



SRI VENKATESWARA COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ELECTRONICS AND COMMUNICATION ENGINEERS ASSOCIATION
in association with
THE INSTITUTION OF ELECTRONICS AND TELECOMMUNICATION
ENGINEERS-SF
&
ROBOTICS AND ARTIFICIAL INTELLIGENCE CLUB
REPORT ON ENIGMA

The Department of Electronics and Communication Engineering in association with the Institution of Electronics and Telecommunication Engineers Student Forum of SVCE (IETE-SF) and Robotics and Artificial Intelligence Club SVCE organised an event ‘ENIGMA’ on 20th December, 2023. The event was conducted exclusively for the first-year students of the ECE department. The event was organised to enhance students' technical skills through healthy competition . This event will provide students with an opportunity to sharpen their critical thinking skills as they engage in encryption and decryption.

	ROUND 1	ROUND 2
TIMING	10.00 AM - 11.00 AM	1.30 PM - 3.15 PM
VENUE	MICROPROCESSOR AND ELECTRON DEVICES LAB	MICROPROCESSOR LAB
NO. OF TEAMS	23	8

FLYER FOR THE EVENT:

SRI VENKATESWARA COLLEGE OF ENGINEERING
in association with
ELECTRONICS AND COMMUNICATION ENGINEERS ASSOCIATION
along with
**THE INSTITUTION OF ELECTRONICS AND TELECOMMUNICATION
ENGINEERS-STUDENTS' FORUM**
&
ROBOTICS AND ARTIFICIAL INTELLIGENCE CLUB
presents

ENIGMA

EXCLUSIVELY FOR 1 YEAR ECE STUDENTS

 **20th dec 2023**

 **TEAM OF 2**

LIMITED REGISTRATIONS ONLY



SCAN TO REGISTER

 **eceasvce**

 SNEKAA R, Secretary (RAIC) - +91 99625 81616
DEEPIKA S, Treasurer (ECEA) - +91 9445949308

PROPOSAL FOR THE EVENT:



SRI VENKATESWARA COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
in association with
ELECTRONICS AND COMMUNICATION ENGINEERS ASSOCIATION,
INSTITUTION OF ELECTRONICS AND TELECOMMUNICATION ENGINEERS-SF,
&
ROBOTICS AND ARTIFICIAL INTELLIGENCE CLUB

Proposal for conducting "Enigma"

Submitted to the HoD-ECE,

15.12.2023

The Electronics and Communication Engineers Association, IETE Students Forum, and RAIC are collaboratively initiating an effort to enhance students' technical skills through healthy competition. We are planning to organize the "ENIGMA" event on **Wednesday, 20th December 2023**, at our college premises.

This event is exclusively planned for **1st year students' (2023-2027)** of the ECE Department. This will provide students with an opportunity to sharpen their critical thinking skills as they engage in the encryption and decryption event.

	ROUND 1	ROUND 2
TIME	10:00 A.M - 11:00 A.M	01:20 P.M - 03:15 P.M
VENUE	MICROPROCESSOR, ELECTRON DEVICES & COMMUNICATION LAB	MICROPROCESSOR LAB

Event Structure:

- **Enigma** consists of two rounds.
- Each team comprises three members.
- The first round is an aptitude test designed to assess students' logical reasoning abilities.
- After the preliminary round, the top teams will advance to the final round.
- The final round will challenge the students to encrypt and decrypt the code and unlock the key to the Enigma machine.

Recognition:

- Certificates will be awarded to the winners.

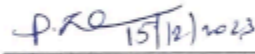
The "Enigma" event aligns with our institution's commitment to practical learning and skill development beyond the classroom. This initiative offers a unique opportunity for students to showcase their talents while enhancing their technical skills.

We kindly request your approval for the successful execution of this event.

Thank You



Dr. T. J. Jeyaprabha / Mr. S. ELANGOVAN
ECEA, IETE-SF, RAIC Coordinator



Dr. G. A. Sathish Kumar /
HoD-ECE

Dr. P. JOTHILAKSHMI

AHoD - ECE

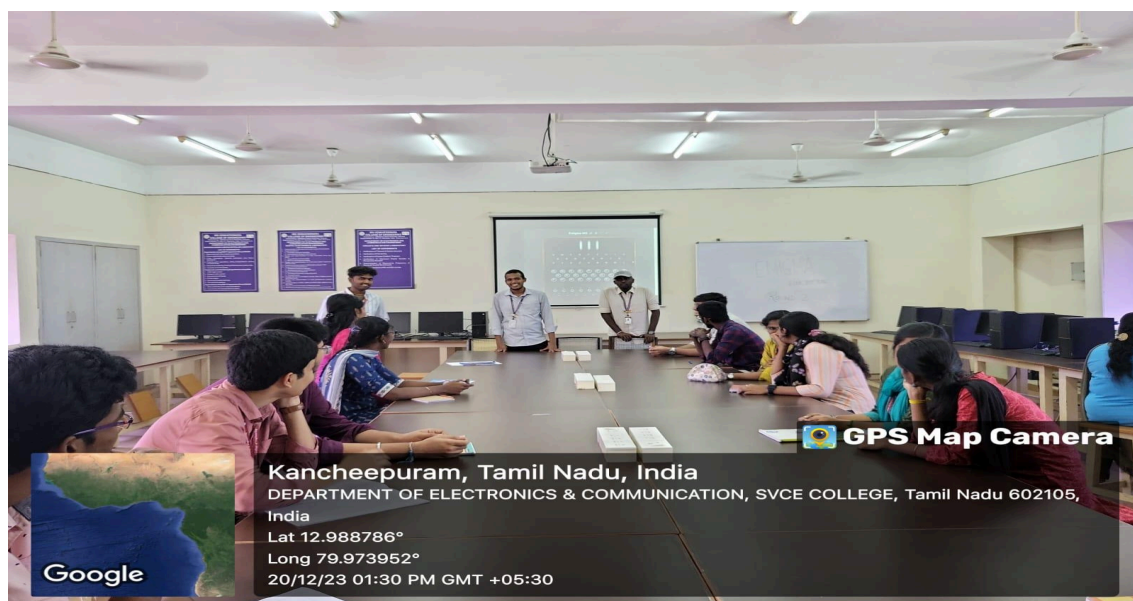
ROUND 1:

The event commenced with an informative speech by Dr.P.Jothilakshmi, Professor and Assistant Head Of the Department - ECE and other senior members of the club. They shared their valuable insights on the field of Electronics and Communication Engineering. In Round 1, the participants were given 25 MCQ questions with a time limit of 30 minutes. The questions were based on logical reasoning. Out of 23 teams, the top 8 teams were selected to participate in the Round 2.



ROUND 2:

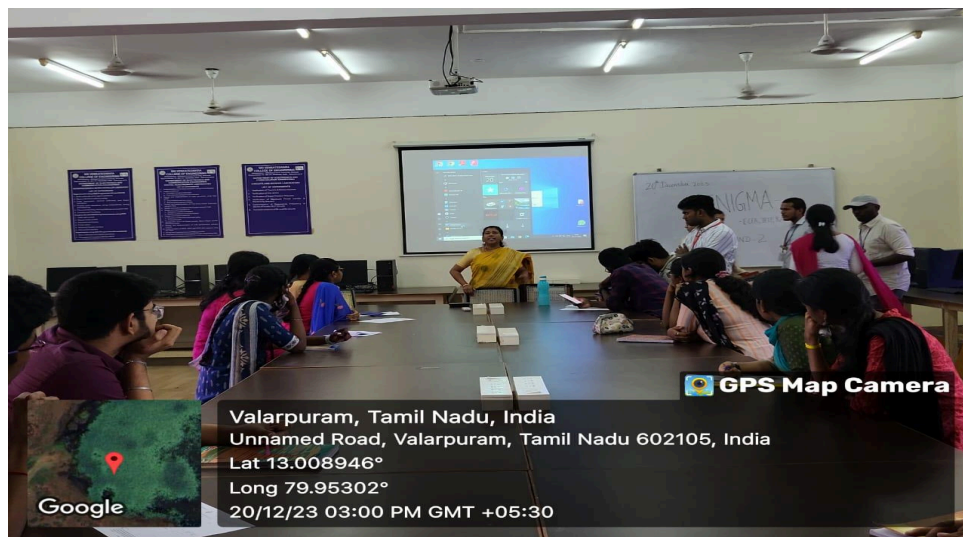
In Round 2 of the event, the selected teams were a set of questions based on encryption and decryption. Level 1 of the round was based on finding the correct words from the given jumbled words in a paragraph. Level 2 was based on decrypting the letter pairs from the given set of images. At the end of the round, the top 3 teams were awarded with certificates by Dr.G.A.Sathish Kumar, Professor and Head Of the Department - ECE.



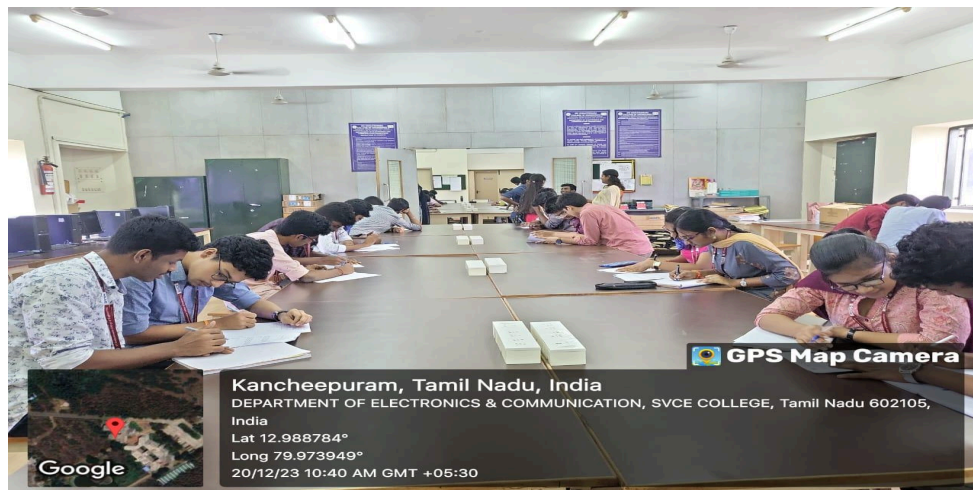
SNAPSHOTS OF THE EVENT:



Participants taking part in Round 1 of the event



Dr.T.J.Jeyaprabha, Associate Professor, ECE addressing the students after the completion of the Round 2



Selected teams from Round 1 taking part in Round 2 of the event

QUESTION PAPER FOR ROUND 1:



SRI VENKATESWARA COLLEGE OF ENGINEERING

ENIGMA ROUND -2

TEAM MEMBERS NAME & SECTION:

TEAM LEAD MOBILE NUMBER:

1.If 'PRINT' is coded a 'RUMSZ', then 'DRINK' will be coded as:

- a) FUMP
- b) FUMSQ
- c) GUMSR
- d) FUPSM
- e) None of these

2. Pointing to a lady, Rani said, "She is the sister of the father of my mother's son."

Who is the lady to Rani?

- a) Mother
- b) Aunt
- c) Cousin
- d) None of these
- e) Cannot be determined

3. In a class of 45 students, among those students who passed, Arun secured 11th position from the top and 15th position from the bottom. How many students failed?

- a) 20
- b) 19
- c) 15
- d) 18
- e) None of these

4. Hari started walking positioning his back towards the sun. After sometime, he turned left, after walking a few metres, he turned right and then towards the left again after a few metres. In which direction is he going now?

- a) North or East
- b) East or West
- c) North or West
- d) South or North
- e) None of these

5. We are provided the plain text "SUN". You need to convert the given plain text into ciphertext under the Caesar cipher encryption technique. Which of the following options is the correct ciphertext for the given text if the key is 2?

- a. UWP
- b. NUS
- c. WUP
- d. QSL

6. What is the angle between the minute hand and the hour hand of a clock at 5.30?

- A. 05°
- B. 15°
- C. 25°
- D. 35°

7. At a crossing, there was a direction pole, which was showing all the four correct directions. But due to the wind, it turns in such a manner that now West pointer is showing South. Harish went in the wrong direction thinking that he was travelling East. In what direction he was actually travelling?

- A. South
- B. North
- C. West
- D. East

8. A deck of 5 cards (each carrying a distinct number from 1 to 5) is shuffled thoroughly. Two cards are then removed one at a time from the deck. What is the probability that the two cards are selected with the number on the first card being one higher than the number on the second card?

- a. $1/5$
- b. $4/25$
- c. $1/4$
- d. $2/5$

9. ELFA, GLHA, ILJA, _____, MLNA

- a. OLPA
- b. KLMA
- c. LLMA
- d. KLLA

10. Akash is encrypting a WWII message in Engima machine and encounters a german word "DEUTSCH". The probability of getting 'D' as encrypted letter for an input 'D' is?

- a. $1/26$
- b. $1/26^3$
- c. 0
- d. 1

11. Identify the figure which completes the pattern



QUESTION PAPER FOR ROUND 2:



SRI VENKATESWARA COLLEGE OF ENGINEERING

ENIGMA ROUND -2

ANAGRAM:

Words are jumbled in the below paragraph.

The Enigma machine is a cipher device (elidedopve) and used in the early- to mid-20th century to protect commercial, diplomatic, and military (onmuniocactmi). It was employed extensively by Nazi Germany during World War II, in all (sebrahcn) of the German military. The Enigma machine was considered so secure that it was used to (ipencher) the most top-secret messages. The Enigma has an (mehcceolarateinlc) rotor mechanism that scrambles the (tretles) of the (hatbplae). In typical use, one person enters text on the Enigma's keyboard and another person writes down which of the lights above the keyboard illuminated at each key press. If (tpxintael) is entered, the illuminated letters are the ciphertext. Entering ciphertext transforms it back into readable plaintext. The rotor mechanism changes the electrical connections between the keys and the lights with each keypress. The Enigma machine was invented by German engineer Arthur Scherbius at the end of World War I. The German firm Scherbius & Ritter, co-founded by (rehbiscsu), patented ideas for a cipher machine in 1918 and began marketing the (denishif) product under the brand name Enigma in 1923, initially targeted at commercial markets.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

LEVEL 2:

FORMAT 1:

(for words from 1 to 7)



FORMAT 2:

(for words 8 and 9)



FORMAT 3:

(for words 10 and 1-9)



RING SETTINGS:

If EARTH is written as FCUXM in a certain code. How is MOO written in that code?

ATTENDANCE SHEET:

		SVCE RAIC		ENGIMA ROUND 1 ATTENDANCE SHEET		
TEAM NO.	TEAM MEMBER 1 NAME	Section:	SIGNATURE	TEAM MEMBER 2 NAME	Section	SIGNATURE
1	BHARATHRAJ R	A	<i>[Signature]</i>	Haritha S	A	<i>[Signature]</i>
2	Haran Chinnasamy	A	<i>[Signature]</i>	PRATHIBAN V	B	<i>[Signature]</i>
3	Pranay V	B	<i>[Signature]</i>	FRANAV V KRISHNAN	B	<i>[Signature]</i>
4	Basit	A	<i>[Signature]</i>	PAVIN KISHORE	B	<i>[Signature]</i>
5	Harsheeraja S.K.	A	<i>[Signature]</i>	Praveen Vasudevan	B	<i>[Signature]</i>
6	LOHITH ASHWA S	B	<i>[Signature]</i>	K.Mukesh	B	<i>[Signature]</i>
7	LAKSHMI NARAYANAN S	B	<i>[Signature]</i>	Suresh sath.k	C	<i>[Signature]</i>
8	KISHORE A	B	<i>[Signature]</i>	SAKTHI PURUSHOTHAMAN	C	<i>[Signature]</i>
9	Adhaya M	A	<i>[Signature]</i>	Udhaya kumar	C	<i>[Signature]</i>
10	Balaji R S	A	<i>[Signature]</i>	SHIVANI R	C	<i>[Signature]</i>
11	A.Naveen	B	<i>[Signature]</i>	Ranjana V	B	<i>[Signature]</i>
12	Balji s	A	<i>[Signature]</i>	PRITHVADHARSHINI PABWONGP	B	<i>[Signature]</i>
13	TEJASWI S	C	<i>[Signature]</i>	Sudhan S	C	<i>[Signature]</i>
14	Ragnid M	B	<i>[Signature]</i>	Ashika L.S	A	<i>[Signature]</i>
15	SOPHIA V	C	<i>[Signature]</i>	Rithvik R	C	<i>[Signature]</i>
16	Lavanya P	B	<i>[Signature]</i>	KAVYAP	B	<i>[Signature]</i>
17	NANDITA S	B	<i>[Signature]</i>	ANTONY LOUIS J	A	<i>[Signature]</i>
18	Sudesh Prasad	C	<i>[Signature]</i>	Ayjun Sathish	A	<i>[Signature]</i>
19	Baradharani Sree R	A	<i>[Signature]</i>	Oviya G	B	<i>[Signature]</i>
20	Rohith kanna S	C	<i>[Signature]</i>			
21	NIYASHINI A S	B	<i>[Signature]</i>			
22	GIRIDHARAN S N	A	<i>[Signature]</i>			
23	Jaswin D	A	<i>[Signature]</i>			
24	Preethika	B	<i>[Signature]</i>			

WINNERS OF THE EVENT:

PLACE	NAME OF THE PARTICIPANTS
1 st	<ul style="list-style-type: none">● Rithvik, ECE C● Rohit, ECE C
2 nd	<ul style="list-style-type: none">● Nandita, ECE B● Karunya, ECE B
3 rd	<ul style="list-style-type: none">● Harini C, ECE A● Harini M, ECE A



1st Place Winners: Rithvik, ECE C and Rohit, ECE C



2nd Place Winners: Nandita, ECE B and Karunya, ECE B



3rd Place Winners: Harini C, ECE A and Harini M, ECE A

RAIC comprising of:

President :Mr. Ganeshan H (IV Year ECE A)

Vice President :Ms. Snehalatha M (IV Year ECE C)

Secretary :Ms. Snekaa R (III Year ECE C)

Joint Secretary :Mr. Adarsh S (II Year ECE A)
Mr. Ramanathan M (II Year ECE B)
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. Kiransekhar (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)
Mr. Saambavi P U (III Year ECE B)



Dr.T.J.Jeyaprabha
ASP, ECEA, IETE-SF, RAIC Coordinator



Dr.G.A.Sathish Kumar
Professor & HoD-ECE

Date : 11.01.2024

Report by:
Aadhithya Narayanan
(Executive member, IETE-SF)
Anish Krishnan
(Executive Member, ECEA)