



Details on Skill Fest Events

1. School of Beauty and Wellness (Orane):

Mehandi Application competition

- Models and Mehendi cones to be brought by the contestant.

Nail Art - Free Style Nail Art competition

- Models and products to be brought by the contestants

Organic Face packs / Mask application

- Innovative face packs with a briefing of the ingredients and its benefits. Best presentation and results will be judged.
- Models and required items to be brought by the contestant.

Circuit Lottery (Mystery Component Challenge):

A dynamic on-the-spot problem-solving challenge. Microcontrollers and sensors are placed on a table and announced. Participants draw random component slips and build a functional circuit combining those components.

Hardware Design & Mystery Challenge

- Time Duration: 90 Minutes (30m Wiring + 45m Coding/Debugging + 15m Demo & Q&A)
- Team Structure: Solo or Team of 2

What needs to Do:

- Pick 3 slips (1 Microcontroller + 2 Sensors/Actuators).
- Assemble the components on a breadboard.
- Write firmware to create a practical, real-world application based on their drawn hardware combination.

On-Site Maker Hackathon (Build Your Own Robot)

Participants receive a raw problem prompt on the day of the event and must assemble, program, and calibrate a brand-new robot or IoT project completely from scratch.

Rapid Prototyping & System Development

- Time Duration: 90 Minutes (30m Mechanical Assembly + 45m System Integration & Coding + 15m Live Demo)
- Team Structure: Solo or Team of 2

What needs to Do:

- Receive a surprise challenge task (e.g., “Build an automated smart gate system that opens when a vehicle is detected and sounds an alert if the vehicle stays too long”).
- Assemble raw components (chassis, sensors, driver ICs, microcontrollers) on-site.
- Code, test, and demonstrate their custom prototype live to judges.

Innovations Expo (Project & Robot Showcase)

An open-ended exhibition platform where students bring their pre-built hardware, IoT systems, or custom robotics projects to demonstrate, pitch, and present to an evaluation panel.

Project Exhibition & Technical Presentation

- Time Duration: Full Event / Flexible (10-15 Minutes Evaluation per team)
- Team Structure: Solo or Team of 2 (or up to 4 depending on rules)

What needs to Do:

- Set up their working prototype at an assigned display booth.
- Present an engineering poster/slide deck covering problem statement, circuit schematics, and practical applications.
- Perform a live, interactive demonstration and answer technical Q&A from judges.

Bot Sprint (Path Follower & Obstacle Avoidance Race)

A high-energy mobility contest where autonomous wheel-driven bots navigate a track containing black line paths, sharp curves, and sudden physical obstacles.

Autonomous Robotics & Motion Control

- Time Duration: 90 Minutes (30m Track Calibration + 45m Code Tuning + 15m Timed Race Runs)
- Team Structure: Solo or Team of 2

What needs to Do:

- Wire up an IR array and Ultrasonic distance sensor onto a 2WD/4WD motor chassis.
- Program if/else control logic and motor speed variations (PWM) to stay on track while dynamically avoiding or stopping before physical barriers.
- Put their robot on the race track for timed runs—points are awarded for speed, path accuracy, and obstacle clearance without human touch.

RoboSoccer / Bot Rush (Remote Controlled Mobility)

A sports-focused robotics arena where participants control wireless (Bluetooth/Wi-Fi/RF) mobile robots to score goals or maneuver dynamic physical objects within an arena.

Wireless Teleoperation & Kinematics

- Time Duration: 90 Minutes (30m Wiring & Bluetooth Pairing + 45m Drive Practice + 15m Match Rounds)
- Team Structure: Solo or Team of 2

What needs to Do:

- Build a sturdy, high-torque wireless rover using Bluetooth (HC-05/ESP32) or RF modules and motor drivers.
- Program a mobile smartphone app interface (e.g., via MIT App Inventor or Dabble) to send motor direction commands.
- Compete head-to-head on an arena field to score goals or clear dynamic checkpoints within a time limit.

2. School of Woodworking and Drone:

Woodworking Competition

To promote practical woodworking skills, teamwork, precision, and awareness of modular furniture assembly through a hands-on competition.

- Team of 2 participants

Pre-Training Session

- A pre-training session will be conducted a few days prior to the competition.
- The exact date and time of the pre-training session will be communicated to all registered participants in advance.
- The session will cover the competition format, assembly procedure, safety guidelines, and the use of tools.
- Attendance at the pre-training session is mandatory. Teams that fail to attend the pre-training session will not be permitted to participate in the main competition.

Competition Format

- Duration: 2 Hours
- All required materials, pre-cut Pre-Laminated Board (PLB) components, hardware, and tools will be provided by MSDC – School of Woodworking.
- Teams must assemble the assigned product within the stipulated time using only the materials and tools provided.
- No cutting or resizing of components will be required during the competition.

Judging Criteria

The winners will be selected based on:

- Accuracy of Assembly
- Product Finish and Overall Quality
- Dimensional Accuracy
- Structural Stability
- Time Taken to Complete the Assembly
- Proper Use of Tools and Safety Practices
- Teamwork and Coordination

Expected Outcome

- Encourage practical woodworking and furniture assembly skills.
- Promote teamwork, problem-solving, and time management.
- Increase awareness of modern woodworking techniques.
- Inspire participants to explore woodworking as a skill and career opportunity.

3. Drone MCQ Competition

Objective:

To enhance awareness and technical knowledge of drone technology, DGCA regulations, and drone applications among students and aspiring drone professionals through a competitive quiz.

Educational Qualification: Minimum 10th Pass Competition

Pattern:

- Total Questions: 30 Multiple Choice Questions (MCQs)
- Duration: 30 Minutes
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Marking Scheme:

- Correct Answer: +1 Mark
- Wrong Answer: -0.25 Mark (1/4 Negative Marking)
- Unattempted Questions: 0 Mark

Winner Selection:

- The participant securing the highest score will be ranked first.
- In case of a tie, the participant who completes the quiz in the least time while maintaining the highest score will be declared the winner.

Topics Covered:

The quiz will be based on:

- DGCA Regulations
- Drone Rules, 2021
- Drone Categories and Classification
- Drone Safety & Airspace Regulations
- Drone Components and Basic Technology
- Drone Applications (Agriculture, Surveying, Mapping, Inspection, Disaster Management, Logistics, Media, etc.)
- Basic Drone Operations
- General Drone Awareness

Expected Outcome:

- Promote awareness of safe and responsible drone operations.
- Enhance participants' understanding of DGCA regulations and Drone Rules, 2021.
- Encourage students and professionals to explore opportunities in the drone industry.
- Foster technical knowledge and healthy competition among participants.

4. School of CNC

Creative Design Challenge

Description: Participants will be tasked with designing and prototyping (3D printing) a product based on a given theme.

Process:

- Topic Reveal – Participants receive a design challenge.
- 3D Modelling Phase – Create a CAD model using solid edge software (45 mins).
- Prototype Phase – Build a physical prototype (3D printing) (30 mins).
- Presentation – Explain the design choice (3 mins).

CNC Programming Sprint

Description: Participants are given a machining drawing, they must:

- Interpret the drawing.
- Write the CNC program manually (no CAM software).
- Run the program in a simulation environment.
- The challenge tests speed, accuracy, and machining knowledge
- Process:
- Drawing Reveal: Participants receive a design challenge.
- Manual CNC Program Writing & Simulation (60 minutes).
- Race: The first participant to successfully complete the simulation (with correct machining output) is declared the winner.

5. School of Automotive

Competition Theme

Product Design – 2D to 3D CAD Modeling Using Autodesk Fusion

Objective

The objective of this competition is to evaluate participants' proficiency in computer-aided product design by assessing their ability to interpret a two-dimensional engineering drawing and accurately develop a three-dimensional parametric model using Autodesk Fusion.

The competition aims to promote industry-relevant CAD skills, engineering drawing interpretation, and digital product development competencies among students.

Competition Description

Participants will be provided with a detailed 2D engineering drawing of a mechanical component. Based on the given drawing, they will create a complete and accurate 3D parametric model using Autodesk Fusion within the specified time.

The challenge is designed to simulate a real-world engineering design task where engineers convert technical drawings into manufacturable digital models.

Software
Autodesk Fusion

Duration
120 Minutes

Eligibility

- Diploma Students
- Undergraduate Engineering Students
- Polytechnic/ITI Students with prior CAD knowledge

Resources Provided
Each participant will be provided with:

- One 2D engineering drawing (printed and digital)
- Computer system with Autodesk Fusion installed
- Blank sheets for rough calculations (if required)

Competition Rules

1. Participants must complete the task individually.
2. Only Autodesk Fusion provided by the organizers may be used.
3. Internet access, external reference files, and pre-built CAD models are not permitted.
4. Participants must submit the Autodesk Fusion design file (.f3d or .f3z) before the completion of the allotted time.
5. Any clarification regarding the drawing must be sought only from the judges during the designated clarification period.

6. School of Industrial Automation and Product Development

Poster Presentation

Non-Conventional Advance Manufacturing Process for Industrial Applications in following categories:

- Advance Precision welding techniques Laser Welding, Mig Welding, Tig Welding, any related product development model or projects, case studies can be shown and presented.
- Importance of CNC Wood Router and its applications. Presentation of case studies can be presented. 3d model's products by CNC Wood Router Machin.

Technical QUIZ Competition on Advance Manufacturing technology:

- Application of Laser Technology for Next Generation.
- Laser technology and its precision applications in various field
- CNC Wood Routers and its applications in various application
- Non-conventional method of Product developments.

7. School of Fashion Design (Dream Zone)

Eligibility

- The competition is open to all registered participants (Age group 15+).
- Individual participation only

Pearl Necklace Making Competition Rules

Materials

- Pearls, beads, threads, wires, clasps, and basic jewellery-making tools must be brought by the participants
- Participants are not allowed to use any additional materials unless permitted by the organizers.
- Total competition time: 120 minutes.

Competition Rules

- Participants must create one wearable pearl necklace during the competition.
- Necklace must be minimum 10inches excluding the hooks or cord.
- The necklace must be completed within the allotted time.
- Pre-made jewellery pieces or partially completed work are not allowed.
- Participants must maintain cleanliness at their workspace.
- Sharing materials or receiving assistance from others is strictly prohibited.
- The judges' decision will be final.

Judging Criteria (100 Marks)

- Creativity & Originality – 30 marks
- Design & Aesthetic Appeal – 25 marks
- Neatness & Finishing – 20 marks
- Durability & Wearability – 15 marks
- Effective Use of Materials – 10 marks

Participants are encouraged to showcase their creativity while ensuring the necklace is elegant, sturdy, and comfortable to wear.

Hand Embroidery Competition Rules

Materials

- 1mtr Black or white cotton Fabric, embroidery hoop, embroidery threads, needles, scissors, carbon paper must be brought by the participants
- Beads and zardozi can be used.
- Only theme or design will be provided by the organizers, design and Ideas must be planned by the participants
- Participants may bring their own basic embroidery tools.
- Use of embroidery machines or any mechanical devices is strictly prohibited.

Time Limit

- Total competition time: 120 minutes.
- All work must be completed within the allotted time.

Competition Rules

- Participants must complete the embroidery work during the competition.
- Only hand embroidery techniques are allowed.
- Pre-embroidered or partially completed work is not permitted.
- Participants must maintain a clean and organized workspace.
- Sharing materials or seeking assistance from others is strictly prohibited.
- The judges' decision will be final and binding.

Judging Criteria (100 Marks)

- Creativity & Design – 25 marks
- Quality of Stitches & Technique – 30 marks
- Neatness & Finishing – 20 marks
- Colour Combination & Overall Presentation – 15 marks
- Completion within Time – 10 marks

Participants are encouraged to demonstrate originality, precision, and good craftsmanship. Creativity, Neatness, colour combination is considered.

Fabric Painting Competition Rules

Materials

- Fabric (White cotton 1mtr), fabric paints, brushes, palettes, and other basic painting materials must be brought by the participants.
- Design will be provided by the organizers (A4 size)
- Only fabric/Acrylic paints are allowed.

Time Limit

- Total competition time: 90 minutes.
- Participants must complete their artwork within the allotted time.

Competition Rules

- Participants must create an original fabric painting during the competition.
- The artwork must be painted entirely by hand.
- Pre-drawn, or partially completed designs are not allowed.
- Participants must maintain cleanliness at their workspace.
- Sharing materials or receiving assistance from others is strictly prohibited.
- Participants must stop work immediately when the time is over.
- The judges' decision will be final and binding.

Judging Criteria (100 Marks)

- Creativity & Originality – 30 marks
- Color Harmony & Composition – 20 marks
- Painting Technique & Skill – 25 marks
- Neatness & Finishing – 15 marks
- Overall Presentation – 10 marks

Participants are encouraged to showcase originality, creativity, and effective use of colors while ensuring a neat and visually appealing fabric painting.

Fabric Rangoli Competition Rules

Materials

- Fabric pieces, decorative materials (lace, beads, mirrors, sequins, ribbons, etc.), fabric glue, scissors, and other craft supplies must be arranged by the participants
- The use of fresh flowers, colored powders, paints, or ready-made rangoli mats is not allowed unless specified.
- Cardboard or canvas can be used as the base.
- Hand stitching is permitted.

Time Limit

- Total competition time: 150 minutes.
- Participants must complete their fabric rangoli within the allotted time.

Competition Rules

- Participants must create a fabric-based rangoli using only the permitted materials.
- The rangoli should be an original design created during the competition.
- Pre-made or partially completed rangoli components are not allowed.
- The rangoli must remain within the allotted display area. **(Minimum of 8-10 inch diameter)**
- Participants must maintain cleanliness and dispose of waste materials responsibly.
- Sharing materials or receiving assistance from others is strictly prohibited.
- All work must stop immediately when the time is over.
- The judges' decision will be final and binding.

Judging Criteria (100 Marks)

- Creativity & Originality – 30 marks
- Design & Composition – 25 marks
- Neatness & Finishing – 20 marks
- Effective Use of Materials – 15 marks
- Overall Presentation – 10 marks

Participants are encouraged to create eco-friendly and innovative fabric rangoli designs inspired by traditional or contemporary themes.



Best out of waste

- All products must be related to home décor (wall hangings, table décor, organizers, lamps, etc.).
- Participants must use only waste or discarded items . No store-bought decorative items allowed, except adhesives, paints, or basic tools.
- Work must be original and created during the competition. Pre-made or copied designs are not permitted.
- No sharp, hazardous, or flammable materials. Items should be safe to handle and display indoors.
- Each participant will have a fixed duration of 3 hours to complete their piece.
- Participants must explain their concept in 2–3 minutes, highlighting the waste materials used and how it fits home décor.

Nutritious salad making

- Salads must be prepared without using fire, stove, oven, or induction.
- Recipes should highlight healthy ingredients — fruits, vegetables, sprouts, nuts, seeds, whole grains, dairy, etc. Junk food or overly processed items should be avoided.
- Participants must cut the vegetables/fruits within the allotted time. No pre-cooked items. Use of mixers and blenders is not permitted.
- Dishes must be original creations. Copying or presenting store-bought food is not allowed.
- No raw meat, fish, or eggs allowed.
- Each participant will have a fixed duration 2 hours to prepare and plate their dish.
- Participants must present their dish with a short explanation covering nutritional value, ingredients used, and health benefits.

8. School of IT

COMPETITION NAME	Debugging Challenge
THEME	Find the Bug, Fix the Code!
AGE GROUP	13-16 years (8 to 10th STD)
TEAM SIZE	1 Member
TIME DURATION	30 Minutes
BRIEF DESCRIPTION OF COMPETITION	Participant will be provided with ‘C’ programs containing different types of errors, such as syntax errors, logical errors, and runtime errors. They must identify the errors, correct the programs, and obtain the expected output. The competition will test participants' C programming knowledge, logical thinking, problem-solving ability, and debugging skills.
ANY SPECIAL REQUIREMENTS	No

COMPETITION NAME	Animation Competition
THEME	A Day in the Future / Technology for Good
AGE GROUP	13-16 years (8 to 10th STD)
TEAM SIZE	1 member
TIME DURATION	60 Minutes
BRIEF DESCRIPTION OF COMPETITION	Participant will create a short animation based on the given theme using beginner-friendly animation tool. The animation should communicate a creative idea or story through characters, backgrounds, movement, dialogue, sound, and other suitable elements. Participants will present their animation to the judges and briefly explain their concept.
ANY SPECIAL REQUIREMENTS	No

COMPETITION NAME	Digital Storytelling Competition
THEME	Technology Makes Life Better
AGE GROUP	13-16 years (8 to 10th STD)
TEAM SIZE	1 member
TIME DURATION	60 Minutes
BRIEF DESCRIPTION OF COMPETITION	Participant will create a short digital story using PowerPoint, Canva, or another approved digital storytelling tool. The story should combine text, images, animations, transitions, and narration or dialogue to communicate a meaningful idea. Participants will present their completed digital story to the judges. Creativity, storytelling, presentation, and effective use of digital tools will be evaluated.
ANY SPECIAL REQUIREMENTS	No

COMPETITION NAME	Cybersecurity Awareness Campaign
THEME	Stay Safe Online
AGE GROUP	13-16 years (8 to 10th STD)
TEAM SIZE	1 member
TIME DURATION	60 Minutes
BRIEF DESCRIPTION OF COMPETITION	Participant will design a digital poster, infographic, or short awareness presentation promoting safe and responsible use of the internet. They may focus on topics such as strong passwords, phishing, cyberbullying, protecting personal information, online scams, safe browsing, and digital privacy.
ANY SPECIAL REQUIREMENTS	No

COMPETITION NAME	Typing Speed & Accuracy Contest
THEME	Type Fast, Type Right!
AGE GROUP	13-16 years (8 to 10th STD)
TEAM SIZE	1 member
TIME DURATION	15 Minutes
BRIEF DESCRIPTION OF COMPETITION	Participant will take part in a timed typing challenge to demonstrate their typing speed and accuracy. They will type a given passage within the specified time. Performance will be evaluated based on words per minute (WPM), typing accuracy, and the number of errors. The participant achieving the best overall score will be declared the winner.
ANY SPECIAL REQUIREMENTS	No
