SRI VENKATESWARA COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

in association with

ELECTRONICS AND COMMUNICATION ENGINEERS ASSOCIATION

&

THE INSTITUTION OF ELECTRONICS AND TELECOMMUNICATION ENGINEERS- SF

&

ROBOTICS AND ARTIFICIAL INTELLIGENCE CLUB

REPORT ON UPAGRAHA'23

The National level technical symposium, UPAGRAHA'23 held between 11th October 2023 (Wednesday) and 12th October 2023 (Thursday) was organized by the Department of Electronics and Communication Engineering in association with the Electronics and Communication Engineers Association (ECEA) along with the Institution of Electronics and Telecommunication Engineers-Student Forum (IETE-SF) and Robotics and Artificial Intellegence Club (RAIC). The target audiences were the second,third and final year students. The event witnessed participation from students across various departments and colleges.

PROPOSAL OF THE EVENT

SRI VENKATESWARA COLLEGE OF ENGINEERING

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along with

THE INSTITUTION OF ELECTRONICS AND TELECOMMUNICATION ENGINEERS - STUDENTS FORUM

&

ROBOTICS AND ARTIFICIAL INTELLIGENCE CLUB

04th Sep 2023

Submitted to the principal through HoD- ECE

Respected sir,

The Department of ECE along with the student forums have been able to organize the highly acclaimed intercollegiate symposium known as UPAGRAHA until last year, which had received positive feedback.This symposium has been a resounding success in previous years, receiving commendable feedback from participants and attendees alike. We are immensely grateful for the continuous encouragement and support extended by our college management, which has been instrumental in facilitating these achievements.

The ECE Association, IETE Students' Forum SVCE and Robotics and Artificial Intelligence Club (RAIC) are planning to conduct **UPAGRAHA'23**, a two-day National-level intercollegiate technical symposium on **October 12th and 13th, 2023**, on our esteemed campus.

The vision for UPAGRAHA'23 is to provide a distinguished platform where students can freely exchange knowledge, engage in discussions on pivotal issues, and partake in intellectually stimulating academic debates. We believe that such an event will not only enhance the educational experience of our students but also strengthen the bonds between our college and other institutions in the region.

To: HoD - ECE

Approved

5/9

The following events have been planned for **UPAGRAHA'23**:

1. Paper presentation

2. Hardware Event

3. Coding event

4. Tech Tune-up (PC Repair event)

5. Circuit related event

6. E - Gadget Marketplace

7. Technical Connexions

8. Lost trail

9. MATLAB related event

The events will be open for students from all engineering colleges; the required budget for the event is estimated to be around Rs.70,000.

We kindly request your consideration of our proposal, as your approval would undoubtedly contribute to the academic enrichment of our college community.

Thankyou for your consideration.

21/9/23

Dr.T. J. Jeyaprabha
ASP, ECE
ECEA, IETE & RAIC Coordinator

Dr.G.A.Sathish Kumar
HOD-ECE

Forwarded & Recommended for your approval.

SRI VENKATESWARA COLLEGE OF ENGINEERING

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&

ROBOTICS AND ARTIFICIAL INTELLIGENCE CLUB

21st Sep 2023

Submitted to the principal through HoD- ECE

Respected sir,

The students' forum of Electronics and Communication Department request the **preponement** of the upcoming National Intercollegiate technical symposium, UPAGRAHA'23 scheduled for 12th and 13th October,2023. The reason for this request is the **unforeseen visit of the National Board of Accreditation (NBA)** to our college on the dates of 13th and 14th of October, 2023.

Hence, we request to change the dates of the technical symposium to **11th and 12th October, 2023.** We also request to allow the other college students to use the transport and hostel facilities of our college in the above mentioned dates.

Thank you for your consideration.

Dr.T. J. Jeyaprabha
ASP, ECE
ECEA, IETE & RAIC Coordinator

Dr.G.A Sathish Kumar
HOD-ECE

AGENDA OF THE EVENT

UPAGRAHA'23

AGENDA:

11.10.2023 - DAY 1

09:30 am to 09:05 am : Prayer Song.

09:05 am to 09:10 am : Welcome address by Ms.Srirkaa R, Secretary - NAC.

09:10 am to 09:20 am : Address of the gathering by Dr.G A Sathish Kumar, HOD, ECE Department.

09:20 am to 09:30 am : Address of the gathering by Dr.S.Ganesh Vaidhyasubhan, Principal, NPCE.

09:30 am to 09:35 am : Introduction of the Chief Guest by Dr. T. J. Jeyaprabha, Faculty Coordinator.

09:35 am to 09:45 am : Special Talk by Chief Guest, Smt. Ilamya G, AGM, NEC.

10:00 am to 10:30 pm : Commencement of UPAGRAHA'23 Day 1 Events.

01:00 pm to 02:00 pm : Lunch.

12.10.2023 - DAY 2

09:00 am to 01:00 pm : Commencement of Upagraha'23 Day - 2 Events.

01:00 pm to 02:00 pm : Lunch.

02:00 pm to 02:05 pm : Introduction of the Chief Guest by Dr. T. J. Jeyaprabha, Faculty Coordinator.

02:05 pm to 02:45 pm : Special Talk by Chief Guest, Dr. V. Narayanan, Director, IPSC, ISRO.

02:45 pm to 03:30 pm : Prize Distribution.

03:30 pm to 03:35 pm : Vote of thanks by Ms. Mridula.V.Nair, IETE - Chairman.

THE INAUGURAL CEREMONY:

The Inaugural ceremony commenced with the arrival of the Chief Guest Smt.Ramya Govrisankaran, AGM, NEC along with Dr.G.A.Sathish Kumar, Head of the Department, Department of ECE and faculty coordinators of the association, Dr.T.J.Jeyaprabha, Associate professor, Department of ECE and Mr.S.Elangovan, Assistant professor, Department of ECE.

Chief Guest, Smt. Ramya Govrisankaran,Dr. G. A. Sathish Kumar, Head of the Department,Dr T.J Jeyaprabha, Faculty coordinator along with Office Bearers of the Clubs.

The event began with Thamizh Thaai Vaazhthu by Ms. Clarinda Susan and Ms. Monigha Rajam followed by the prayer song by Ms. Shreeja K, 3rd year, SVCE. Ms. Snekaa R, Secretary, EAIC delivered the welcome address. Dr.G.A.Sathish Kumar, Head of the Department, Department of ECE addressed the gathering. Dr.T.J.Jeyaprabha, Associate professor, Department of ECE introduced the chief guest to the gathering. The Chief Guest, Smt.Ramya Govrisankaran, AGM, NEC delivered a short presentation on "5G and Beyond" and shared her knowledge with the students present at the ceremony.

ABOUT UPAGRAHA'23:

Upagraha'23 is aimed with an objective to provide students from different engineering colleges a platform to demonstrate their technical abilities. It offers a wide variety of events for engineers to display their skills across various technical domains. This platform not only enhances students' knowledge but also serves as an ideal opportunity to enhance their technical and non-technical competencies. Moreover, it fosters students' curiosity and deepens their grasp of emerging concepts. The event schedule offers a wide range of chances for students to showcase their skills in different technical fields.

ABOUT THE CHIEF GUEST:

Smt Ramya Gowrisankaran, AGM, NEC is an accomplished expert with a proven track record of experience in the Wireless Telecom Industry. She started her career as a Board Design Engineer and later handled multiple Product Design and Development - Embedded systems 5G Radio Wireless Backhaul/Network Access switch/Aggregators etc. She has almost 20+ years of experience in the Telecom field. She is an expert in the field of Product Design and Development. She worked as project manager in NEC and later became the senior manager. She excelled in the role of technical lead in Aricent Technologies (Holdings) Ltd. She performed as a senior design engineer in Midas Communication Technologies.

SNAPSHOTS OF THE EVENT:

Lecture by Smt. Ramya Gowrisankaran

Dr G A Sathish Kumar, HOD, ECE Department, addressing the gathering

Faculties and Audience attending Guest lecture

ATTENDANCE SHEET

SRI VENKATESWARA COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

[illegible]

SRI SAIRAM ENGINEERING COLLEGE - DAY 1

NAME	EMAIL ID	PHONE NO.	SIGNATURE
[illegible]	[illegible]	[illegible]	

SRI SAIRAM ENGINEERING COLLEGE - DAY 2

NAME	EMAIL ID	PHONE NO.	SIGNATURE
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	
S M [illegible] Kumar	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	

SAIRAM INSTITUTE OF TECHNOLOGY - DAY 2

NAME	EMAIL ID	PHONE NO.	SIGNATURE
[illegible]	[illegible]@sairamtap.edu.in	[illegible]	
C SAIVARSHAA	[illegible]@sairamtap.edu.in	[illegible]	
NANDHITHA B	[illegible]@sairamtap.edu.in	[illegible]	
[illegible] R	[illegible]@sairamtap.edu.in	[illegible]	
KRITHIKA G	[illegible]@sairamtap.edu.in	[illegible]	
KANNAN S	[illegible]@sairamtap.edu.in	[illegible]	
RAHUL V	[illegible]@sairamtap.edu.in	[illegible]	
D. Pooja [illegible]	[illegible]	[illegible]	
S. Sai [illegible]	[illegible]@gmail.com	[illegible]	

[illegible] Day-2

REPORT ON PROMPTIFY

Promptify was organized as a part of Upagraha'23 by the Department of Electronics and Communication Engineering. The event aimed at bringing out the technical and prompting skills of the participants and also to check their ability to complete a task in the timeframe provided. A total of 40 teams (80 students) participated in the event.

Commencement of the event	October 11th 2023(12.30 PM IST)
End of the Event	October 11th 2023(3.00 PM IST)
Total Teams	40
Total Participants	80

The judges for the event were Mr. K.Venkatesh, Assistant Professor and Dr.S.Vijayanand ,Assistant Professor.

The event commenced at 12.30 pm and the venues for the event were CB531 and CB532.The rules and regulations were explained to the participants by the student coordinators. The round 1 was a Pen and Paper round in which the questions were based on Electronics and Communication related clues and AI generated images. The duration of the first round was 30 minutes.

Out of the total 40 teams, 11 teams were shortlisted based on their scores and were qualified to the second round. In the second round, participants were expected to handle tasks that will be revealed spontaneously. The winners were determined by their ability to complete these tasks by using AI tools within the specified time limit.

The event coordinators were Mr.Aadhithya Narayanan B (III-year ECE-A) and Mr.Mukesh S (III-year ECE-B).

Flyer of the Event:

Attendance Sheet of the event:

Snapshots of the Event:

Round 1 (pen and paper round)

A team is being evaluated by Mr.K.Venkatesh, Assistant Professor, ECE in the Round 2

Sample Question paper:

Round 1:

Question 1:

Clue 1: It is used for power regulation and conversion in electronic circuits.

Clue 2: It operates based on the principles of self-inductance.

Question 2:

Clue 1: This component is often called the "brain" of electronic devices.

Clue 2: It can perform arithmetic and logical operations.

Question 3:

Clue 1: It is commonly used in displays and indicators.

Clue 2: It emits different colors based on the materials used.

Question 4:

Clue 1: It is commonly used in audio systems and speakers.

Clue 2: This component increases the power of electrical signals.

Round 2:

1. Space Calculator - Calculate Light-Year Distance

- Description: Participants creates a program that calculates the distance in light-years to a specified celestial object.

Prompt Question: Write a program that calculates the distance in light-years of different Galaxies.

2. Alien Language Translator - Code Challenge:

Description: Participants program that translates English text into an imaginary alien language.

Prompt Question: Create a program that translates 'Hello, Earthlings!' into the Zorblatt language.

3. Space-themed Clock - Countdown Timer:

Description: Participants use a program and tinker or any other GUI to create a space-themed countdown timer with custom messages.

Prompt Question: Build a Python program with tinker that counts down from 10 minutes, displaying 'Blast-off in T-minus' messages.

4. UFO Tracker - Real-time Data Visualization:

Description: Participants design a program that retrieves and displays real-time UFO sighting data on a map.

Sample Prompt Question: Create an application that visualizes recent UFO sightings on a world map.

5. Astronomical Calculator - Planet Data Retrieval:

Description: Participants code a Python tool to fetch and display data about celestial bodies (e.g., planets, moons).

Prompt Question: Write a program that retrieves and prints information about Saturn's rings.

6. Cosmic Quiz App - Interactive Quiz Game:

Description: Participants build a Python-based quiz app on space-related topics with multiple-choice questions.

Prompt Question: Develop a Python quiz app on the topic of 'Exoplanets' with 5 multiple-choice questions.

7. Mars Rover Simulator - Remote Control Program:

Description: Participants create a Python script to simulate remote control of a Mars rover.

Prompt Question: Write a Python program to remotely control a Mars rover's movement (forward, backward, left, right).

8. Space Mission Planner - Optimal Route Finder:

Description: Participants write a Python program that finds the optimal route for a spacecraft to reach a distant planet.

Evaluation Sheet:

Round 2:

[illegible]

[illegible]

[illegible]

DATE: [illegible]

S.No	Team Name	Team Members	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Total Marks
1	[illegible]	[illegible] [illegible]						45
2	[illegible]	[illegible] [illegible]						39
3	[illegible]	[illegible] M Ajay Kumar [illegible]						45
4	[illegible]	[illegible] [illegible]						43
5	[illegible]	[illegible] [illegible]						38
6	[illegible]	[illegible] [illegible]						30
7	[illegible]	[illegible] [illegible]						40
8	FUTURE [illegible]	[illegible] [illegible]						42
9	[illegible]	[illegible] [illegible]						35
10	[illegible]	[illegible] [illegible]						49
11	[illegible]	[illegible] [illegible]						46
12								
13								
14								
15								

[illegible]
([illegible])
[illegible]
([illegible])

Winners of Promptify:

Place	Team Name	Participants Name	College
1	Cypher Assassins	B. Madhav V. Subash	Sri Venkateswara College of Engineering
2	Inventors	M. Abarajitha A.S. Ajay Kumar	Sri Venkateswara College of Engineering

Report by:

Mr. AADHITHYA NARAYANAN B (III-Year, ECE-A)

Executive Member, IETE-SF

REPORT ON ARDUINO ALLEY

Arduino Alley was organized by the Department of Electronics and Communication Engineering in association with the Electronics and Communication Engineers Association (ECEA), Institution of Electronics and Telecommunication Engineers Student Forum of SVCE (ISF SVCE), and Robotics and Artificial Intelligence Club (RAIC) as an event in Upagraha'23, ECE Department Symposium.

Commencement of the event	October 11th, 2023(10:30 AM IST)
End of the event	October 11th 2023(3.00 PM IST)
Total Teams	24 Teams
Total Participants	96

Event Description:

Arduino Alley comprised two thrilling rounds that tested the participant's knowledge and innovation. The rules and regulations were announced to the participants by the student coordinators.

Round 1: Arduino Knowledge Challenge (MCQs)

- Teams of four students each.
- Teams split into batches for MCQs.
- Average scores determined qualification for Round 2.
- Questions based on Arduino, sensors, and actuators.
- Students had to solve 25 questions in 30 minutes.

Out of the total 24 teams, 6 teams were shortlisted based on their scores and were qualified to the second round.

Round 2: Arduino Game Master (Sensor-Based Game Development)

- Participants created unique sensor-based games.
- Sensors and components provided for game development.
- Emphasis on creativity, functionality, and presentation.
- Duration of the event: 1.5 hours.

The event coordinators were Mr Parvesh R (III-year ECE-B) and Mr Kiran Yadav (III-year ECE-B). The faculty coordinators were Mr.V.Yokesh, Assistant Professor, Mr.R.Ramesh Kumar, Assistant Professor and Mrs.S.Radhika, Assistant Professor.

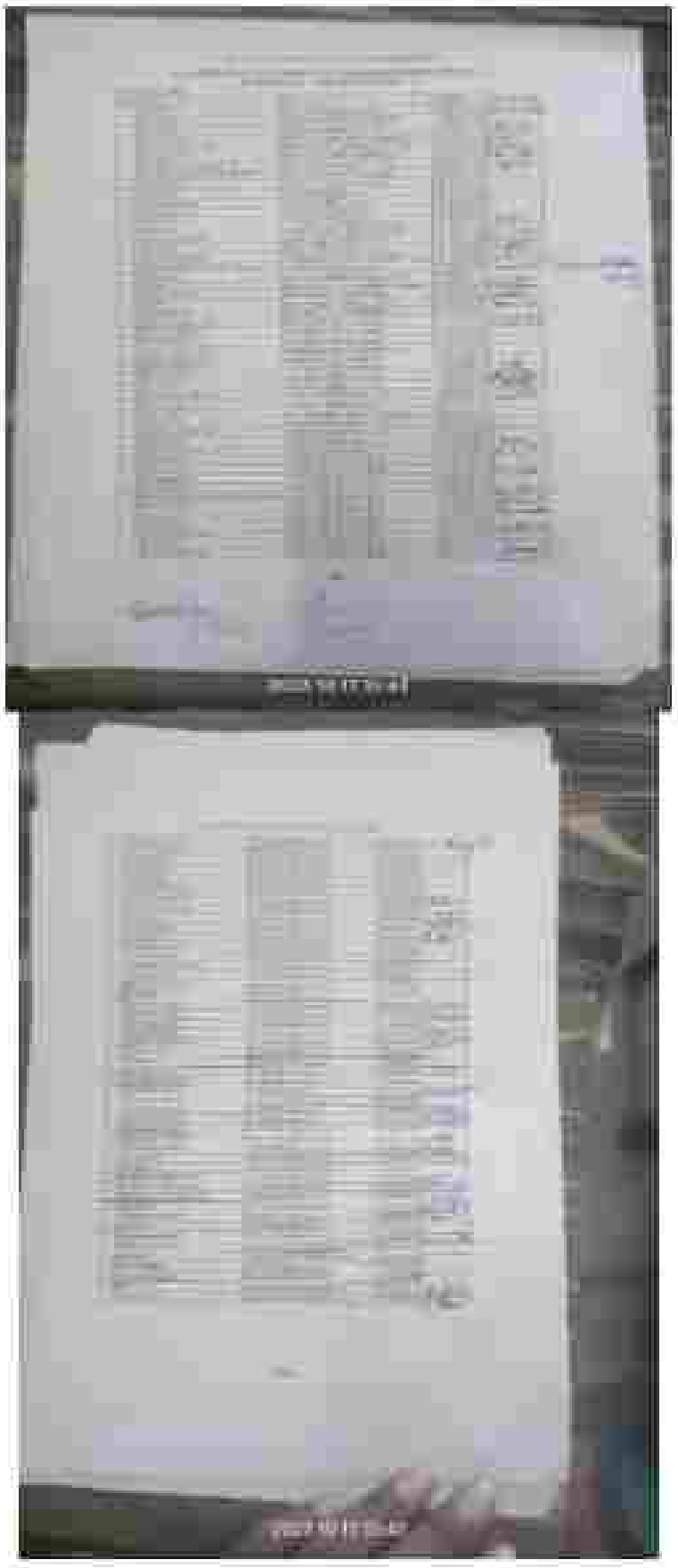
We would like to extend our heartfelt gratitude to our event sponsor, F22 Labs, for their invaluable support. Special thanks to Mr.Shubham Ambastha and Mr. Keshan Surana from F22 Labs for participating as judges in Round 2, and bringing their expertise to evaluate the participants.

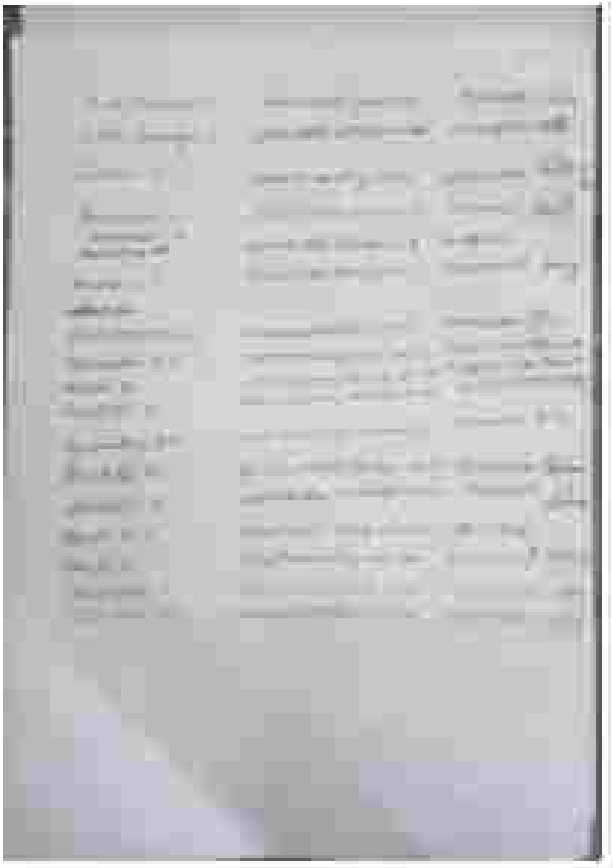
Teams were assessed based on the following criteria:

- Idea of the game.
- Innovation of the solution.
- Time of implementation.
- Demonstration.

Flyer of the event :

Attendance sheet of the event:





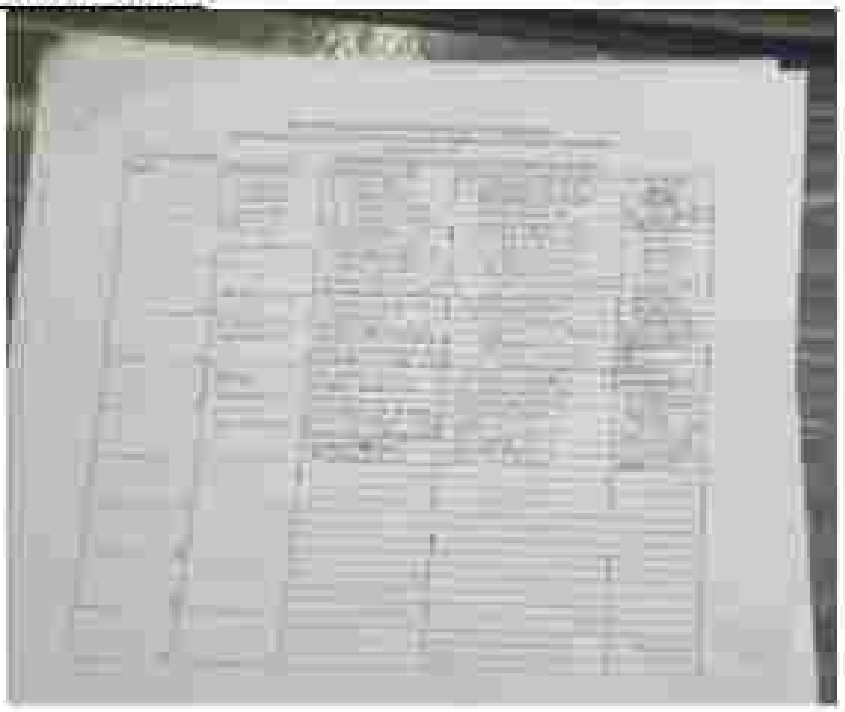
SAMPLE QUESTION PAPER :ROUND 1:

Snapshots of the event :

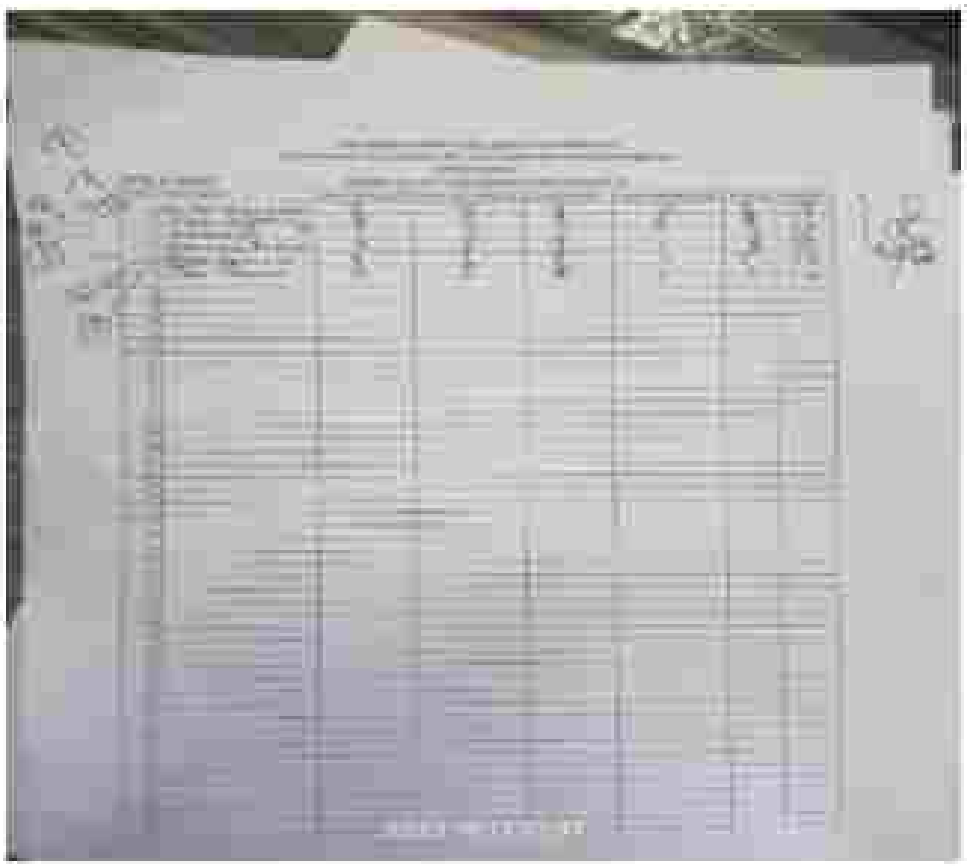
Mr Shubham Ambastha and Mr. Keshav Surana evaluating the answer sheets

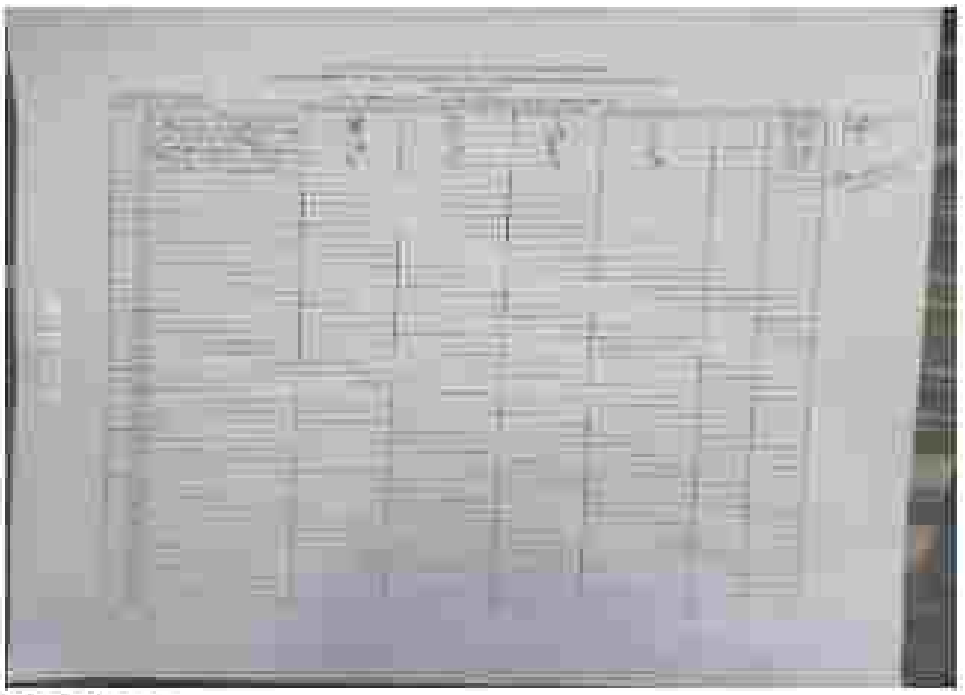
Round 1 : Participants solving the MCQ's

Round 2 Attendance Sheet:



Round 2 Evaluation Sheet:





Winners of the event

S.NO	POSITION	TEAM NAME	PARTICIPANTS NAME	COLLEGE NAME
1	Winner	Cyber Corps Elite	S Ashish	SVCE
			K Jagadish	
			K Gunnavel	
			A S Ajay Kumar	
2	Runner Up	Red Gnomes	Sriram Rajee G	SVCE
			Srinidhi K	
			Stefanie M Olivia	
			Sriram S	

Report by:

Mr. PARVESH R (III Year, ECE B)

Executive Member, IETE-SF

REPORT ON VENTURE VISION

Venture Vision was organized by the department of Electronics and Communication Engineering in association with the Electronics and Communication Engineers Association (ECEA), Institution of Electronics and Telecommunication Engineers Student Forum of SVCE (ISF SVCE) and Robotics and Artificial Intelligence Club (RAIC) as an event in Upagraha'23, ECE Department Symposium. Venture Vision was aimed at scouting for individuals with best pitching abilities. A total of 20 teams (80 students) registered for the event.

Commencement of the Event	October 11th 2023 (11.00 AM IST)
End of the Event	October 11th 2023 (3.00 PM IST)
Total Teams	20
Total Participants	80

The rules of the event were explained to all the participating teams by the event co-ordinators. Venture Vision consisted of two rounds; the first round required the teams to pitch a project idea specified to them. The teams were divided equally among a panel of 3 judges. Each team was given 5 minutes of preparation time and 5 minutes for presenting. The round lasted for about an hour. Out of 20 teams, 9 teams were selected for the second round, which was held from 1.45 PM. The second round required the team to pitch the allocated companies to the judges. Each team was judged based on 5 unique but necessary categories. After the panel of judges discussed amongst themselves, the winner and runner teams were announced. The event was concluded by 3.00 pm.

The event coordinators were Mr.Prabhu Dharshan R (III-year ECE-B), Mr.Anish Krishnan (III-year ECE-A) and Ms.Subasree S S (III Year ECE-C). The judges for the event were Dr.M.Bindhu, Associate professor,Mr.M.K.Varadarajan, Assistant professor and Mrs.C.Gomatheeswari Preethika, Assistant professor.

Flyer of the event:

Snapshots of the Event:

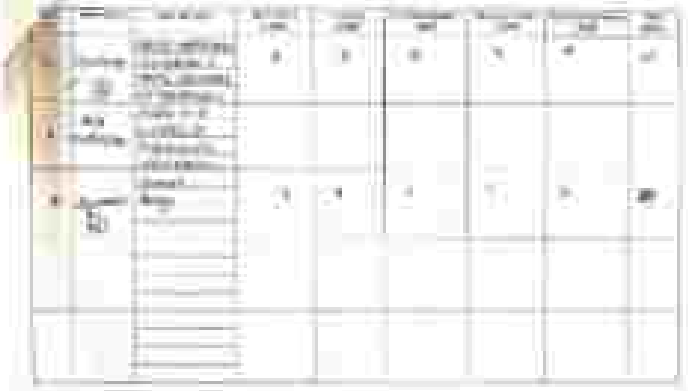
Team pitching their product to Mrs. C.Gnanatheeswari Preethika, Assistant Professor, ECE

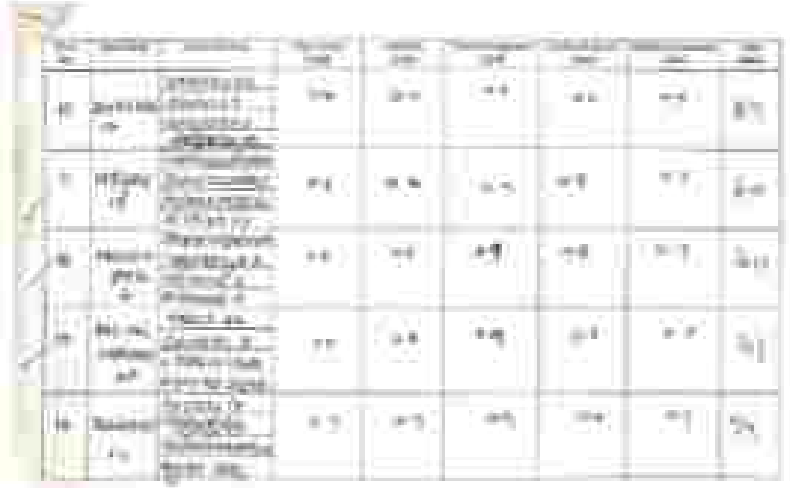
Participants of the event

Team pitching their product to Mr.M.K.Vimalarajan, Assistant Professor, ECE

Evaluation Sheet:

Round-1

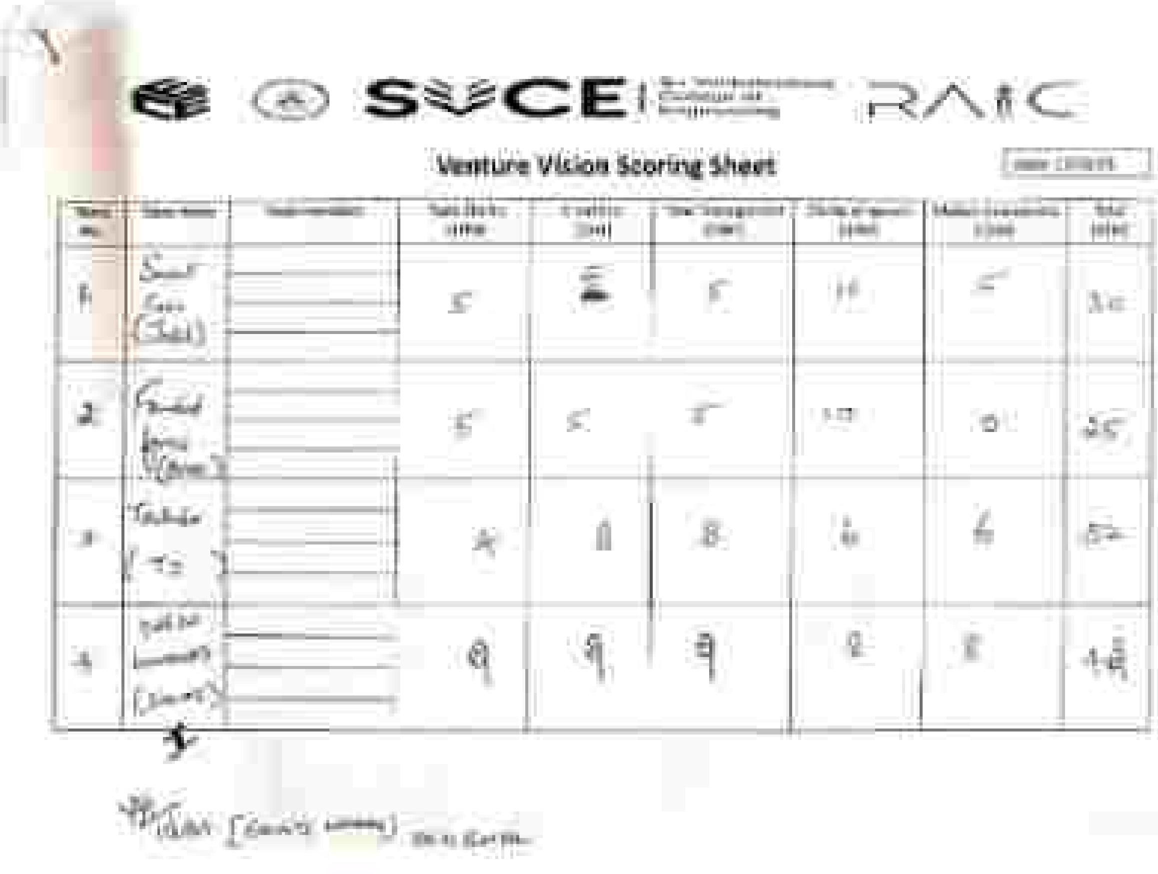




Round 2:

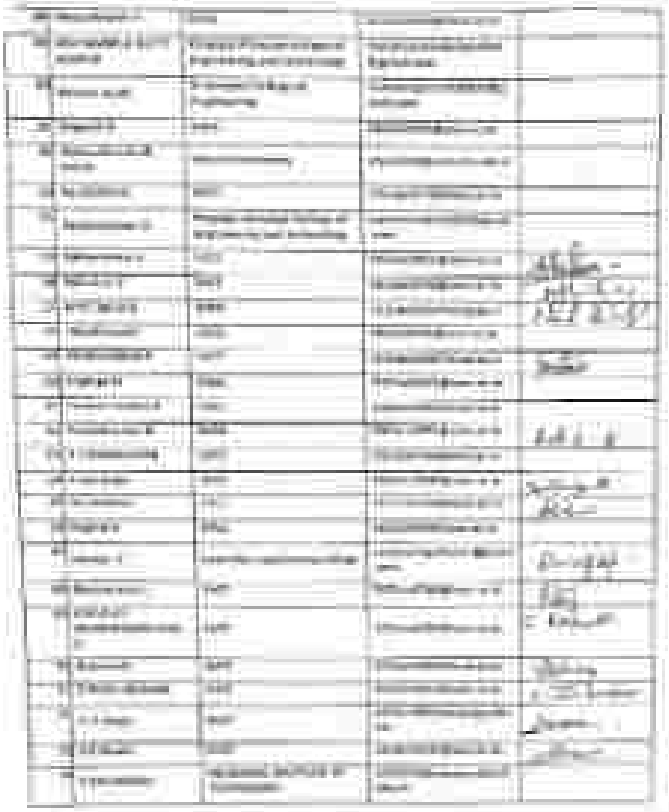
Round-2

Venture Vision Scoring Sheet



Venture Vision Scoring Sheet

Attendance Sheet of the event:



Winners of the Event:

Place	Team Name	Members Name	College
1st place	One-Hit Wonders	Vikash S.K Srumathi.R S.Tamil Nilavan S.Shakeel Irfan	Sri Venkateswara College of Engineering
2nd place	Cracks	Karthikey Mishra Harish K.P Jayanth. J Kiruthika.V	R.M.K Engineering College

Report by:

Mr.ANISH KRISHNAN (III-Year, ECE-A)

Executive Member, ECEA

REPORT ON ALGORITHM ALCHEMY

Algorithm alchemy was conducted on 11th October 2023 between 11.30 AM &3.15 PM. This event was a part of the national-level technical symposium Upagraha'23 conducted by the Electronics and Communication Engineering Department, SVCE. Algorithm Alchemy was a coding event conducted to check the understanding of basic coding skills of participants.

Commencement of the event	October 11th2023(11.30 AM IST)
End of the event	October 11th 2023(3.15 PM IST)
Total teams	30
Total participants	60

The event consists of 2 rounds. The first round was MCQ which consisted of 14 questions, to sharpen problem-solving skills by hunting the bugs in pen-paper mode. Based on the scores, the top 10 teams were shortlisted for round 2, which takes to an online coding round in the Hacker Rank platform, which consists of 3 problem statements but there was a surprise twist of swapping the participants of the team, each for 10 mins and last 15 minutes both the participants were allowed to code together to solve the tasks. The judgment was made based on the points of the problem statements solved and trivia scores.

Mrs. A. Ramya, Assistant professor and Mrs.M.Kavitha, Assistant professor,were the judges for the event. The student coordinators for the event were, Ms.S.Lathikaa Shri, Ms.P.U.Saamhavi, Mr.S.Kiran Sekar, and Mr.H.Rajit.

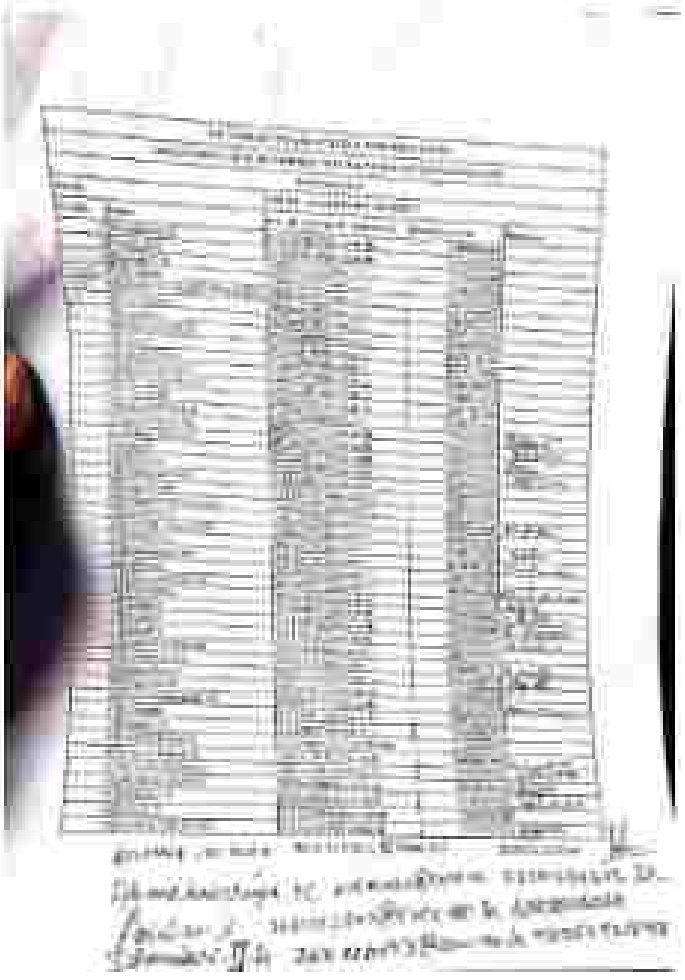
Flyer of the event

Snapshots of the event:

Round 1 Pen and paper mode

Speakers from P22 evaluating the participants

Attendance sheet of the event:



Sample Questions from Round 1:

1)def find_average(nums):

```
    total = 0
    for num in nums:
        total += num
    average = total / len(nums)
    return average
```

The above code is supposed to calculate the average of a list of numbers and print it. However, there is a bug in the code. Can you identify and fix it?

2)

```
#include <iostream>
using namespace std;
int main()
```

```
{
int age;
cout << "Enter your age: ";
cin >> age;
if (age >= 18)
{
cout << "You are an adult." << endl;
}
else
{
cout << "You are a minor." << endl;
}
return 0;
}
```

```
3) #include <iostream>
using namespace std;
int main()
{
int n;
cout << "Enter a number: ";
cin >> n;
int factorial = 1;
for (int i = 1; i <= n; i++) {
factorial *= i;
}
cout << "Factorial of " << n << " is: " << factorial << endl;
return 0;
}
```

```
4)def outer_function():
    x = 10
    def inner_function():
        x += 5
```

```
        return x
    result = inner_function()
    print("Result:", result)
outer_function()
```

Questions from Round 2

1)Two friends like to pool their money and go to the ice cream parlor. They always choose two distinct flavors and they spend all of their money. Given a list of prices for the flavors of ice cream, select the two that will cost all of the money they have.

Sample Input

```
STDIN       Function
-----       --------
2           t = 2
4           k = 4
5           cost[] size n = 5
1 4 5 3 2   cost = [1, 4, 5, 3, 2]
4           k = 4
4           cost[] size n = 4
2 2 4 3     cost = [2, 2, 4, 3]
```

Sample Output

```
1 4
1 2
```

2) A weighted string is a string of lowercase English letters where each letter has a weight. Character weights are to from to as shown below:

The *weight of a string* is the sum of the weights of its characters. For example: A *uniform string* consists of a single character repeated zero or more times. For example, ccc and a are uniform strings, but bcb and cd are not. Given a string, let be the set of weights for all possible uniform contiguous substrings of string . There will be queries to answer where each query consists of a single integer. Create a return array where for each query, the value is Yes if , Otherwise, append No.

Working from left to right, weights that exist are:

```
string  weight
a       1
b       2
bb      4
c       3
cc      6
ccc     9
d       4
dd      8
ddd     12
dddd    16
```

Now for each value in , see if it exists in the possible string weights. The return array is ['Yes', 'No', 'No', 'Yes', 'No'].

Sample Input 0

```
abccddde
6
1
3
12
5
9
10
```

Sample Output 0

```
Yes
Yes
Yes
Yes
No
No
```

3) An arcade game player wants to climb to the top of the leaderboard and track their ranking. The game uses Dense Ranking, so its leaderboard works like this:

- The player with the highest score is ranked number on the leaderboard.
- Players who have equal scores receive the same ranking number, and the next player(s) receive the immediately following ranking number.

Example

Ranked= [100,90,90,80]

Player= [70,80,105]

The ranked players will have ranks 1,2 , 3 and 4 respectively.

Evaluation sheets:

Winners of the event:

SL.NO	POSITION	TEAM NAME	PARTICIPANT NAME	COLLEGE
1	WINNER	PARTY SMASHERS	MADHUSUDHANAN K JESWIN SWINTON J	SRI VENKATESWARA COLLEGE OF ENGINEERING
2	RUNNER	DED SEC	DHAYANIDHI .R .S GOKUL NAMBIAR.R	SRI VENKATESWARA COLLEGE OF ENGINEERING

Report by:

Ms LATHIKAA SHRI.S (III year, ECE-B)

Executive Member, ECEA

REPORT ON PROJECT EXPO

Project Expo was organized by the Department of Electronics and Communication Engineering as an event in Upagraha'23, ECE Department Symposium. Project Expo was aimed at scouting for the best projects that the students have come up with on their own. A total of 15 teams (50 students) registered for the event, out of which 3 teams were awarded.

Commencement of the event	October 11th 2023 (10.30 AM IST)
End of the event	October 11th 2023 (12.30 PM IST)
Total Teams	15 Teams
Total Participants	50

The event commenced at 10.30am and the participants were given time to setup their project for display and additional time was provided for making any improvisations. The panel of judges evaluated the participants based on the following criteria: novelty and innovation of the solution, quality of implementation, people impact and the quality of their presentation. A total of 15 teams consisting of 50 participants were evaluated. Out of these, 3 teams were scrutinized. The event was concluded by 12.30 pm.

The event coordinators were Mr.Umesh Anandh S (III-year ECE-C),Ms.Srivarshini S (III-year ECE-C) and Ms.Deepika S (III-year ECE-A).

The judges for the event were Dr.M.Athappan, Associate professor, Dr.A.Prasanth, Assistant professor, Mrs.K.S.Subhashini, Assistant professor, Mrs.S.Kalyani, Mrs.K.Sruvidhya, Assistant professor, Mr.Senthil Rajan, Assistant professor and Mrs.R.Kousalya, Assistant professor.

Flyer of the event:

Evaluation sheet:

Attendance sheet of the event:

Winners of the event:

PLACE	TEAM NAME	MEMBERS NAME	COLLEGE
1ST PLACE	INNOVATIVE SPHERE	• Sharven G S • Aaron Ranjith S • BalaKumaran T • Mouli Vignesh K	Jerusalem College of Engineering
2ND PLACE	DEVICE DREAMERS	• B. Shruthika • V. Sai Sruthi	Sri Venkateswara College of Engineering
3RD PLACE	CYPHER ASSASINS	• Madhav B • Subash V	Sri Venkateswara College of Engineering

Report by:

Ms.SRIVARSHINI S (III-Year_ECE-B)

Honorary Treasurer, IETE-SF

REPORT ON CONNECTIVERSE

Connectiverse was organized as a part of Upagraha'23 by the Department of Electronics and Communication Engineering. Connectiverse was organized to assess the participants' technical skills, logical reasoning, creativity, and problem-solving capabilities. The event consisted of three rounds. Connectiverse was conducted on 12th October 2023 between 9:00 AM & 12 PM.

Commencement of the event	October 12th 2023(9 AM IST)
End of the event	October 12th 2023(12 PM IST)
Total Teams	51
Total Participants	102

The judges for the event were Mr.S P Sivagnana Subramanian, Assistant Professor and Mrs S.M Abinaya, Assistant professor.

The event consisted of a total of 3 rounds and it commenced at 9AM in CB531 and CB532. The rules and regulations were announced to the participants by the student coordinators.

The first round is rearranging letters, filling the crossword, and forming a word using the letters in the shaded boxes. As per the evaluation criteria, 18 teams were shortlisted for Round 2 which is a memory-based viva round. The further short listing enabled the best 7 teams to participate in the final round, which is a buzzer round called connections, participants had to find the technical words by connecting the pictures that were presented on the screen. The final judgment was made based on the number of words found by each team within the time limit.

The student coordinators for the event are Mr. Lok Ranjan P (III-year ECE-B) and Ms P.U Saambavi (III-year ECE-B).

Flyer of the event:

Snapshots of the event:

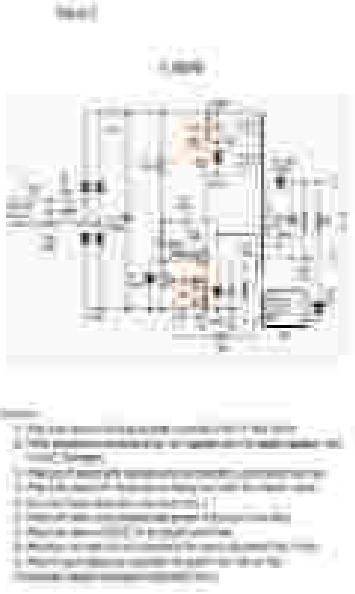
Glimpse of Round 1-Crossword

Round 2- Memory based role round

Round 3- Participants trying to find the words

Sample Question Paper for Round 1:

Question Paper for Round 2:



Sample Questions for Round 3:

Wheatstone Bridge

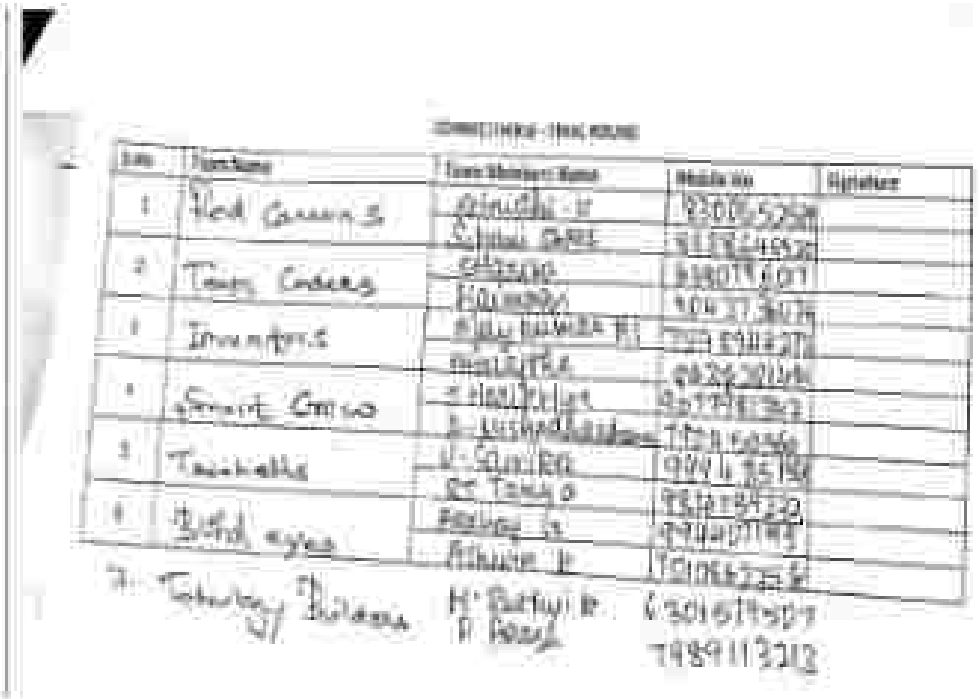
Dielectric constant

Attendance Sheet:

Round 1

Round 2

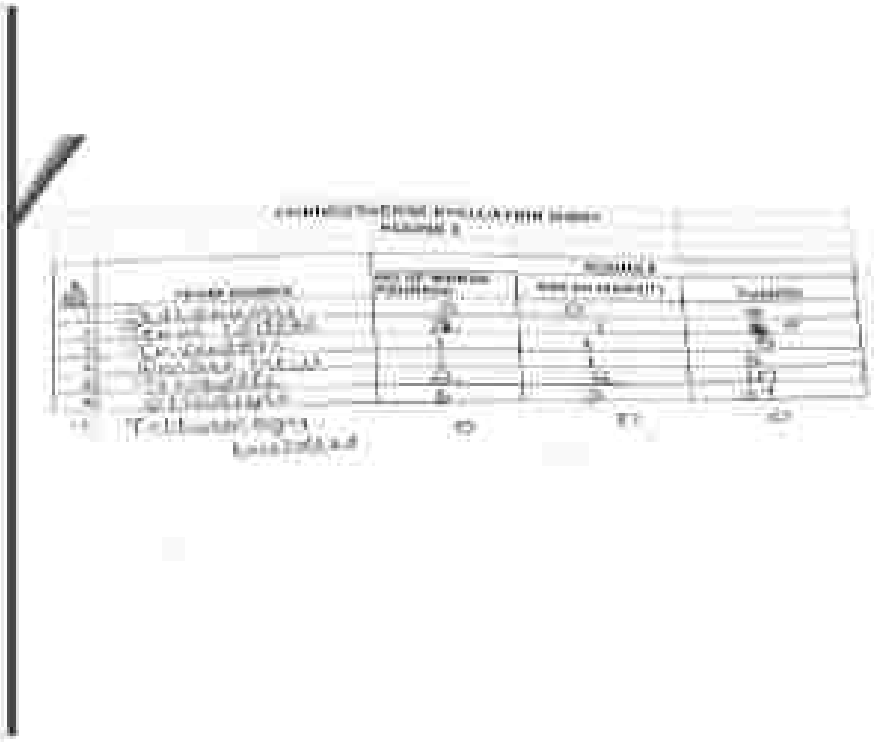
Round 3



Evaluation Sheet:

Round 2

Round 3



Winners of the Event:

Place	Team Name	College Name	Members
I Place	BLINDEYES	Sri Venkateswara College of Engineering	Ashwin R
			Akshay G
II Place	TACOBELLS	Sri Venkateswara College of Engineering	Sasrika U
			R J Tanya

Report by:

Mr. LOKRANJAN P (III-year, ECE B)

Executive Member, ECEA

REPORT ON E-GADGET MARKETPLACE

E-Gadget Market place was conducted on12th October 2023.This event was a part of the national-level symposium Upagraha'23 conducted by the Electronics and Communication Department, SVCE. E-Gadget Marketplace was a technical event conducted to check the understanding and application of Electronics devices and circuits among the students. A total of 32 students participated in the event.

Commencement of the event	October 12th 2023 (9:00AM IST)
End of the event	October 12th 2023 (3:00PM IST)
Total Teams	16
Total Participants	32 participants

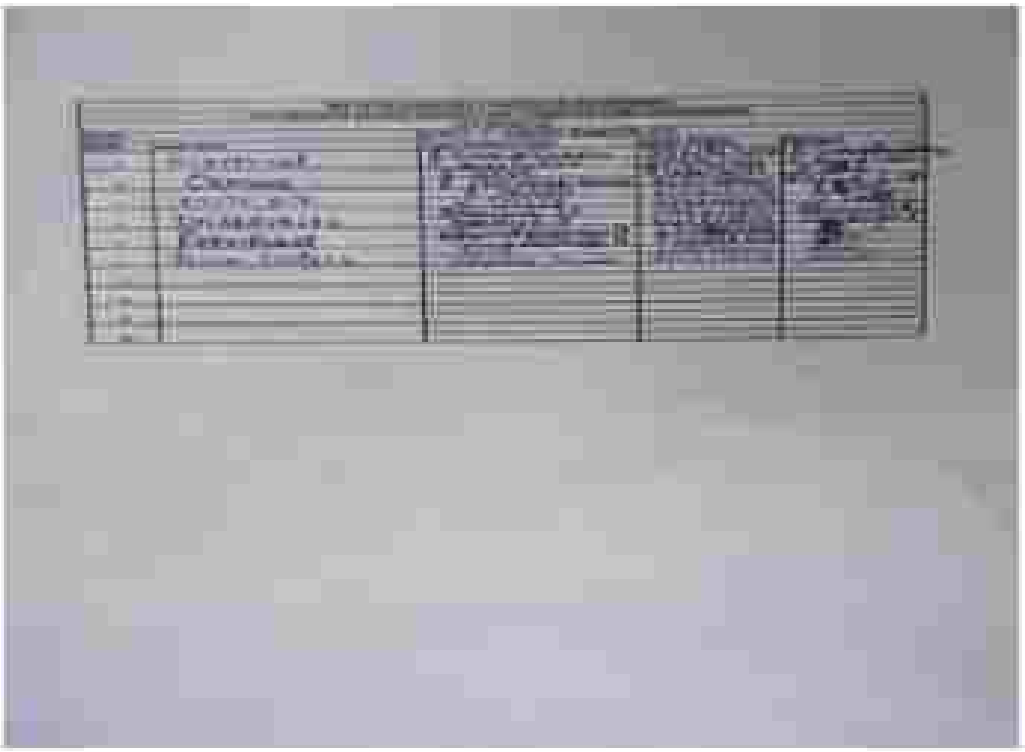
The event consists of 2 rounds. The first round was MCQ based, in this round the teams will be given with a problem case where they would be given with various devices as choices, from which they would be instructed to choose one device to resolve the problem and should give a strong and detailed justification for the same choice, justification will be evaluated by judges. Based on their cut-off score in round 1, the top scorers were shortlisted for round2.

In second round, a circuit design would be given to each team, and initially the teams would be provided with a capital value. The components required for the circuit will be provided but with a particular capital value. The teams should select the required and most economical components for their circuit and build, also execute to get the required output. Here both the capital value used and the time taken will be considered for the scoring. The judgement was done based on the score, time taken and viva to complete the task.

Mrs. Mary Cynthia, Assistant professor, Mrs. S. M. Mekzabeen, Assistant professor and Mr. D. Silambarasan, Assistant professor, were the judges for the events. The student coordinators and mentors for the event were Mr. R. Nandhanan and Ms.S.Kavitha.

Flyer of the event:

Attendance Sheet of the event:



Snapshots of the event:

Participants engaged in a quiz

Participants creating a dance based on the requirements

Participants describing connections to the exam judges

Evaluation Sheet:

Question Paper for Round 1(MCQ):

SRI VENKATESWARA COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

UPAGRAHA'23

TEAM NAME:

TEAM LEAD MOBILE NUMBER:

E-GADGET MARKETPLACE

ROUND –I

SET-1

1. Question: In order to intricately synchronize two distinct operations within your circuit, which electronic component should you employ for the meticulous generation of time delays?

Choices:

a) IC 4066
b) Capacitor
c) IC 555
d) IC LED

2. Question: You are tasked with enhancing the strength of feeble electrical signals in your circuit design. Which electronic component should you strategically select for this purpose?

Choices:
a) Op-amp
b) Capacitor
c) Rectifier
d) Transformer

SRI VENKATESWARA COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

UPAGRAHA'23

TEAM NAME:

TEAM LEAD MOBILE NUMBER:

E-GADGET MARKETPLACE

ROUND -I

SET-7

1. Question: In the realm of your project, where the goal is to convey data across vast expanses without the constraints of wires, which electronic component stands as the signal emissary, orchestrating the symphony of wireless communication?

Choices:
a) Transmitter
b) Capacitor
c) Antenna
d) Transistor

2. Question: In the realm of your project, where the pursuit is the exacting measurement of force, which electronic instrument should you employ as your precision maestro, conducting the delicate symphony of force measurement with finesse?

Choices:
a) Pressure sensor
b) Heat sensor
c) Weight sensor
d) Temperature sensor

Circuit Design for Round 2:

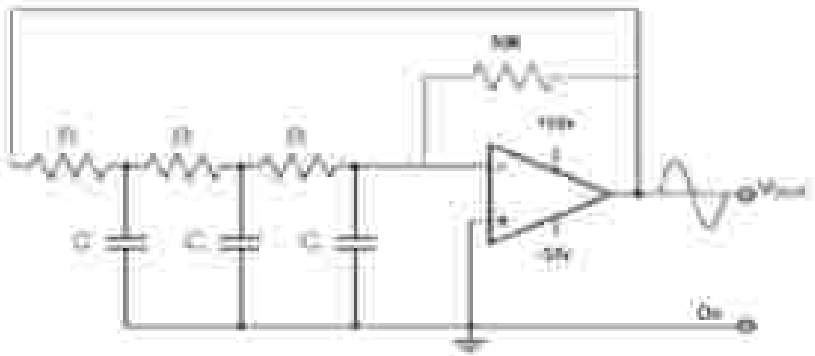


Diagram:

Get a Sine wave as Output with 2V Amplitude at 0 sec time period.

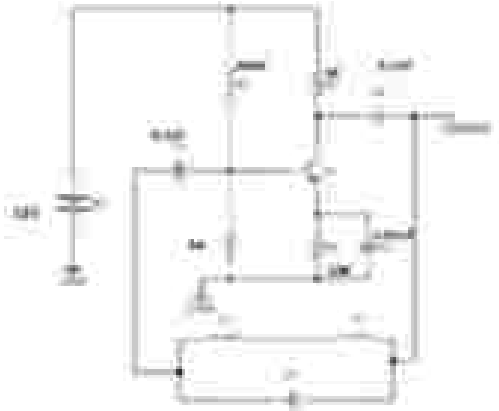


Diagram:

Get a Sine wave as Output with 2V Amplitude at 2 sec time period

Winners of the event;

S.NO	POSITION	TEAMNAME	PARTICIPANTSNAME	COLLEGE
1	WINNER	ELECTRICAL	R GNANESWARAN S ARAVINDAN	Adhiparasakthi Engineering college, Melmaruvathur
2	RUNNERUP	INCREDIBLES	HARIPRIYA J DHANUSHRI J	SVCE

Report By:

Mr.NANDHANAN R (III Year, ECE-B)

Mentor, RAIC

REPORT ON INTELLECT NEXUS

Intellect Nexus was organized by the Department of Electronics and Communication Engineering as an event in Upagraha'23, National level Technical Symposium. Intellect Nexus was aimed at scouting for the best research paper by the students. A total of 42 teams (102 students) registered for the event, out of which 30 teams (80 students) were shortlisted based on their paper's abstract that was submitted during registration process.

Commencement of the event	October 12th 2023 (10.30 AM IST)
End of the event	October 12th 2023 (12.30 PM IST)
Total Teams	42 Teams
Total Participants	102

The rules of the event were explained to all the participating teams by the event co-ordinators. Paper Presentation consisted of one straight forward round, where shortlisted teams were equally divided among 5 panels of judges, for evaluation. All the judges took around an hour to analyse their set of papers. Out of the 30 teams shortlisted, 3 teams were given prizes after the individual judgement was completed. For each paper, a total of 50 marks were awarded based on 3 unique but necessary categories which are presentation, novelty and viva. After the panel of judges discussed amongst themselves, the winner and runner teams were announced. The event was concluded by 12.30 pm.

The event coordinators were Mr.Umesh Anandh.S (III-year ECE-C) and Mr.Anish Krishnan (III-year ECE-A). The judges for the event were Dr. P. Jothilakshmi, Professor,A-HoD, Department of ECE,Dr. N. Kumarathsaran, Professor ,Dr.R.Gayathri, Professor, Dr.M.Athappan, Associate Professor and Dr.D.Menaka, Associate Professor.

Flyer of the event:

Snapshots of the event :

Team presenting their paper to Dr. R. Gayathri, Professor, ECE

Team presenting their paper to Dr. P. Nithiyakumari, Professor, ECE

Team presenting their paper to Dr. D. Manjula, Associate Professor, ECE

Sample Paper presented by one of the teams:

RADIO WAVES AND ITS MAJOR IMPACT IN COMMUNICATION

Dennis Chibwe, Hammond S

Radio Waves

Radio waves refer to the electromagnetic waves that are transmitted across space from one point to another without any physical medium through which the radio waves travel and the various objects that may appear in the path. The properties of the path by which the radio signals will propagate governs the level and quality of the received signal.

Radio Propagation

Radio propagation is the way radio waves travel or propagate when they are transmitted from one point to another and effectively the medium in which they travel and in particular the way they propagate around the Earth or various parts of the atmosphere.

Factors affecting radio propagation

There are many factors that affect the way in which radio signals or radio waves propagate. These are determined by the

Reflection, refraction and diffraction may occur. The resultant radio signal may also be a combination of several signals that have travelled by different paths. These may add together to achieve from one another and in addition to this the signals travelling via different paths may be delayed causing distortion of the resultant signal. It is therefore very important to know the likely radio propagation characteristics that are likely to prevail.

There are many radio propagation scenarios in real life. Often signals may travel by several means, radio waves travelling using one type of radio propagation interacting with another. However to build up an understanding of how a radio signal reaches a receiver, it is necessary to have a good understanding of all the possible methods of radio propagation. By understanding these, the limitations can be better understood along with the performance of any radio communications system that are used.

How do radio waves carry information?

The basic principle is simple. At one end, a transmitter "encodes" or modulates messages by varying the amplitude or frequency of the wave – a bit like Morse code. At the other, a receiver tuned to the same wavelength picks up the signal and 'decodes' it back to the desired form: sounds, images, data, etc.

All wireless communication systems, from the home remote control up to the satellite, are based on this principle, even though increasingly complex technologies are of course used to encode these electromagnetic signals, improve their quality, increase the amount of information or make transmissions secure.

We use radio waves in almost every aspect of our daily lives. In the morning we get the latest news from an AM or FM radio; throughout the day such as our mobile, keyfobs or parking meter using NFC contactless technology, they enable us to alert the authorities in case of an emergency (police, fire brigade, ambulance); and they also enable terrestrial objects to communicate thanks to consumer devices such as Wi-Fi, Bluetooth, LORA, DECT... and of course private and professional communication. They have become indispensable.

An Antenna Type

An antenna with a parabolic shape that concentrates electromagnetic waves, such as radio waves, microwaves, or satellite signals, onto a single point is referred to as a parabolic antenna, also known as a parabolic reflector. Highly focused and directional signal reception or transmission is made possible by this design. Due to their capacity to capture and transmit signals with high gain and little interference, parabolic antennas are frequently used in applications like satellite communication, microwave links, and radio telescopes.

History of an Antennas

The first radio antennas were built by Heinrich Hertz, a professor at the Technical Institute in Karlsruhe, Germany. Heinrich Hertz's well-loaded half-wave dipole transmitting antenna and resonant half wave receiving loop operating at $\lambda = 8$ m in 1886.

Antennas

An antenna (or aerial) is an electrical device which converts electric power into radio waves, and vice versa. It is usually used with a radio transmitter or radio receiver. In transmission, a radio transmitter supplies an oscillating radio frequency electric current to the antenna's terminals, and the antenna radiates the energy from the current as electromagnetic waves (radio waves). Antennas are our electronic eyes and ears on the world.

Walkie-Talkie

A walkie-talkie is a portable, hand-held two-way radio transceiver. Its creation during World War II has variously been attributed to Donald Hings, Motorola engineering teams, radio engineer Alfred J. Gross, and Henryk Magnuski. Similar versions were initially made for infantry, field artillery, and tank groups, and after the war, walkie-talkies were utilized for public safety, then for business and construction site work.

All radios require batteries to function, but every radio is found with a full battery included. To use a radio, right-click it in the inventory or the world and select "Device Options" to open a control panel window. Here you can see information about the radio's specifications and current settings, power it on or off, remove/replace the battery, adjust the volume, add or remove headphones for stealthy listening, mute the mic, and select and edit preset frequencies.

Walkie Talkies are two-way radios and will transmit and reproduce voices at a distance. "Voices" includes both the Shout command used to draw zombies' attention, and chat messages in multiplayer. This can be prevented on the transmitting radio by muting the mic. The reproduction will be silent to nearby players and zombies if the receiving radio is using ear buds; otherwise, it will make noise in the surroundings depending on the volume setting.

The obvious use of this is for communication on multiplayer servers that have disabled global chat, but it can also provide a single-player tactic: throwing your voice to draw zombies where you want them. Place a radio anywhere, power it on, and tune it to a given frequency. Make sure it has no ear buds, and pump up the volume. Then tune a portable two-way to the same frequency, go to anywhere else within the transmitter's range, and Shout. Nearby zombies should converge on the receiving radio where you can evade them, snipe them from a rooftop, or—if you feel especially daring—toss a Molotov.

It is a good idea to use the Automated Emergency Broadcast System (AEBS) radio station, which is randomized every game. The player can then use some ear buds and listen to the AEBS, stealthily, anywhere. Alternatively, radios in vehicles can be tuned to the AEBS for more mobile listening. The AEBS is important to listen to for the helicopter event and the power shutoff.

Development

The idea of walkie-talkies did not get much interest until the war started in 1939. After a few years, the Motorola team had improved them so that the army could use them. There were also vehicle and tank versions.[1] The British, Germans, and Americans all had their own versions.

Motorola also produced the hand-held AM SCR-536 radio during World War II, and it was called the "handie-talkie" (HT).[4] The terms are often confused today.

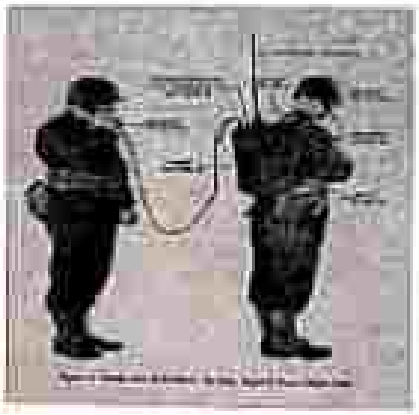
Form

- The first mobile communication devices were two-way radios.
- The first walkie talkie had a backpack like size.
- In space, two-way radios are used for communication.
- Technically, your cell phone functions as a two-way radio.

Range, Reliability

A longer antenna, a stronger battery, or a repeater can all extend the range of a basic. long range walkie-talkie's coverage by up to 15 miles. In ideal circumstances, a long-range walkie-talkie can travel up to 65 miles with the aid of these extra accessories.

Walkie talkies are more dependable in locations with poor reception because they don't rely on cellular networks. Additionally, the batteries in walkie-talkies can last for up to 48 to 50 months.



Components

Walkie-talkies work by using radio waves to transmit and receive audio messages between two or more devices. Here's a straightforward explanation of how they work:

1. Microphone: When you speak into the walkie-talkie, a microphone converts the sound into electrical signals.

2. Transmitter: These electrical signals are then sent to a transmitter, which encodes the audio into radio waves. The transmitter modulates the radio waves to match a specific frequency within the radio spectrum.

3. Antenna: The modulated radio waves are transmitted through the walkie-talkie's antenna. The antenna radiates the radio waves into the air.

4. Receiver: On the other walkie-talkie(s), there is a receiver with its own antenna. It picks up the radio waves transmitted by the first walkie-talkie.

5. Demodulation: The receiver demodulates the received radio waves, extracting the encoded audio signal.

6. Speaker: The audio signal is then sent to a speaker, which converts it back into sound that you can hear.

Depending on the power and frequency of the devices as well as any obstructions in the environment, this two-way communication process enables people using walkie-talkies to talk to each other in real-time over a limited range. Walkie-talkies are popular in many different industries, including public safety, construction, and outdoor activities. They are frequently used for short-range, point-to-point communication.

Related Devices and Alternatives

- ALO
- ADIA Small Talk
- Voxox
- Two Way Walkie Talkie
- HeyTell
- PocSayAnywhere
- Ranch PTT
- PositionPTT

Comparison of Walkie Talkie with Phones

There is no doubt that smartphones have changed the way we go about our lives. But, in many situations, they aren't the only communication option, and modern walkie-talkies are more than a match for them.

In this section, we look at various aspects of how the two methods compare in a head-to-head comparison.

1. Ease of use

It is easy to just say that walkie-talkies are simpler to use than mobile phones and leave it at that. After all, to communicate with a walkie-talkie is simply a matter of pressing a button and talking, whereas with a phone, you need to unlock it, pull up the right app, open your contacts, find one.

But the ease of use that a walkie-talkie offers runs deeper than just this. While this simplicity is the foundation of an efficient communication system, the benefits of one-click communication can be a game-changer.

One-to-many communication – While to one degree or another, a mobile solution can offer limited one-to-many functions, this is not achievable without software and technical means on the part of the users. Walkie talkies make this process as simple as pressing that manual button.

Simple to setup – Imagine a large team scenario when a new team member is introduced. If it's a company mobile phone, then a new phone will need to be set up from scratch with all the necessary software, contacts etc.

If they use their own phone, then most of the necessary steps will still be required. With a walkie-talkie solution, you simply hand them their radio, and the job's done!

Greater efficiency – Unlike mobile phones, which have a large range of functions, walkie-talkies are designed with one goal in mind – To make communication as efficient and simple as possible. In situations where communication is essential and reliable, walkie-talkies are the most efficient solution.

2. Operating limitations

Mobile phones are restricted by the necessity to be within range of a cell phone mast. This means that in many places where communication is of the highest importance, a mobile phone can let you down.

Rural and remote areas, tunnels, cottages, power cuts, all these factors can stop a mobile phone from working, just when you need it the most.

Compare this against walkie-talkies – Two-way radios are effectively their own broadcast mast, there is no reliance on third-party models or cell networks, as long as you are within range of your handset, a walkie-talkie works regardless of the location.

3. Cost

When comparing the two devices, the walkie-talkie option comes out as the clear winner in two distinct ways.

Purchase cost – It doesn't matter whether you draw a comparison between the top of the range models or entry-level models, A walkie-talkie solution will always come out as the cheaper option.

There is also what you get for your money. A cheap smartphone will undoubtedly underperform due to a constant source of frustration. Whereas even basic walkie-talkies will still provide instant and crystal-clear communication.

Ongoing costs – There are no contracts, no data or roaming charges, and no cell charges with two-way radios. Once the radios are purchased, that's the end of the costs.

4. Robustness

Whether we are talking about using them outdoors as a way of keeping in touch with the kids in Grey camp and in the garden, industrial scenarios, or anything in between, when it comes to robustness, walkie-talkies are the hands-down winner.

We all know that smartphones are delicate, but look at them wrong, and the screen can shatter. Two-way radios are many of them are designed to be all but indestructible for surviving and functioning in the harshest of circumstances, the even basic walkie-talkies are far more rugged than smartphones.

5. Battery life

Another area where cell phones can be seen down to with battery life. Even a good smartphone will close enough its battery

even with light usage. On a busy day, a smartphone might just limp through a workday without needing to be recharged.

On average, a good set of walkie-talkies will have double the battery life of a mobile phone, and even cheaper sets will easily outperform a mobile phone.

6. Safety features

Even if we look at some of the advantages of walkie-talkies that we have already covered, you can see how walkie-talkies are the clear winner when it comes to safety. Instant and dynamic communication without the dependence for a mobile signal makes it safety-critical situations. Two-way radios are the clear winner.

But that's even before we have considered the safety feature that many two-way radio models include. Amongst these are lone-worker functions, man-down features, and emergency broadcast buttons.

This makes them ideal as a safety tool for many business applications, but also for hikers, anglers, and extreme sports like mountain biking.

The Conclusion

When we draw a direct comparison between two-way radios and mobile phones in scenarios where both can possibly provide

Radio Waves impact on Military

Despite the challenges the military faces, there are still opportunities in radio technology. The military is always looking for new ways to improve its communications systems. This includes developing new radios, improving existing radios, and finding new ways to use radio waves.

One area that the military is currently exploring is using Radio Frequency systems in military electronics.

High-performance radio frequency systems are essential for the military. They enable soldiers to communicate with one another and coordinate their efforts in the field. However, these systems are also very expensive.

A way to reduce costs is to allow the public sector to access these systems. This would enable businesses and other organizations to use them for their own purposes, which would, in turn, help to reduce the cost of these systems for the military.

There are a number of benefits that would come from this arrangement, including increased competition and innovation in the development of these systems. In addition, it would allow the military to focus on its core mission rather than having to worry about managing and regulating these systems. Ultimately, this could lead to better outcomes for both the military and the public sector.

Radiation Pattern of Parabolic Antenna

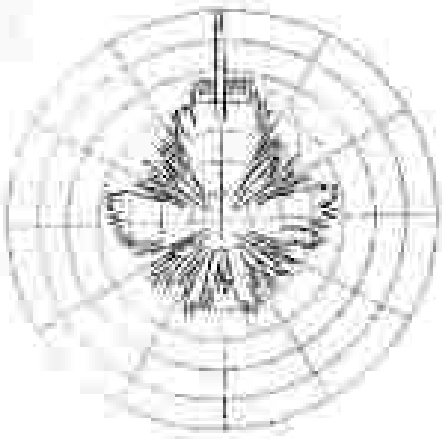
The radiation pattern of a parabolic antenna contains a major lobe, which is directed along the axis of propagation, and several small minor lobes. Very narrow beams are possible with this type of reflector.

The gain G of an antenna with parabolic reflector can be determined as follows:

G=16000/ΘAΘE

Θ Az = beam width in azimuth angle

Θ El = beam width in elevation angle



Ships and Aircrafts

Radio waves play a crucial role in both ships and aircraft for communication, navigation, and safety purposes. Here are some common uses:

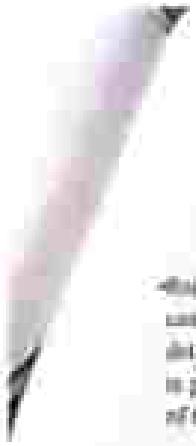
Communication: Radio waves are used for voice and data communication between ships and aircraft and with ground-based stations. This includes air traffic control, maritime VHF radios, and aviation communication systems like VHF and HF radios.

Navigation: Radio waves are essential for navigation systems, including the Global Positioning System (GPS). GPS relies on signals from satellites to determine the precise location and speed of ships and aircraft.

Weather Information: Radio waves are used to broadcast weather information and updates to ships and aircraft. This information is vital for safe navigation and flight planning.

Emergency Communication: Ships and aircraft use emergency beacons that transmit radio signals to indicate distress situations. Rescue and rescue operations rely on these signals to locate and assist vessels or aircraft in distress.

Radar Systems: Radio waves are the basis for radar systems, which are used for collision avoidance, weather monitoring, and navigation in both ships and aircraft. Radar helps detect obstacles and other vessels or aircraft in the vicinity.



-Radio Direction finding: Ships and aircraft can use radio direction finding equipment to determine the direction of radio signals. This is particularly useful for locating the source of distress signals or interference.

Wireless Communication: Within ships and aircraft, radio waves are used for various onboard wireless communication systems, including Wi-Fi for passengers, crew, and internal communications.

In summary, radio waves are integral to the safe and efficient operation of ships and aircraft, providing means for communication, navigation, safety, and situational awareness.

References

1. "The Art of Radiotelegraphy" by William G. Pierpont

2. "Walkie Talkie Communication at Sea" by Bernie Roberts

3. "The Radio Amateur's Handbook" by ARRL

4. "Radio Wave Propagation and Parabolic Antennas" by John David

5. "Radio Control for Model Ships, Boats, and Aircraft" by Malcolm Maffiad

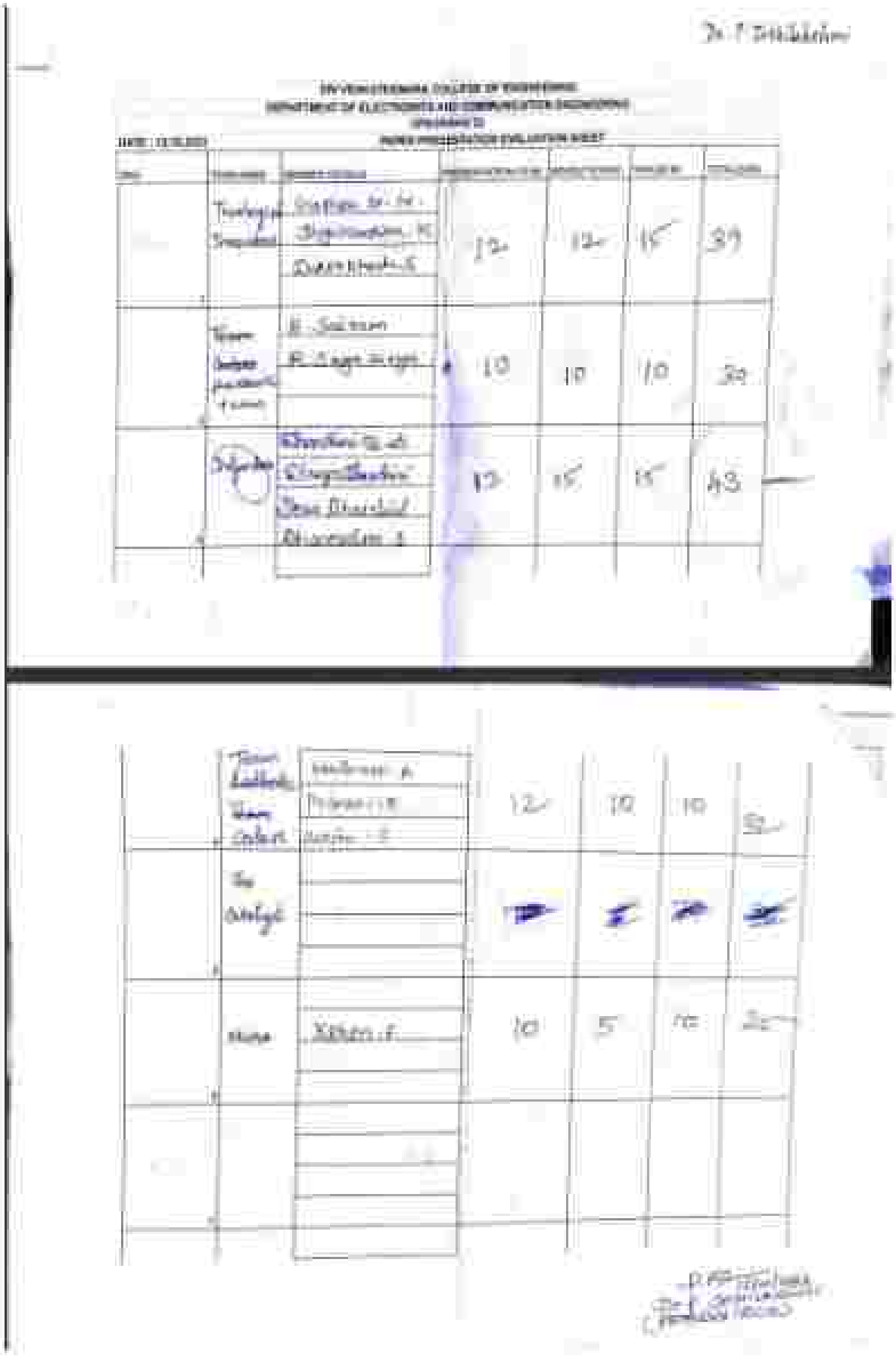
Links

1." https://en.wikipedia.org/wiki/Walkie-talkie"

2."https://wiki.ahlanbook.com/wiki/Walkie-Talkie"

3."https://wiki.ahlanbook.com/wiki/Walkie-Talkie"

Evaluation sheet :



Attendance sheet of the event:

Winners of the event :

PLACE	TEAM NAME	MEMBERS NAME	COLLEGE
1ST PLACE	AGRI_WIZARDS	Vaishnavi S Niveditha S	Sri Sairam Engineering College
2ND PLACE	DEFENDERS	Dharshini B.S E.Divya Dharshini M.Devadarshini Dhanashree.S	R.M.K Engineering College
3RD PLACE	SHYENA	Nandhitha B S Saivarshaa Krithika G	Sri Sairam Institute of Technology

Report by:

Mr. UMESH ANANDH.S (III-Year, ECE-C)

Executive member, IETE-SF

REPORT OF TECH-CPR

Tech-CPR was organized as a part of Upagraha'23 by the Department of Electronics and Communication Engineering.

The event was aimed towards bringing out the technical skills of the participants and also to check their ability of completing a task in the timeframe provided. A total of 35 teams (70students) participated in the event.

Commencement of the event	October12th2023(9.30 AMIST)
End of the Event	October12th2023(12.00 PMIST)
Total Teams	35
Total Participants	70

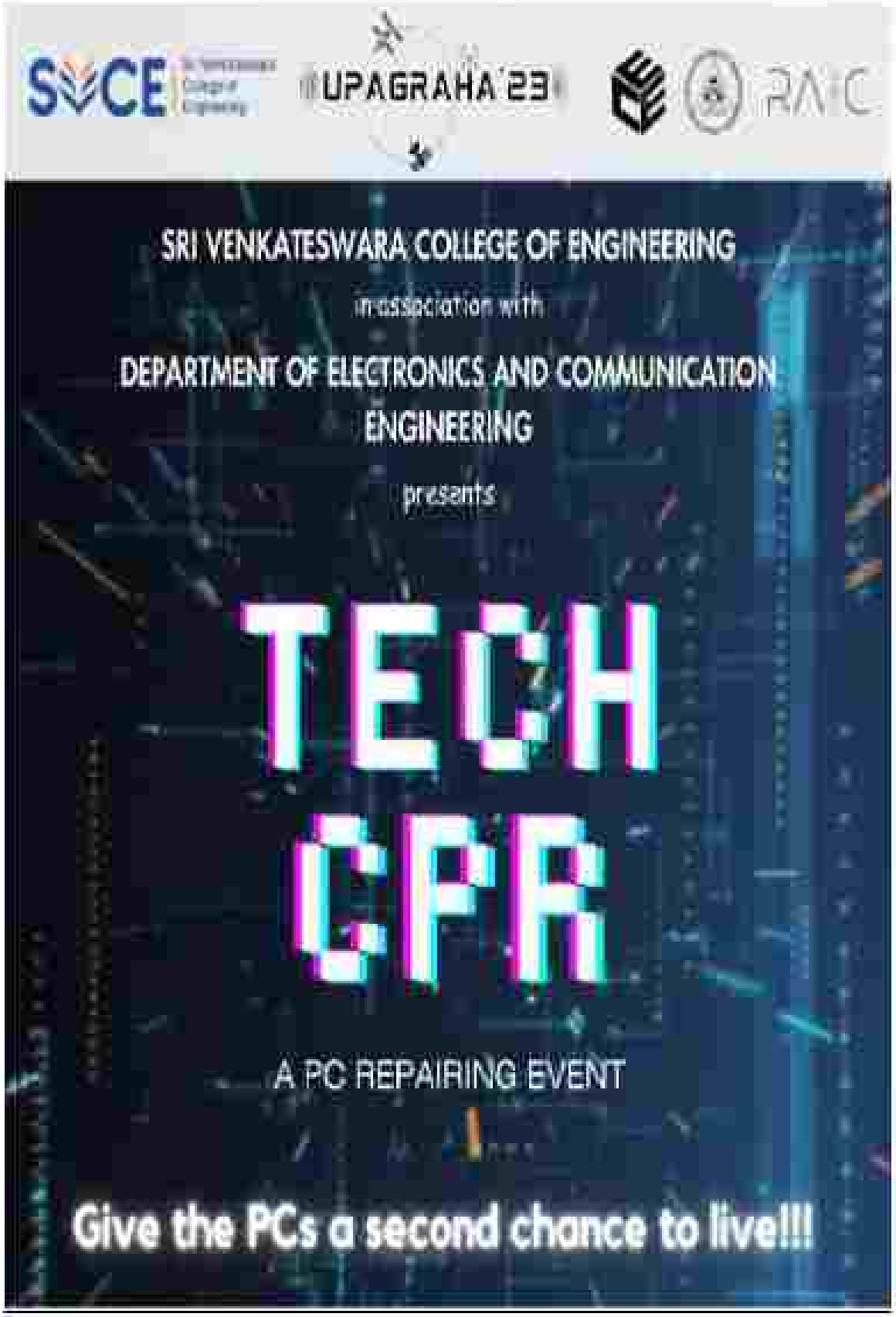
The judges for the event were Mr.P.Arul, Assistant professor, Mr.N.Sathish, Assistant professor and Mr.P.Muthukumaran, Assistant professor.

The event consisted of a total of 2 rounds and it commenced at 9:30AM in CB531 and 532. The rules and regulations were announced to the participants by the student coordinators. The round 1 was a MCQ round in which the questions were based on logical reasoning and brain teasers. The duration of the first round was for 20 minutes.

Out of the total 35 teams, 8 teams were shortlisted based on their scores and were qualified to the second round. In the second round, participants were expected not only to identify computer faults but also to handle additional tasks that will be revealed spontaneously. The winner was determined by their ability to complete these tasks within the specified time limit.

The event coordinators were Mr.K.Udhaya (III-year ECE-C), Mr.R.B.Aakshay (IV-year ECE-A), Ms.S.Srivarshini (III-year ECE-C) and Ms.S.S.Subasree (III-year ECE-C).

Flyer of the event:



Attendance sheet of the event:

Snapshots of the event:

Participants rectifying the fault in the computer system

Debugging the errors in the CPU

Question paper for round 1 (MCQ):

1. Question: Which component of a computer is responsible for storing data in a long term, non-volatile fashion?

a) CPU
b) RAM
b) Hard Disk Drive (HDD)
d) SSD(Solid State Drive)

2. Question: What is a race condition in concurrent programming?

a) A condition where two threads compete to access shared resources simultaneously, leading to unpredictable behaviour

b) A situation where multiple threads cooperate perfectly to complete a task

c) A deadlock situation in which all threads are stuck waiting for each other

d) A condition where a program runs without any synchronization issues

3: What is the first step you should take when troubleshooting a computer that won't turn on?

a) Check the monitor
b) Reinstall the operating system
c) Verify the power source and connections
d) replace the motherboard

4: Which of the following tools is commonly used to check the voltage output of a power supply unit (PSU)?

a) Multimeter
b) Screwdriver
c) Powermeter
d) Tweezers

Evaluation sheet:

Winners of the event :

PLACE	TEAM NAME	MEMBERS NAME	COLLEGE
1ST PLACE	DON'T KNOW TECHIES	P.MEENALOSHINI R.PRAVEEN KUMAR	Sri Venkateswara College of Engineering
2ND PLACE	DUO OF DARKNESS	R.S.ADITYA VARDHAN G.S. HARESH KRISHNA	Sri Venkateswara College of Engineering

Report by:

Mr. K.UDHAYA (III YEAR, ECE C)

Executive Member, ECEA

REPORT ON BITFLOW

BitFlow was organized as a part of Upagraha'23 by the department of Electronics and Communication Engineering. Bitflow was aimed at putting the participants to experience the logic behind every digital circuit and was given a chance to design a logic circuit with the circuit simulator we provided (LogiSim Evolution). A total of 50 teams (105 students) participated in round 1 (MCQ) of the event and out of which 6 teams were shortlisted for round 2 based on their performance in round 1.

Commencement of the event	October 12th 2023 (10.30 AM IST)
End of the event	October 12th 2023 (3 PM IST)
Total teams	50
Total participants	105

The judges for the event were Mrs.B.Sarala, Assistant professor, Mr. L.K. Balaji Vignesh, Assistant professor and Dr.R.Priyadharshini, Assistant professor.

The event coordinators for the event were Mr.Ram Solaiappan A (III Year ECE-B), Mr.Dharani A (III Year ECE-A), and Mr.Prabhu R (III Year ECE-B).

The event commenced at 10.30 AM and the participants were given the question (MCQ type) paper for Round 1. A total of 50 teams consisting 105 participants were enthusiastically solving the questions and the Round 1 got over by 11.00 AM. The top 6 teams were selected for Round 2 of the event based on their performance in the MCQ question paper. Round 2 commenced at 2:00 PM and the participants were introduced to the simulation software (LogiSim-Evolution). The participants were given questions for designing the digital circuits in the simulator. The participants tried their best to provide an optimal solution for the problem they were given in the given amount of time. The evaluation was done by the judges and out of 6 teams, a winner and a runner were chosen based on their understanding, solution, successful execution and viva. The winner and runner were announced in the valedictory event.

Flyer of the event :

Snapshots of the event:

Participants solving questions during round 1

Participants solving problems during round 2

Attendance sheet of the event:

Round 1 MCQ sample questions:

1. What is a Gray code, and how is it different from binary code in digital design?

   A. A Gray code is a code used for error correction.
   B. Gray code is synonymous with binary code.
   C. Gray code is a non-weighted code with only one bit changing at a time.
   D. Gray code is used exclusively in analog circuits.
   E.

2. Explain the concept of "edge-triggered" and "level-triggered" flip-flops in digital circuits.

   A. Edge-triggered flip-flops respond to both rising and falling edges of a clock signal.
   B. Level-triggered flip-flops respond to a continuous HIGH or LOW level on the clock.
   C. Edge-triggered flip-flops have no clock input.
   D. Level-triggered flip-flops have multiple clock inputs.

3. What is the purpose of a PAL (Programmable Array Logic) device in digital design?

   A. To store data temporarily.
   B. To perform arithmetic operations.
   C. To generate clock signals.
   D. To implement custom combinational logic functions.

4. Explain the concept of "asynchronous reset" and "synchronous reset" in flip-flops.

   A. An asynchronous reset is controlled by a clock signal, while a synchronous reset is not.
   B. An asynchronous reset is not controlled by a clock signal, while a synchronous reset is.
   C. Both asynchronous and synchronous resets are the same.
   D. Reset is not a feature of flip-flops.

5. What is a hazard in digital circuit design, and how can it be resolved?

   A. A hazard is a bug in the circuit that cannot be resolved.
   B. A hazard is an unintended transition in the output of a combinational circuit. It can be resolved using hazard detection and elimination techniques.
   C. A hazard is a safety feature in digital circuits.
   D. Hazards can only be resolved through trial and error.

6. What is the difference between a "combinatorial delay" and a "propagation delay" in digital circuits?

   A. They refer to the same thing.
   B. Combinatorial delay is the time taken for signals to traverse combinational logic, while propagation delay is the time taken for signals to travel through flip-flops.

C. Combinational delay is the time taken for signals to travel through flip-flops, while propagation delay is the time taken for signals to traverse combinational logic.

D. They are unrelated to digital circuit design.

7. What is the purpose of a multiplexer (MUX) in a digital design and how is it different from a demultiplexer (DEMUX)?

A. A MUX selects one input from multiple sources, while a DEMUX takes one input and distributes it to multiple outputs.

B. A MUX and a DEMUX are the same thing.

C. A MUX takes one input and distributes it to multiple outputs, while a DEMUX selects one input from multiple sources.

D. Both MUX and DEMUX are used for data storage.

8. What is a carry-ripple adder, and what are its limitations in digital circuit design?

A. A carry-ripple adder is a type of adder that can handle any number of inputs.

B. A carry-ripple adder is the fastest type of adder.

C. A carry-ripple adder is a simple adder with a delay that increases with the number of bits, making it slow for large inputs.

D. A carry-ripple adder has no limitations.

9. What is the concept of "fan-out" and "fan-in" in digital circuit design, and why are they important?

A. Fan-out is the number of inputs a gate can accept, while fan-in is the number of gates a signal can drive. Proper fan-out and fan-in values are essential for circuit reliability and speed.

B. Fan-out is the number of gates a signal can drive, while fan-in is the number of inputs a gate can accept. Proper fan-out and fan-in values are irrelevant in circuit design.

C. Fan-out and fan-in have the same meaning in digital design.

D. Fan-out and fan-in are not relevant concepts in digital circuit design.

10. In digital design, what is the significance of the race condition, and how can it be avoided?

A. A race condition occurs when two signals arrive simultaneously at a flip-flop, causing unpredictable behavior. It can be avoided by proper circuit design and synchronization techniques.

B. A race condition is a desirable feature in digital circuits.

C. Race conditions cannot be avoided.

Round 2 sample questions:

Q1. Arjun wants to design a transmitter which masks its data with particular sequence of codes as given below. For example lets assume "1,2,2,5,5" as the data in the sent.

Data	Sequence Code	Masking	Masked Data
1	0	160	0
3	2	362	2
5	3	583	1
2	6	260	0
6	7	667	0
5	0	560	0

Your task is to help him build a circuit that generates the sequence codes on every clock pulse as given in the table.

Q2. Rohit is building a 8-bit processor's ALU and he needs to deign a digital circuit which can store 3-bit binary data and also is capable of multiplying the data present by a factor of 2. The digital circuit should have the following inputs and outputs. The data generated should not be fed again continuous multiplication.

Inputs:

`load` - Signal to load the data on rising clock pulse

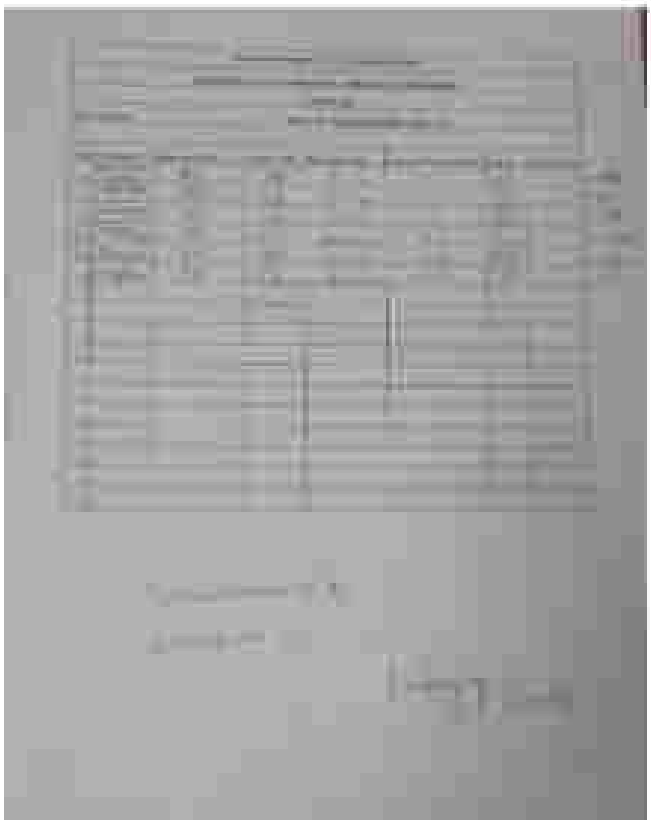
`mul` - Signal to multiply the data by a factor of 2 on next clock pulse

`clr` - Asynchronously clear the data present

Output:

- The contents of the data stored

Evaluation sheet:



Winners of the event :

Place	Team Name	Members	College
1st	Techno Tuners	1. Sanjay 2. Haridharan 3. Sneha A	Sri Venkateswara College of Engineering
2nd	Zeroes	1. Roshan M 2. Vikaash BG 3. Roohack Ganeshwara Rao C	Sri Venkateswara College of Engineering

Report By:

Mr RAM SOLAIAPPAN A (III Year, ECE B)

Mentor, RAIC

CHIEF GUEST OF DAY-2

About the Chief Guest :

Dr. V. Narayanan, a distinguished scientist and visionary leader in the field of rocket and spacecraft propulsion. Dr. Narayanan currently serves as the Director of the Liquid Propulsion Systems Centre (LPSC), a vital component of the Indian Space Research Organization (ISRO).

One of his significant achievements was leading the successful development of the C25 Cryogenic Stage for the GSLV Mk III vehicle, a milestone in India's space endeavors.

Under his leadership, the LPSC has delivered numerous propulsion systems and control power plants for launch vehicles and satellites, making significant strides in space exploration. Dr. V. Narayanan is an exemplary scientist and leader whose unwavering dedication has significantly contributed to India's achievements in space exploration.

Dr. V. Narayanan, addressed the audience, sharing his invaluable insights on personality development and the journey of ISRO missions. He began by emphasizing the importance of character development for students to excel in their paths and also discussed the vital role of student-professor interaction in gaining a deeper understanding of a specific field.

Dr.V. Narayanan then provided a comprehensive overview of the evolution of ISRO's missions, starting from their inception to their most recent achievements like Chandrayan 3 and the Vikram L1 mission, which aimed to land on the sun.

Snapshots of event :

Lecture by the chief guest, Dr. V. Narayanan.

Dr.S.A.Sathish Kumar presenting the memento to the chief guest.

Dr.V.Narayanan, along with the office bearers and faculties of ECE Department

UPAGRAHA'23 VALEDICTORY CEREMONY

The valedictory ceremony of Upagraha'23 was organized by the Department of Electronics and Communication Engineering. The event took place on 12/10/2023 (Thursday) from 3.00 PM to 3.30 PM.

The valedictory ceremony commenced with the arrival of Dr.G.A.Sathish Kumar, Head of the Department- ECE, Dr.T.Jeyaprabha, Associate professor, Department of ECE, Mr.S.Elangovan, Assistant professor, Department of ECE and the participants and winners of various events along with the members of the organizing committee.

Winners of various events were felicitated by the HoD-ECE and certificates, cash prizes were provided. Upagraha'23 concluded with the national anthem.

Snapshots of the event :

Dr.G.A.Sathish Kumar, HOD, ECE Department, distributing prize to the winners

Dr. T. J. Jayaprabha, Faculty co-ordinator distributing prize to the winners

Faculty co-ordinators, Dr.T.J.Jayaprabha and Mr.Elangovan along with office bearers of ECEA, IETE-SF and IEEE

ORGANISING COMMITTEE COMPRISING OF:

Chief Patron	:Dr.M.Sivanandham, Secretary, SVEHT
Patron	:Dr.S.Ganesh Vaidyanathan, Principal, SVCE
Convenor	:Dr.G.A.Sathish Kumar, Professor & HOD
Faculty Co-ordinators	:Dr.T.J.Jeyaprabha, ECEA, IETE-SF and RAIC Coordinator
	Mr.S.Elangovan, ECEA, IETE-SF and RAIC Coordinator

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Vice-President	: Mr.Avinash.P (IV Year ECE A)
Secretary	: Mr.Sharad L (III Year ECE C)
Treasurer	:Ms.Deepika S(III Year ECE A)
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	Ms.Dharani A (III Year ECE A)
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	Mr.Kiran Yadav V(III Year ECE B)
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	Ms.Varsha P (II Year ECE C)

IETE SF SVCE comprising of:

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Vice Chairman:

Student Coordinator :Mr Sanjay Lokesh A M(IV Year ECEC)

Event Coordinator :Mr. Shashidar G(IV Year ECE C)

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Mr. Aadhithya Narayanan B(III Year ECE A)

Mr. Parvesh R (III Year ECE B)

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Ms. Subasree S S (III Year ECE C)

Mr. Umesh Anandh S (III Year ECE C)

Joint Secretary :Ms. Deepikashri S (II Year ECE A)

Mr. Manoj Kumar K (II Year ECE B)

Mr. Tamil Nilavan S (II Year ECE C)

RAIC comprising of:

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	Ms Vasantha Vidhya P V (II Year ECE C)
Lead Mentor	:Mr. Rajit H (IV Year ECE C)
Mentors	:Ms. Kavitha S (III Year ECE B)
	Mr. Kiransekar (III Year ECE B)
	Mr. Nandhanan R (III Year ECE B)
	Mr. Parvesh R (III Year ECE A)
	Mr. Ram Solaiappan A (III Year ECE B)
	Ms. Saambavi P U (III Year ECE B)

Dr.T.J.Jeyaprabha
ASP,ECEA,IETE-SF,RAICCoordinator

Dr.G.A.SathishKumar
Professor&HOD-ECE

DATE: 30.10.2023

Report by:
Ms.Deepika S (ECE-A, III-Year)
Treasurer, ECEA