



**JB INSTITUTE OF ENGINEERING & TECHNOLOGY**

**UGC Autonomous**

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**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

**TECHNICAL FEST**

**VIGYAN**

**05-05-2022 to 07-05-2022**

**Coordinators**

- 1. Mrs. K. Snehalatha, Asst.Professor**
- 2. Mrs. B. Sowmya, Asst.Professor**

**HOD-ECE**

**Dr. Towheed Sultana**

## Banner



Department of  
Electronics & Communication  
Engineering

CLIQUE

TECH FEST  
2022

# VIGYAN

5-7 MAY, 2022

SCIENCE TODAY IS  
TECHNOLOGY TOMORROW  
TIME TO BUILD A NEW  
WORLD

- QUIZ - GENERAL AND TECHNICAL
- ROBO RACE - FASTEST TO COMPLETE THE TRACK WINS
- PROJECT EXPO - TIME TO DISPLAY AND SHOWCASE YOUR IDEAS FOR A BETTER PLACE TO LIVE.
- COMPETITIVE CODING - CODE TO SOLVE. LIMITED TIME
- AUTOMOBILE DESIGN CONTEST - REDEFINE THE FUTURE OF TRAVEL.
- LINE BASED MAZE SOLVER CONTEST - FASTEST TO SOLVE THE MAZE WINS
- DRONES AND QUAD-COPTER CONTEST - TIME TO GET AIRBORNE.
- BRIDGE DESIGN AND CONSTRUCTION CONTEST - LET BUILD OUR OWN REALITY
- PPT MAKING CONTEST - PRESENT - TALK AND EXPRESS
- WORKSHOPS - CYBER SECURITY / PYTHON - SIT AND LEARN AND PRACTICE NEW STUFF.
- PHOTOGRAPHY CONTEST.

WE INVITE ALL THE STUDENTS WHO  
HAVE INTEREST IN TECHNOLOGY

Exciting Prizes !!!

NOW  
or  
NEVER



SCAN TO REGISTER





**Department of Electronics and Communication Engineering**

**EVENTS OF THE FEST**

**1. QUIZ**

Vigyan - Quiz, Present the Participating Student with a Platform to showcase their scientific and practical life problem solving skills. All participants have to solve the maximum number of questions in a specified time interval to compete with the brightest minds around.

Aim - Vigyan - Quiz is Aimed to bring out the best in participants and recognize their true potentials. We are working to motivate students to explore the field of STEM (science, technology, engineering, and math) In an integral manner skill required for Career development.

Vigyan quiz strives to popularize academic competition and assist the development of competitive spirit among participants.

**2. ROBO RACE**

The challenge is to Build your own robot either wired or wireless within the specified dimensions in order to achieve the maximum speed to beat other robots on the given track and reach the finishing line in minimum time. The robot must run on the given racetrack. The robot must start behind the starting mark and is considered to have crossed the finishing line if any part of the robot crosses it when the robot has completed a full lap of the course. Your robot must be manually / autonomously controlled, and it should be capable of traversing over different terrain and hurdles without going outside the track. Separate points will be awarded for overcoming the hurdles. The bot with the maximum cumulative points will win the race. The competition area has a special place defined for the robot's operation (hereafter COMPETITION FIELD).

**3. PROJECT EXPO**

Dare to Dream - Display your ideas for a interaction with civilians and industry experts - bring and present you projects, Ideas, Start up (MVP - Minimum viable products) and products. with general theme - need for Technology for a better india

**4. COMPETITIVE CODING**

‘Competitive Programming’ in summary, is this: “Given well-known Computer Science (CS) problems, solve them as quickly as possible!”. The term ‘well-known CS problems’ implies that in competitive programming, we are dealing with solved CS problems and not research problems (where the solutions are still unknown). Definitely, some people (at least the problem setter) have solved these problems before. ‘Solve them’ implies that we must push our CS knowledge to a certain required level so that we can produce working codes that can solve these problems too – in terms of getting the same output as the problem setter using the problem setter’s secret input data. ‘As quickly as possible’ is the competitive element which is a very natural human behavior.



## Program schedule:

Competitive programming combines two topics: the design of algorithms and the implementation of algorithms. **Design of Algorithms** The core of competitive programming is about inventing efficient algorithms that solve well-defined computational problems. The design of algorithms requires problem solving and mathematical skills. Often a solution to a problem is a combination of well-known methods and new insights **Implementation of Algorithms** In competitive programming, the solutions to problems are evaluated by testing an implemented algorithm using a set of test cases. Thus, after coming up with an algorithm that solves the problem, the next step is to correctly implement it, which requires good programming skills. Competitive programming greatly differs from traditional software engineering: programs are short (usually at most some hundreds of lines), they should be written quickly, and it is not needed to maintain them after the contest.

### **5. AUTOMOBILE DESIGN CONTEST**

To tackle the surging fuels prices and increasing pollution, today, the world relies on electric vehicles as a cleaner mode of transportation. Today, EVs are the hot topic of the future of mobility. Although the surge has been happening since the last decade, electric vehicles have been here for a longer time.

### **6. LINE BASED MAZE SOLVER CONTEST**

Build your own autonomous robot within the specified dimensions to achieve the maximum speed to beat other robots on the given track and reach the destination in minimum time. The robot must start behind the starting point and is considered to have crossed the finishing line if any part of the robot crosses it in a full lap of the course. The robot must follow the black line. The competition area has a special place defined for the robot's operation (hereafter COMPETITION FIELD).

### **7. DRONE AND QUAD – COPTER CONTEST**

The challenge is to Build a Quadcopter which is aerodynamically stable to achieve a successful flight. Quadcopter must be built within the specified dimensions. The Quadcopter should be able to take off, land and can do simple and complex maneuvers. The competition has 2 Rounds i.e. elimination round and final round. Performance of the Quadcopter in all the Rounds/Arena will be evaluated individually. Team Scoring the maximum points in the final round will be nominated as the Winner of the competition. The performance of the Quadcopters in all the round will be evaluated individually.

### **8. BRIDGE DESIGN AND CONSTRUVTION CONTEST**

This contest is to design, construct, and test the most efficient bridge built in accordance with the specifications. Model bridges are intended to be simplified versions of real-world bridges, which are designed to accept a load in any position and permit the load to travel across the entire bridge. In order to simplify the model bridge design process, the number of loading positions is reduced, and to allow the contest to proceed in a reasonable amount of time, only three loading positions is tested. These simplifications do not negate the requirement that the bridge must be designed to accept a load at any of the specified positions.

### **9. PPT MAKING CONTEST**

Great presentations make drab topics fascinating, weaving narratives in a concise manner. So when you create a presentation on the topic above, think as if you are writing a story – have a plot with a premise and an end. The hard part would be to do it within 12 slides. But then, that's the challenge. If you can do this effectively, we are sure you can make the best PowerPoint presentations. Things to keep in mind while making the presentation We know that you have some amazingly creative ideas. However, we feel that there

## Program schedule

use certain pointers that will make your presentation more effective, and we are sharing them with you. Remember: These are just pointers to help you. There is no compulsion to follow them. always creates more impact than using way too many unnecessary and complicated words (See?). Try to use no more than 5 words per line of text, 5 lines of text per slide or 5 text- heavy slides in a row. attention and make the message more powerful

### 10. WORKSHOP

In the 4-hour workshop, participants will learn about common cyber threats and counter defense tools, how to keep accounts and credentials safe, and how to avoid common, yet dangerous threats and malicious scams. Cyber threats continue to evolve rapidly, which is why learners are provided with ongoing access to fresh content around emerging cyber threats, on-demand webinars, and tools to minimize risk and human error.

### 11. PHOTOGRAPHY CONTEST

Visual storytelling is the heart of Vigyan 2022. Our photography contests feature images created by photographers from around the world, sharing visions that inspire, inform, and awe.

The Photographs should be Taken at the time of the event and under geographic Limitations. The use is Camera of any sort is allowed but subjected to declaration - Mobile photography is also allowed The organizing team will declare the themes at the time of commencement of the Event.

## Program Schedule

### DAY 1:

- Inauguration
- Project expo
- Line based maze solver
- Quiz round

### DAY 2:

- Workshop
- Robo race
- Competitive coding
- PPT making
- Drone and quad copter contest

### DAY 3:

- Quiz
- PPT
- Competitive coding
- Bridge design contest

## **Participants:**

### **QUIZ**

<https://docs.google.com/spreadsheets/d/1SDqtQxggGNdRn4UNPftLgrTU6KE2BiEZzTyqCCYEjfo/edit>

### **PROJECT EXPO**

<https://docs.google.com/spreadsheets/d/1oz2oJl7t8ipbv2WK1bOhO t oEha9eUPi5rscEAByBc/edit>

### **COMPETITIVE CODING**

<https://docs.google.com/spreadsheets/d/1tqrlGqu7B978SWJwgfcMJVf3RTARA0Px7MlnkuNxFgU/edit>

### **LINE BASED MAZE SOVER**

<https://docs.google.com/spreadsheets/d/1zGZB83yykSuqlrX0JYwKFErOaUH5qth3x2B b paNtKA/edit>

### **BRIDGE DESIGN CONTESTPPT MAKING**

<https://docs.google.com/spreadsheets/d/1w4SRLwW5uFDoF6M2bAWnj73l xp7poZHhUOtJiVJM-4/edit>

### **PPT MAKING**

<https://docs.google.com/spreadsheets/d/1qA5 oa7dYnHXshRGbbS81RzBr PTXfTBAc47HnP22P0/edit>

### **WORKSHOP**

<https://docs.google.com/spreadsheets/d/1v6GvPDw7YtPbggrbJaaOZjV-O5xTS9Beu 2T0p1lMh4/edit>

### **PHOTOGRAPHY**

<https://docs.google.com/spreadsheets/d/1LTTCBaoNG129lFqTMag6X4vhT9WE0U6PZqnmO2CK9Xg/edit>

## Sample Photos



Poster Launch



DAY 1: Inauguration



PPT making





**Quiz**



**Photography**



**Bridge design contest**





Line based maze solver



Project expo



Workshop



Sample Certificate