 pop sticks should be overlap other than joints.
- **winning criteria:**
1. The greatest load prior to failure will be a bridge's capacity.
  2. The capacity divided by the bridge mass will be the bridge's score.
  3. The bridge with the highest score wins the event.

## (4) Pirate battle:-

- Price:-60/-
- Maximum members per team:-4

**Problem Statement:** To build a boat that can sustain external weight without getting submerged.

**Maximum number of persons per team: 4**

### Rules:

- Width 20-25 cm, -25 cm, length 30-50cm.
- Loading at first will be same for all & it will increase gradually until submerged condition.
- Load for evaluation will be the ultimate load at which boat gets submerged.
- Position of loading will be of your choice.
- Insulation of boat will be done after evaluation of the weight of boat.
- Materials allowed: card board & favigol.

**Winning criteria:** Ratio = Total load/self weight of boat

## (5) Auto Cad (Civil):-

- **Price:-50/-**
- **Maximum members per team:-1**

**Problem Statement:** Plan of action will be explained right at the time of competition

**Rules:**

- There will be two different rounds.
- Student who passes the rapid drafting round will be selected for 2nd round.
- Time for 1st round will be 30 minutes.



## (7) Robo Race:-

- **Price:-200/-**
- **Maximum members per team:-4**
- One team should have maximum 4 participants.
- Each team is allowed to have only one robot.
- The voltage between any two points must not exceed 12V at any point of time.
- Maximum dimensions - 30cm ×30cm×30cm (L×B×H).
- All teams will have to submit their robot with controlling device to the respective coordinator before starting off the event.
- Please will be responsible for any damage to the robot caused by obstacles
- The robo can't be constructed using readymade LEGO KIT. or any kind of readymade mechanism. One can make use of readymade gear assembly.
- There will be 2 rounds.
- The path may be consisting of
  - sand, bricks, marbles, grease, oils, mud, rollers, sharp turns, hanging bridges, rotating discs, sea saw and pendulums.
- No modifications be made to robots after first round.
- Any damage to arena and obstacles can lead to disqualification.
- The weight of the robo should not exceed 2kg .(excluding remote and battery)+
- The motor should not exceed the capacity of 300 RPM .
- There might be some change in any rules and specification.
- Coordinator's decision will be final and binding.
- In any dispute judge's decisions would be considered to be final decision.

\* EVALUATION criterion :-

(I) Based on the time taken by the robot to complete track, evaluation will be done.

(II) Foul {touch} will lead to penalty in terms of extra time added to total time.

## (8) Robo Soccer:-

- **Price:-200/-**
- **Maximum members per team:-4**
- One team should have maximum 4 participants.
- Each team is allowed to have only one robot.
- The voltage between any two points must not exceed 12V at any point of time.
- Maximum dimensions - 30cm ×30cm×30cm (L×B×H).
- Each team of robots in robo soccer is controlled by human and goal must be done by robot body.
- There will be two rounds . In the first round two robots will play against in the ground track without hurdles and they have to do their goals and save opponent's goals. And in second round there will be hurdles in the ground. Second round will take place after you win the first round.
- The ball can be either dragged out pushed by a robot.
- Maximum 2 members per team will be allowed to remain close to field for operating the robot.
- As both the teams will stand outside to the arena so there should not be any interference by robot or by wires to another robot.
- In case of wireless robots, all the robots with radio system must have a way to change frequencies or coded channels to prevent radio conflicts. There should be at least 2 frequencies or coded channels are available.
- The weight of the robot should not exceed 2kg .(excluding remote and battery)
- The motor should not exceed the capacity of 300 RPM .
- In case of Jam up of for more than 30 seconds the robot will have to kick off at the order of the referee.
- The robot should not damage the arena in any case, it can lead to disqualification .
- There might be some change in any rules and specification.
- Coordinator's decision will be final and binding.
- In any dispute judge's decisions would be considered to be final decision.

## (9) Robo Tug of war:-

- **Price:-150/-**
- **Maximum members per team:-4**
- Robo begin approximately 30 cm from the centreline(approx. 60 cm apart). The line may be marked with tape.
- The tow-string should slack(not tight) and should be cantered. The string must be 60 cm long, with a mark at its midpoint, and small paperclips on each end. No part of the robot shall extend past the paperclip when the round begins.
- Robots must be safe. A robot should not be a danger to competitors, other robots, or the competition area. They should not have sharp parts, and should not have pieces that shoot or could fly off.
- After being triggered, a robot must wait at least 5 seconds before moving.
- If after 1 minute, no robot has crossed the centreline, the round is to be considered a draw.
- A robot must win 2 out of 3 trials.
- In the case of a draw, where neither robot is successful in pulling the other across the line, the winner is determined by holding a tie-breaking round. In this round, the winner is determined by measuring the distance of each robot from the centreline at the end of the time limit. The robot closest to the line loses.
- If the judge determines that a robot is incapable of pulling the robot across the line(for example a robot can't move or pull at all), that robot will be disqualified.
- Competitors and spectators may not touch robots, the arena, or otherwise interfere during the match. They should not be close enough to the arena to interfere with sensors.

## (10) Eureka:-

- **Price:-200/-**
  - **Maximum members per team:-4**
- One team should have maximum of 4 participants.
  - Only one robot is allowed per team.
  - Participants are allowed to use battery of max 12volts.
  - Participants can max use the motor of 350rpm.
- There will be 3 rounds,
1. In 1st round robot have to climb vertical rope up to 3 meters.
  2. In 2<sup>nd</sup> round there will be a horizontal rope on a height of 2.5meters, participants have to attach one secondary robot which they have to land on a particular spot .
  3. In 2<sup>nd</sup> round the operator will be blind eyed and have to land secondary robot with the help of another team member.
  4. **The 3<sup>rd</sup>** round will be surprise round .
  5. The thickness of rope(10mm) will be same in all the rounds.
  6. The weight of secondary robot shouldn't be more than 500gms.
  7. No weight restriction for primary robot.
  8. In second round, secondary robot can cover max height of 1meter after that secondary robot should experience free fall to reach at the desire destination.
  9. In first round the robot who took the least time to climb the rope will be qualified.
  10. In 2<sup>nd</sup> round finalist will be decided on the basis of time taken by them and the accuracy of landing spot .

## (11) Auto cad (Mech):-

- Price:-50/-
- Maximum members per team:-1

**Problem Statement:** Plan of action will be explained right at the time of competition

**Maximum number of persons per team: 1**

### Rules:

- There will be two different rounds.
- Student who passes the rapid drafting round will be selected for 2nd round.
- Time for 1st round will be 30 minutes.

## (12) Circuitronix:-

- **Price:-50/-**
- **Maximum members per team:-2**
- Event includes 3 rounds:
  - 1. Technical test (Elimination Round):**

MCQ Test will consist of 30 question with 1 mark each. Top scorers of first round will be shortlisted for Circuit Simulation.
  - 2. Circuit-simulation:**

Virtual layout and simulation of given circuit in software participant prefer (Proteus/ Multisim).  
If the participant wish to take clues, then their points will be deducted.
  - 3. Circuit Implementation:** Hardware implementation of virtual layout.

**Note:-** 1. Participation will be two in a group.

2. Components will be provided by event coordinator.

3. Participants must carry registration slip with them.

## (13) Switch-Maze:-

- **Price:-100/-**
- **Maximum members per team:-4**

- Event includes two rounds:

1. **Screening Test:** Technical quiz will be conducted.
2. **E-Treasure Hunt:** Using a series of clues, participants have to find the treasure i.e., the components required for circuit implementation.
3. The one who does this task correctly in minimal amount of time will be winner of the event only after your circuit is tested.
4. Team whose circuit works correctly first will be the winner.

Cell phones are not allowed.

The Event organizers' decision will be final and binding.

## (14) Relay Coding:-

- **Price:-50/-**
- **Maximum members per team:-2**
- 1<sup>st</sup> Round(Day 1):-
  1. Both members should be compulsorily present.
  2. Members have to solve the technical quiz in half hour.(on paper)
  3. Eligible group can further participate in round 2.
- 2<sup>nd</sup> Round(Day 2):-
  - ❖ Particular task of coding will be given.
- Rules:-
  - I. One member of the group will be given 10 minutes for coding.
  - II. After 10 minutes, the members will be switched and another member will continue the coding for another 10 mins.
  - III. Top 3 groups who completes the task first will be the winners.

## (15) Code War:-

- **Price:-50/-**
- **Maximum members per team:-2**

### Round 1 :Simple Coding Round

- 5 simple programs will be given to All Participant & Participant will Choose Any Language (from Java, C, C++) for Coding for these programs.

### Round 2 : Simple Quiz Round

- Some Logical Questions ( from Programming Language ,Data Structures ) will be given to Participant .
- Participants have to Describe their answers by Paper Working (Like Writing Code for their Questions in Paper)

### Round 3 :Final **Code Compression** Round

- One Big Code Will be given to Participant .
- Participant have to Compress Code by their own way
- Code will be given to Participant in their Selected Language (Java , C, C++)

### Rules :

- All rounds will take place in the college premises during the 2 days of event i.e. there are no online eliminations for this contest.
- This is strictly an individual participation event.
- The coding should be done in JAVA , C or C++ only. Use of any other language is not allowed.
- Student can Choose any language from Java , C, C++.
- Use of -any kind of data transfer peripherals(CD, pen-drives, etc.) is prohibited.
- Coding should be done in stipulated time only. No extra time will be given for thinking.
- Use of rough papers is allowed.
- In case of any dispute, the decision of core committee will be final.

### Judging Criteria :

- The teams will be judged on basis of their accuracy, correctness of program as well as speed.

□ The participants, in any case, reserve no right to challenge the decision of the core committee of Aayam.

## (16) Auto Sketching:-

- **Price:-50/-**
- **Maximum members per team:-1**

- Participants have to make a sketch with pens or pencils. We will provide a sheet for sketching.
- Participant will be given time limit for the sketching.
- Only 1 participant. No teams.
- Best 3 sketches will be awarded.

Rules:

1. No electronic device should be used.(cell phone, laptop)
2. No pictures or any photographs should be attached to sketches.

## (17) Short Film:-

- **Price:-50/-**
- **Maximum members per team:-3**
- Max. resolution 1920x1080.
- Min. resolution 720x576 FHA / 1024x576.
- In the beginning of your film. Insert 5 sec. of bars and tone.
- After bars and tone, add 5 sec of black after which 5 sec of this slate.
  - ❖ Team name
  - ❖ Film name
  - ❖ **Aayam on film 2018**

## (18) Logo Designing:-

- **Price:-50/-**
- **Maximum members per team:-2**

- 1) The design should be submitted online on Aayam portal before the deadline of 4/3/2018
- 2) An entry could be individual.
- 3) Each participant can submit only one entry.
- 4) Logo should be submitted in JPEG, PNG OR PDF format only.
- 5) File should be high resolution - at least 300 pixels per inch at 100% size.
- 6) File should look clean when viewed on screen at 100%.

### **Selection process:-**

- 1) The winner would be selected by the selection panel.
- 2) There will be only one winner of competition.
- 3) The designer shall be required to give copyright of the design to the committee and provide the original open source file of the designed logo

## **(19) Poster presentation:-**

- **Price:-50/-**
- **Maximum members per team:-3**

### **Rules & Regulations:**

- Event fee is 50/- rupees per group.
- Maximum 3 participants can take part in team.
- Participants must be present 15 minutes before the events.
- The decision of the jury will be final.
- For participants ID card and registration receipt are compulsory.

### **Guidelines for Poster:**

- Poster size: 594x841 mm (A1 sheet)
- The poster should be explain for at least 5 to 6 minutes.
- The poster displaying your name, department (or class if appropriate) should be positioned at the bottom of the poster.
- You will be disqualified if the poster is not as per specification provided.

## (20) Model Presentation:-

- **Price:-50/-**
- **Maximum members per team:-3**

### Rules & Regulations:

- Event fee is 80/- rupees per group.
- Maximum 5 participants can take part in team.
- Participants must be present 15 minutes before the events.
- The decision of the jury will be final.
- For participants ID card and registration receipt are compulsory.

### Guidelines for Model Presentation:

- Topic for model presentation: **“URBAN DEVELOPMENT”**
- Whole team must be present during the event.
- Working and non-working both type of models are allowed.
- The model should be explaining for at least 6 to 7 minutes.
- You will have to explain working system (if needed), its uses and advantages.



# Non Technical Events

## (21) Counter Strike:-

- **Price:-120/-**
- **Maximum members per team:-5**
- 1st round will be knife round.
- For the knife round map will be decided by event coordinators. The winner of the knife round picks the side they want to play.
- Matches will be played 5 on 5.
- The maps for the tournament will be decided by event coordinators.
- Automatic Snipers, tactical shield and smoke grenades are strictly not allowed.
- Teams messages are allowed.
- If disconnection occurs during a match then scores till the last round will continue and starting money will be decided by the organizers.
- Playing with fewer than 5 players in any match is permitted with captain's agreement.
- Use of the particular console commands will be informed by organizers on the day of event.
- Players may bring their own headphones and mouse pads. Mouse and keyboards are strictly not allowed.
- Starting money and match time will be decided by organizers. Friendly fire is off.

## (22) Need for speed:-

- **Price:-50/-**
- **Maximum members per team:-1**

- Individual registration.
- Race type: Sprint, circuit.
- Player getting the first position will qualify for next round.
- All matches will knock out match.
- Cars available: This will be decided by game administrator.

### **Penalty for unfair play:**

- Unfair play.
- Use of any cheat program is prohibited.
- Intentional disconnection.
- If the match is disrupted, due to unnecessary chatting, the player may be given warning or lose by default.
- Upon discovery of any player committing any violations regarded as unfair play, that player will be disqualified from the tournament.
- During the course of any match, the operations staff and/or referee may determine other actions to be unfair play at any time.
- Two warnings constitute being disqualified from the tournament.

## (23) Mini militia:-

- **Price:-60/-**
- **Maximum members per team:-2**

- A maximum team of three players is possible.
- Single or duo entries will be merged with other players to make a team of three.
- The merging of players will solely depends on the administration hence no arguments will be entertained.
- Maps for the game will be decided either by mutual understanding or tossing the coin.
- Players have to bring their own mobile phones.