



DEPARTMENT OF APPLIED SCIENCES

COLUMBUS

SEGMENT 1

(NOV2022-APRIL2023)

MESSAGE FROM PRINCIPAL



It gives me great pleasure to give my best wishes to the editorial committee of the Department of Applied Sciences, New Horizon College of Engineering. The students and faculty of the department are always enthusiastic learners and great thinkers embarking and enriching their know knowledge to grow as our future entrepreneurs and be our future pillars of strength. I congratulate all the achievers, contributors and students for bringing out such a captivating newsletter. May this newsletter instill the best in you.

REGARDS,

DR. MANJUNATHA

LETTER FROM HOD



I am delighted to share our collective achievements in this newsletter, highlighting the remarkable efforts of both our students and teachers.

To our dedicated faculty members,

Your commitment to excellence in teaching and research has been the cornerstone of our success. Your passion and tireless efforts to inspire and guide our students do not go unnoticed. Thank you for your invaluable contributions to our department.

To our outstanding students,

Your achievements this year have been truly impressive. Your curiosity, hard work, and commitment to academic excellence have set a standard for others to follow. We are proud of your accomplishments and look forward to witnessing your continued success in the future.

As we celebrate these achievements, let us also acknowledge the collaborative spirit that defines our department. Together, we create an environment where excellence thrives.

Thank you all for your dedication and contributions.

DR. ANUSUYA DEVI V.S
PROF. & HOD – APPLIED SCIENCES

ABOUT THE DEPARTMENT

Department of Applied Sciences was started in the year 2001. As a fundamental department, supporting all branches in 1st year of engineering, laying emphasis on basics of Sciences and Engineering along with Humanities. Furthermore, it deals with applications of Basic Sciences in engineering discipline covering all the major domains of technology.

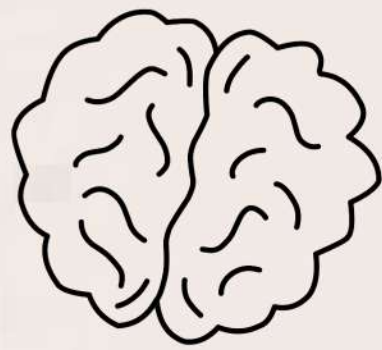
Applied Sciences Department has many dedicated Professors, Associate Professors and Assistant Professors, who are actively involved in research activities. Their experiential insights of research are also reflected in classroom teaching.

Numerous research publications in leading National and International Journals have been produced to the credit of department.

The department has well-equipped laboratories for Engineering Physics, Basic Electrical Engineering, Engineering Chemistry and Languages. Labs of Mechanical Engineering and Computer Science Engineering aid in developing and nurturing the students in the 1st year. The Department stands tall in developing scientific temperament among the budding engineers along with required elements of Humanities.



Vision



To build strong and sustainable platform for churning out quality studentbearing appreciable conceptual knowledge and engineering mindsets to their respective branch department(s).

Mission

To develop and nurture dedicated teaching-learning team equipped with strong personality traits towards application driven approach, encompassing all stakeholders.

DEPARTMENT ACHIEVEMENTS

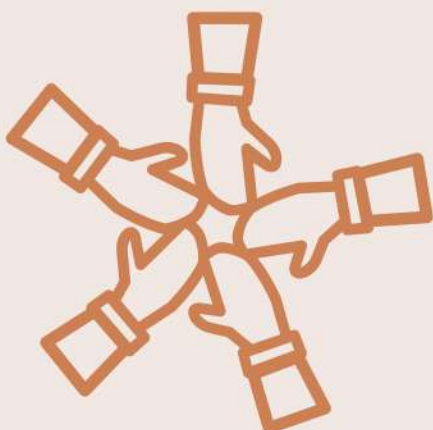
- The Applied Sciences Department's faculty members have produced notable research in the fields of chemistry, physics, and mathematics. Dept. has authored several papers that have been published in journals with a Q index. The department has published 250 papers in total during the past five years in well-known journals. About 24 books and book chapters have been published by the Department. There have been about 15 filed or published patents.
- This year, a large number of academic members obtained their PhDs. The department has 16 doctorates in total.
- There are roughly sixteen PhD students pursuing their degrees under the VTU-recognized R&D centers for mathematics, physics, and chemistry.
- Faculty members have won ten honors in various categories.
- Our department faculty members have completed a vast array of courses in every category, and we always work to add opportunities for relearning.
- We have effectively finished more than 170 courses between 2017 and 23. We take great pride in our department faculty members' constant efforts to enhance their knowledge and impart it to the students.
- Academics for first-year BE students are handled by the Applied Sciences Dept. 1210 received scholastic mentoring from faculty members. The odd semester SEE scores showed an 88% result. 974 students have achieved distinction in their first class, 62 in their first class, and 17 in their second class. Numerous extra -curricular and co-curricular activities have been taken part in by the students.

INDUCTION PROGRAM

PURPOSE

Student Induction program is designed to welcome new students to Higher Education and prepare them for their new role with various activities, assignments and evolving talks. Student Induction program is designed to welcome new students to Higher Education and prepare them for their new roles by covering various aspects such as

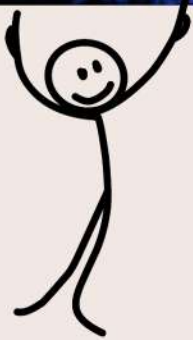
- Socializing, Associating, Governing, Experiencing. Purpose of Student Induction Program is to
- Familiarize the new students with the various branches, methods of study, various facilities, the academic and administrative set up in the Institute.
- To develop a sense of aesthetics and enhance creativity among students.
- To generate favourable attitudes towards peers, senior students, teaching and non-teaching staff in the Institution.
- To inculcate value systems, ethics and leadership qualities among students.



ORIENTATION PROGRAMME

An 'Orientation Program' was organized on Day 1 of induction program to welcome the first-year students who were admitted to Engineering program at the institute premises on 10/10/2022, where students and parents were welcomed by the Management and Principal of New Horizon College of Engineering.

The objective of the Program was to make the parents and students aware of the academic aspects of the course, the rules and regulations of the Institute and ensuring parental participation in monitoring the performance and progress of the students. 1st year HOD's - Dr. Revathi V and Dr. Anusuya appraised students about the information required for the start of a new beginning. Also, students were informed about their schedule, sections, calendar of events and handed over to them in the program. The importance of conducting the Induction program was explained to the students and parents.



PROGRAM: UNIVERSAL HUMAN VALUES

The primary goal of including UHV in the induction program is to help students see the need of acquiring a holistic view on life and to make them aware of the breadth of existence as an individual, in a family, in society, and in nature. Additionally, it aims to improve self-reflection.

As a part of the Induction Program on 12.10.2022, Dr Aravinda, Professor and Head of the Electronics and Communication Engineering Department gave a talk on 'Universal Human Values'. The session started off with questioning 'How do you obtain knowledge?' and 'What are the sources of knowledge?', to which Dr Aravinda skillfully explained there are two sources of knowledge external and internal.

External sources of knowledge include books and teachers, and internal sources of knowledge include intellect and intuition. Taking the students through 6 internal enemies , 3 stages of success and also defining the words like GOAL ,TIME etc... to understand and incubate these learnings in our life.

Program: Health – HAR GHAR DHYAN

Meditation has been practiced for thousands of years. Meditation originally was meant to help deepen understanding of the sacred and mystical forces of life. These days, meditation is commonly used for relaxation and stress reduction. To make our students realize the power of meditation New Horizon College of Engineering has organized HAR GHAR DHYAN, an initiative of UGC by calling experts from Art of Living - Dr. Ravi and Major. Shubhra who guided the students through structured program and taught them the art of relaxing and meditation by laying out various benefits of meditation. They connected Meditation to emotional and physical well-being very nicely. Students took part actively in all the sessions by performing various poses depicted by the experts



Program: Health – Physical Fitness (Yoga, Aerobics, Indoor & Outdoor Games)

As a part of induction program UHV Module 1, the department of Applied Sciences organized a yoga session on “Yoga for mindfulness” for all the first-year students. Resource persons were Dr. Suma T, M.Sc. in Yoga therapy from SVYASA university, Bengaluru. The session 1 was divided into two sub – parts. First part was theoretical session handled by Dr. Suma T, in this session a detailed information about pranayama, meditation and its benefits were explained. Second part was practical session in which she demonstrated the practice of pranayama namely Anuloma, villoma, pranayama, 17 Bhastrika, Kapalabhati and Brahmari pranayama and also made students to practice. Students’ session was handled every day in the morning from Day 2 to Day 21.

Physical activities like aerobics, indoor and outdoor games were held on all the days between 3pm – 4pm every day during induction session. Students were asked to enroll and participate for these everyday activities based on their interest and attendance was monitored by the faculty in charge. Mr. Vinay, Physical Education Director of NHCE, had an interaction with I year BE students regarding the various facilities and opportunities available and also witness our valuable sports team who inspired them to follow passion and message of “when you lose is when you win”.





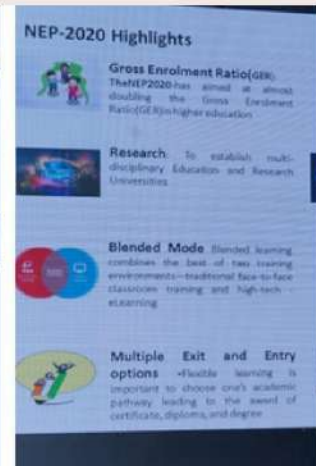
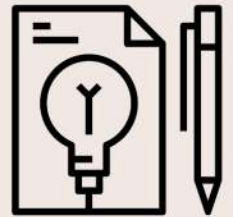
Program: Familiarization with Departments

The most significant part of the induction program was familiarization with the department. This was done class-wise by the faculty members on Day 2 of induction program. The students were taken for a campus tour and introduced to various academic and non-academic departments. The students were detailed about the department, institution, facilities, rules and regulations, examinations and Timetable. They were taken through campus to show various Industry sponsored labs, library, sports facilities, indoor and outdoor gym. Students were told to refer Academic rules and regulations which is put up on the website and a softcopy reference in a web link .



Program: Implementation of National Educational Policy @NHCE

NHCE which is autonomous institution affiliated to VTU takes pride in introducing NEP to the fresh batch of students from the A.Y 2021-22 as per the directions and guidelines issued by VTU. Department of Applied Sciences organized a session on "Implementation of NEP@NHCE" for its I year BE students of 2022-23 batch, at New Horizon auditorium. The session was addressed by our principal Dr. Manjunatha. He addressed the students on the salient features of NEP 2020 and the initiative taken by NHCE. Dean Academics Dr. Anandhi R J, highlighted the academic changes brought in by the introduction of NEP. The salient points she highlighted were the introduction of Emerging Technology courses 27 (ETC), Engineering Science Courses (ESC), Programming Language Courses (PLC) in addition to the branch specific Basic science courses such as Physics, Chemistry and mathematics. After the NEP workshop, we tried to get the ideas from students on what they understood by NEP 2020 by conducting Competitions on 14/12/2022. Good number of students participated in the competitions , showcased their ideas through Essay writing, paintings, Posters and presentations. The competitions also boosted their self-confidence and their knowledge on NEP 2020. Dr. Sowmya Narayanan, Head CLSLLL judged the student's activities. She encouraged and appreciated the students who have taken part in the competitions.



Program: Indian Constitution and Legal Awareness for students

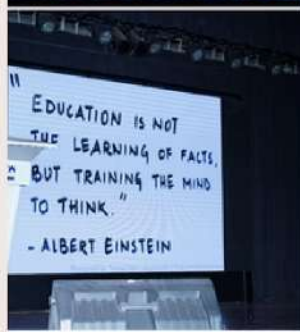
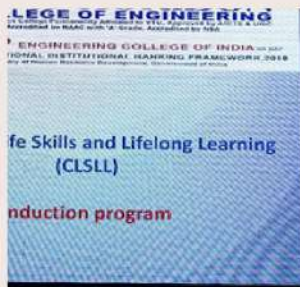
As a part of Induction Program, the I year BE students who are majority of first-time voters, were introduced to Indian constitutional rights by professor. Ashok Kumar of Kristu Jayanti College. He gave an awareness to the students regarding the various rights in our constitution. He also warned the students about various unlawful activities that they should not indulge and if so, what are the repercussions to be faced followed by a successful Q&A session .



PROGRAM: TALENT SHOW

A Talent Show was performed by the I year BE students. Students voluntarily came forward to exhibit their talents. This also come as a part of Self-Realization and students were encouraged to overcome the stage fear by their faculty members and counsellors. The session continued for the next day as the students came forward in more number to exhibit their talents in various fields like singing, dancing, beat boxing, drama, acting, debating, drawing, painting etc.





Program: Literary Activity Module: Communication Skill

As a part of student induction program, department of CLSLL (Centre for Life Skills and Lifelong Learning) of NHCE conducted a session “Importance of communication skill” as a part of the induction program. The session was very interactive and quite fun and exciting. The speakers with their presentations and the interactions with the audience made it very interesting. The main takeaways from the session were that to survive in today’s world, it is not enough to just have the knowledge. The way you present yourself and communicate is very crucial. For communicating with people, certain skills are required, such as writing, reading, listening and speaking. If these skills are cultivated among us then it is pretty much a guarantee for proper and clear communication. Communication is the real work of leadership. It is a skill which can be achieved easily if the necessary work is done by us. Dr. Sowmya Narayanan with her team made sure that the session was completely interactive and cultivating.

Program: Career Avenues

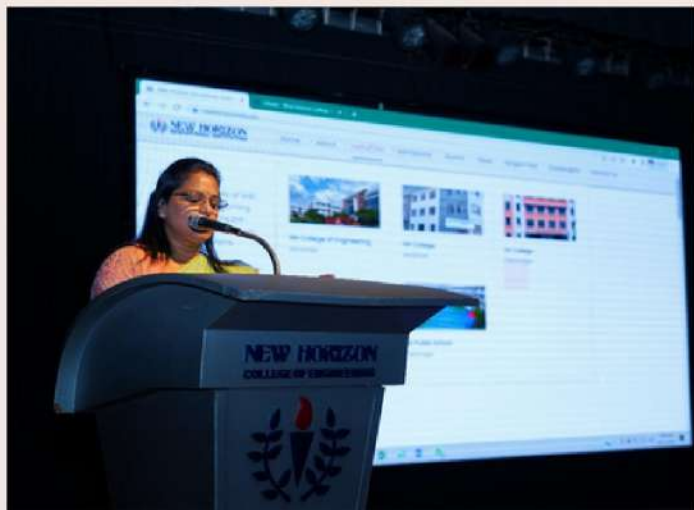
The 1st year BE students of New Horizon College of Engineering, had so many questions regarding the placement opportunities for their program of study. To clarify and to give a detailed information about the Human Resource Development @ NHCE. Mr. Binod, from the Department of HRD addressed the students about the career Avenues. He gave details about the placement training at the institution, promotion of brand ambassadors right from 1 year of BE, helping the students to ace in their competitive exams and various other facilities offered by the department of HRD assuring students about their bright future which left with the satisfaction of picking the right college.





Program: Entrepreneurship Development Cell Initiative Udaan

Dr. Sheelan Mishra, Head – Management Studies & Entrepreneurship Development Cell of New Horizon College of Engineering conducted a session for the young to be Engineers. The session started with a welcome note by Dr. Prashanth KS followed by a presentation on entrepreneurship by Dr. Sheelan Mishra, where she addressed the students about entrepreneurship- the key points being why people don't want to pursue their dreams of becoming an entrepreneur and how it is a myth. Ma'am also gave us examples of 'NirNal' and 'Bullet Tractor' which gave us ideas about innovations, encouraged and guided the students on how to join the ED cell and about the Udaan program, an initiative by NHEI to encourage the budding entrepreneurs.



Program: Library Orientation

The new entrants of Bachelor of Engineering program were introduced to the Library & Information Centre facilities by Dr. Anitha S Rai, Dean– Library & Alumni Relations. The students were given orientation on how to access the library facilities and informed about all the facilities available in the centre. The online access of the e-journals and books were explained to them.

The induction program also had Math Horizon and Genesis club activities with workshops and an Industrial Visit to diFacto, as a part of the proficiency module in induction program, few other home assignments based on society, relationships for the 21 Days Induction Program. At the end, Feedback report analysis was obtained by the google forms circulated - data received was analysed for improvements that can be incorporated in the future induction programs and bring out the best for the forth coming engineers.

CO - CURRICULAR CLUBS



MATH HORIZON CLUB

The objective of the club is to provide a unique and enriching experience to students and generating interest in the subject while establishing confidence through skillfully reinforced encouragement



GENESIS CLUB

The objective of the club is to update and upgrade scientific education by transforming abstract information into tangible ideas and to bridge the gap between institute and industry with innovative, entrepreneurial and research ideas

INVESTITURE CEREMONY

The Investiture Ceremony for the Academic Year 2022-2023 was conducted on 19th December 2022 in the New Horizon Auditorium. Approximately 700 first-year students and members of various Co-Curricular Clubs graced this event with their presence. The President and Vice-president of the Math Horizon club for the academic year 2021-23 presented a comprehensive overview of the club's achievements in the past academic year. During this ceremony, badges were conferred upon the board members of the various clubs by Dr. Manjunatha, our esteemed Principal. The ceremony culminated with the solemn oath-taking, setting the tone for an academically rich year



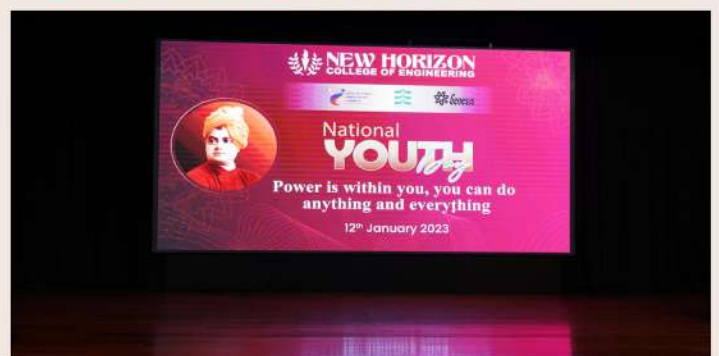
NATIONAL MATHEMATICS DAY

On the 22nd of December, we celebrated National Mathematics Day with an unconventional twist – blending artistic talent with mathematical spirit. This event featured a competition centered around drawings and sketches of the illustrious Indian Mathematician, Shri Srinivasa Ramanujan, in commemoration of his birth anniversary. To enlighten our students about the beauty of mathematics, a guest talk was organized, with Dr. Indrani Pramod Kelkar, Subject Admin, Engineer, and Basic Sciences at TCS iON, Mumbai, sharing insights on 'Mathematical Modeling for Engineers.' The event ignited enthusiasm among our students for the fascinating world of mathematics.



NATIONAL YOUTH DAY

In observance of National Youth Day, our Math Horizon and Genesis Clubs organized a series of events. Beginning a day prior to this nationally acclaimed event, students prepared a color code for the following three days. On the 12th of January 2023, a portrait sketching competition featuring Swami Vivekananda was held, shedding light on the life and teachings of this great visionary. A guest talk by Mr. Pramod NG further enriched the understanding of Swami Vivekananda's impact on the youth of India



On the 13th of January 2023, our college observed National Youth Day with an array of engaging activities, including a banner presentation competition. Students created enlightening banners that tackled serious issues such as drug abuse, mental health, sexual harassment, environmental concerns, and pollution. Last but not the least, a Tug Of War Tournament was held on the 13th January 2023 for the 1st year students, leading to a day well spent in the sun and enjoying activities that allowed for the spirit of youth to blossom amidst young and creative minds. These activities fostered a spirit of youth and creativity among our student body.



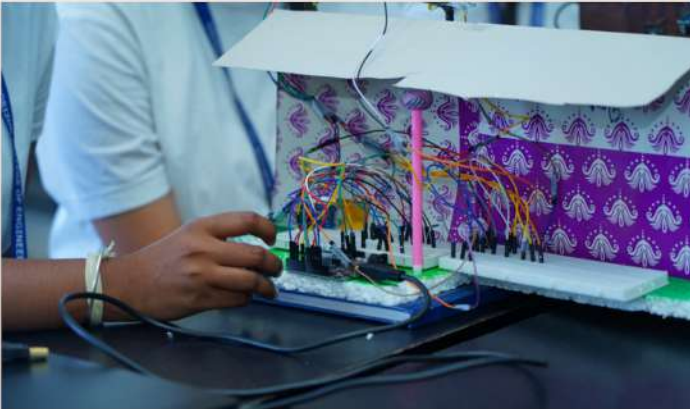
REPUBLIC DAY

Our Math Horizon and Genesis Clubs marked the 74th Republic Day with a spirited collage-making competition on the 23rd of January 2023. The competition saw participants crafting visually captivating collages, portraying India's transformation from 1950 to 2023, highlighting its glorious journey. The competition showcased the creativity and presentation skills of our students, and winners were selected based on their ability to convey ideas and knowledge through their artwork.



NATIONAL SCIENCE DAY

National Science Day, celebrated on 28th February, commemorates the discovery of the 'Raman Effect' by the eminent physicist Sir CV Raman. Our Math Horizon and Genesis Clubs marked the occasion with a captivating science exhibition. Students presented working models and innovative ideas with practical applications in our daily lives, fostering creativity and problem-solving skills. The event served as a platform for students to showcase their talents, overcome challenges, and grow in their abilities.



Seminars and Workshops

Expert Talk on “Indian Constitution and Legal Awareness”

Date: 05-12-2022

Time: 11:00 AM TO 1.00 PM

Department of Applied Sciences organized a guest Lecture by Mr Ashoka Naikaa, faculty member at Kristu Jayanti College of Law, on 05th December 2022 at Auditorium. Students of first year attended the lecture. In his talk Mr Ashoka Naikaa has explained students about the awareness of Constitutional remedies and provisions in the law to fight injustice, discrimination and personal violation. He discussed about IPC and sections for Anti National activities, Ragging, Eve teasing, Narcotics usage and Misuse of Social media. Around 650 students along with the faculty members have attended the talk



World Drug Day: “Talk on Drug abuse and precaution”



Date: 26.06.2023

Time: 11.30 AM To 1Pm

Department of Applied Sciences has organized World Drug Day on 26.06.2023. Mr. Girish IPS, Deputy Commissioner of Police, Whitefield region, Bangalore was invited as chief guest and Mr. Anil Kumar, Inspector, Marathahalli Police station, Bangalore as guest. Mr. Girish, DCP addressed first year BE students about the Drug Abuse and Illicit trafficking. Advised students about the ill effects of drugs and legal punishment of possessing and using drugs. Around 200 students have attended the program.



FACULTY ACHIEVEMENT



Dr. Ramachandra Naik



We are pleased to highlight the remarkable achievements of Dr. Ramachandra Naik, whose contributions to academia continue to inspire. With a prolific publication record comprising 59 scholarly works, Dr. Naik's impact is further underscored by an impressive H-index of 22 and a total citation count of 1,141. His dedication to advancing knowledge in his field is evident through his extensive research output and the substantial recognition it has garnered within the academic community. Dr. Naik's commitment to excellence serves as a beacon of inspiration for both colleagues and students alike, embodying the spirit of innovation and scholarly pursuit at our institution.

We are delighted to announce the prestigious achievement of Dr. Bhavya P, who has been awarded a research grant of rupees 3 Lakhs under the scheme Research Grants for Scientists/Faculty (RGS/F) by the VISION GROUP ON SCIENCE AND TECHNOLOGY, Department of Information Technology, Biotechnology & Science & Technology, Government of Karnataka. The grant is in recognition of Dr. Bhavya P's groundbreaking proposal titled "Analysis of novel heterocyclic compound for photophysical properties and their biological activity through fluorescence quenching by Spectroscopic and computational methods." This significant funding not only acknowledges Dr. Bhavya P's expertise and dedication but also underscores the importance and potential impact of their research in the fields of photophysics and computational biology. We extend our heartfelt congratulations to Dr. Bhavya P on this remarkable accomplishment, and we look forward to witnessing the invaluable contributions their research will make to the scientific community and beyond.

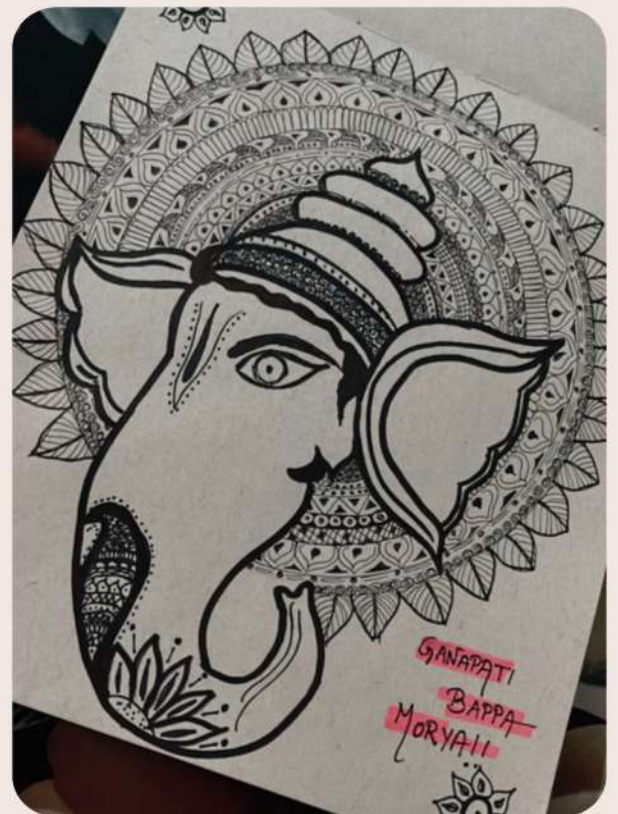


Dr Bhavya P

STUDENTS CORNER

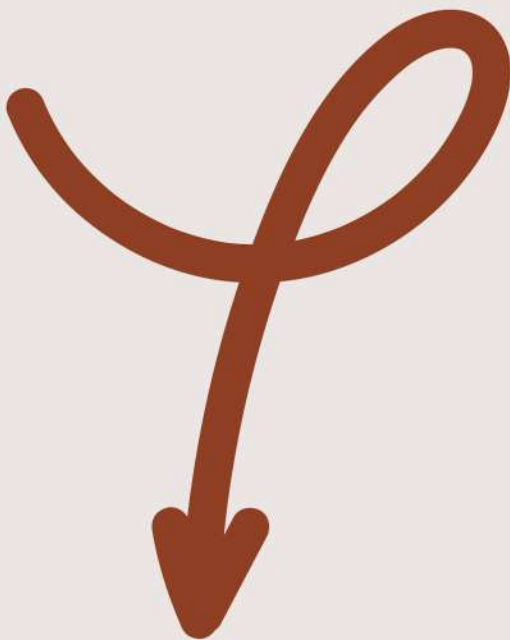
Priyanka S Reddy

1NH22CEO39





ANAND KUMAR
1NH22AI017





JOHNSON V JOHN
1NH22ME028

His intoxicating eyes and placid smile become the
comfort of my every day.

His presence around me is an ineffable magic , i
can't even say.

Everytime i see him I fall in love all over again.
Always thinking of him , whether it is sunny or it's
rain.

- Srishti Kumari

SRISHTI KUMARI
1NH22CE055



क्यों न देखे हम सपने ?
हर सपने नहीं टूटते है !
कुछ सपनों में होती है ताकतें ,
वो बस मंजिलों का पता ढूंढते है ।

क्यों न एक सपना हम फिर से सजाए ?
अपने आज के खुद को याद दिलाए !
वो बीता बचपन जो हमसे है उम्मीद लगाए ,
आओ ये वक्त है कुछ कर दिखाए ।

- सृष्टि कुमारी



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Thank You