YASHODA SHIKSHAN PRASARAK MANDAL, SATARA
YASHODA TECHNICAL CAMPUS
DEPARTMENT OF E &TC ENGINEERING

DEC 2023

....TECHNICAL MAGAZINE

Department of Electronics & Telecommunication Engineering Technical Magazine

(YASHOTECH-ELECTRONICS)

2023-24 [ODD SEM]

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TODAY'S READER CAN BE A TOMORROW'S LEADER !

PRESIDENT'S DESK

I welcome you to YSPM's Yashoda Technical Campus, Satara, an Institution which inculcates true values while disseminating quality education for shaping the career of our students. All our institutes are approved by the concerned statutory bodies and fulfill all the norms and standards laid down by them. Our technical campus is located in a lush, green, pollution free, picturesque environment. Our institutes have well qualified, experienced and student caring faculty, well equipped laboratories, spacious lecture halls and tutorial rooms, well maintained rich library, e-library, Wi-Fi Campus, Computer with Internet Facility, and a play ground with sports facilities. We emphasize on overall personality development of our students. Our faculty pays attention to each students a platform to excel not only in academics but also in co-curricular and a multi disciplinary study culture. Amenities provided by our institutes include transport facility, hostel facility, reprographics facility, canteen, STD PCO, medical centre, sports centre etc.

We are committed to import value based quality education along with development of positive attitude, skills and abilities to apply knowledge in order to meet the challenges of future. I extend my best wishes for your bright and prosperous future.

Prof. Dasharath Sagare
Founder President
YSPM - YSS, Satara

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WORDS FROM THE PRINCIPAL

It gives me immense pleasure and delight to know that the Dept of E&TC, YTC have mooted up a time needed, need based and innovative move, to bring out a domain specific annual magazine, in the name and style of Technical Magazine (YASHOTECH-ELECTRONICS) while involving all the faculty, staffs, students and the Electronics Engineering fraternity.

The objectives, as spelled out by the Editorial board of the newly emerging magazines are quite sublime, ennobling as well as triggering of and enlightening about the basic concepts and philosophy of knowledge Engineering among all the knowledge seekers on all the latest vital, pivotal and critical aspects of the profession in the field of E&TC and its technology.

Being the Head of the Institution, I congratulate the head of the Dept., the faculty, staffs and students of the Dept for their keen and vigorous effort in widening the knowledge base.

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Vision of the Department

To be an excellent technological hub in the field of Electronics and Telecommunication Engineering ensuring state of the art knowledge transfer through teaching and research activities to meet educational, societal, ethical need of the nation.

Mission of the Department

· To provide cutting edge platform to explore innovative, creative and entrepreneurial leadership qualities among the students.

· To be hungry for academic excellence through innovative procedure.

· To inculcate leadership quality and ethical values.

· To accept/ face technological challenges through the continuous efforts in collaboration with industry.

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PEOs

Graduates will able to–

·To equip graduates with a strong foundation in engineering sciences and Electronics & Telecommunication Engineering fundamentals to become effective collaborators, researchers and real-time problem solver with technical competencies.

·Perceive the limitation and impact of engineering solutions in social, legal, environmental, economic and multidisciplinary contexts.

·Excel in Industry/technical profession, higher studies, and entrepreneurship exhibiting global competitiveness.

PSOs

·Apply basic knowledge related to Electronic Circuits, Embedded & wireless communication Systems and Signal Processing to solve engineering/ societal problems in the field of Electronics and Telecommunication Engineering.

·Recognize and adapt to technical developments and to engage in lifelong learning and develop consciousness for professional, social, legal and ethical responsibilities.

·Excellent adaptability to the changing industrial and real world requirement.

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POs

1. Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems. (Engineering knowledge)
2. Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences. (Problem Analysis)
3. Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations. (Design and Development of Solutions)

4. Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions. (Conduct Investigations of Complex Problems)
5. Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations. (Modern Tool Usage)
6. Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice. (The Engineer and Society)

POs

7. Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development. (Environment and Sustainability)
8. Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice. (Ethics)
9. Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. (Individual and Team Work)

10. Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions. (Communication)
11. Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments. (Project Management and Finance)
12. Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. (Life-long learning)

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INTERNET OF THINGS

Internet of things (IoT) is the network of devices, vehicles, and home appliances that contain electronics, software, actuators, and Connectivity which allows these things to connect, interact and exchange data. IoT involves extending The Internet connectivity beyond standard devices, such as desktops, laptops, smartphones and tablets, to any range of traditionally dumb or non-internet-enabled physical devices and everyday objects. Embedded with technology, these devices can communicate and interact over the Internet, and they can be remotely monitored and controlled. The definition of the Internet of things has evolved due to convergence of multiple technologies, real-time analytics, machine learning, commodity sensors, and embedded systems. Traditional fields of embedded systems, wireless sensor networks, control systems, automation (including home and building automation), and others all contribute to enabling the Internet of things.

JADHAV MAYURI SANTOSH
SY

Real world Applications: Smart Home Wearables Smart Agriculture Connected cars Industrial Internet etc. Conclusion: The future of IOT is virtually unlimited due to advances in technology & consumers desire to integrate devices such as smart phones with household machines.

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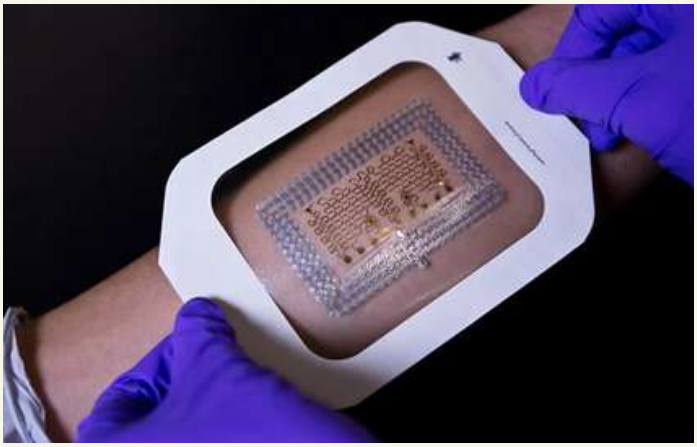
FLEXIBLE ELECTRONIC SKIN

Electronics plays a very important role in developing simple devices used for any purpose. In every field electronic equipments are required. The best achievement as well as future example of integrated electronics in medical field is Artificial Skin. It is ultrathin electronics device attaches to the skin like a sick on tattoo which can measure electrical activity of heart, brain waves & other vital signals. Artificial skin is skin grown in a laboratory. It can be used as skin replacement for people who have suffered skin trauma, such as severe burns or skin diseases, or robotic applications.



MANE APURVA VINOD
SY

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Humanoid Robotics

Humanoid robotics is an emerging and challenging research field, which has received significant attention during the past years and will continue to play a central role in robotics research and in many applications of the 21st century. Regardless of the application area, one of the common problems tackled in humanoid robotics is the understanding of human-like information processing and the underlying mechanisms of the human brain in dealing with the real world.

KANASE ARYAN PRAVIN, SY

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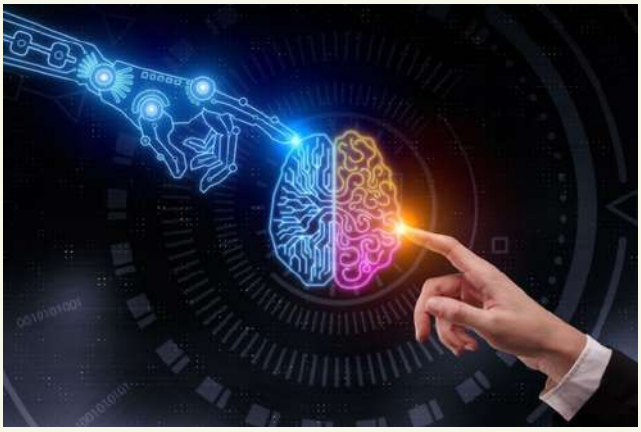
Blue Brain Technology

Human brain is the most valuable creation of God. The man is intelligent because of the brain. "Blue brain" is the name of the world's first virtual brain. That means a machine can function as human brain. With the advancement in technology, human, the ultimate source of information and discovery should also be preserved. In other words, human is does not live for thousands of years but the information in his mind could be saved and used for several thousands of years. Today scientists are in research to create an artificial brain that can think, response, take decision, and keep anything in memory. The main aim is to upload human brain into machine. So that man can think, take decision without any effort. After the death of the body, the virtual brain will act as the man .So, even after the death of a person we will not lose the knowledge, intelligence, personalities, feelings and memories of that man that can be used for the development of the human society.



KENJALE SHRUTI DATTATRAY, TY

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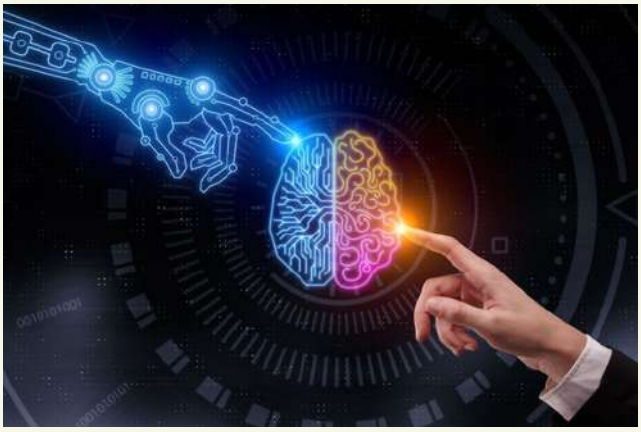

MANE ANURADHA DILIP, TY

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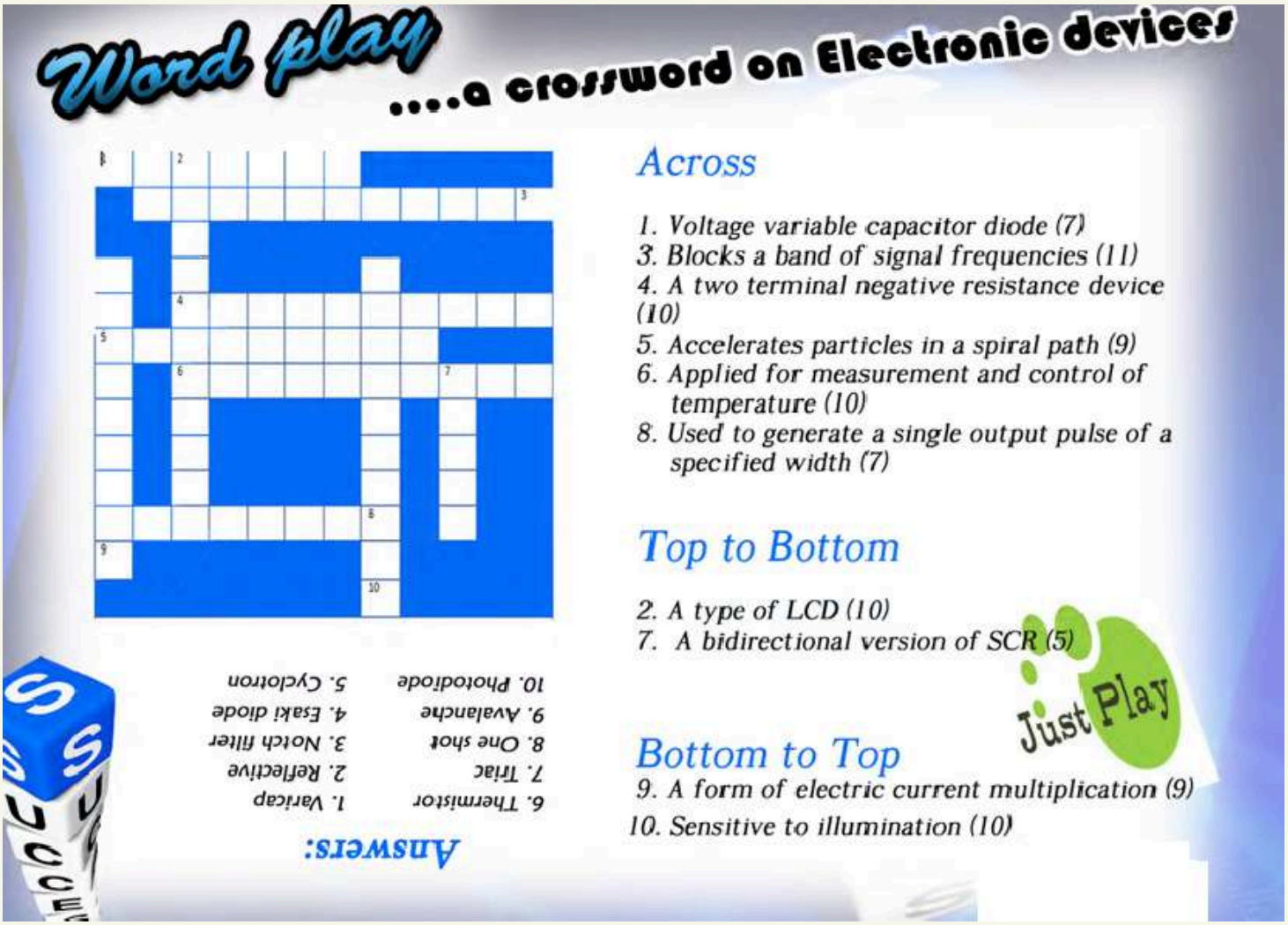

PISAL MADHU DNYANDEV, B.TECH

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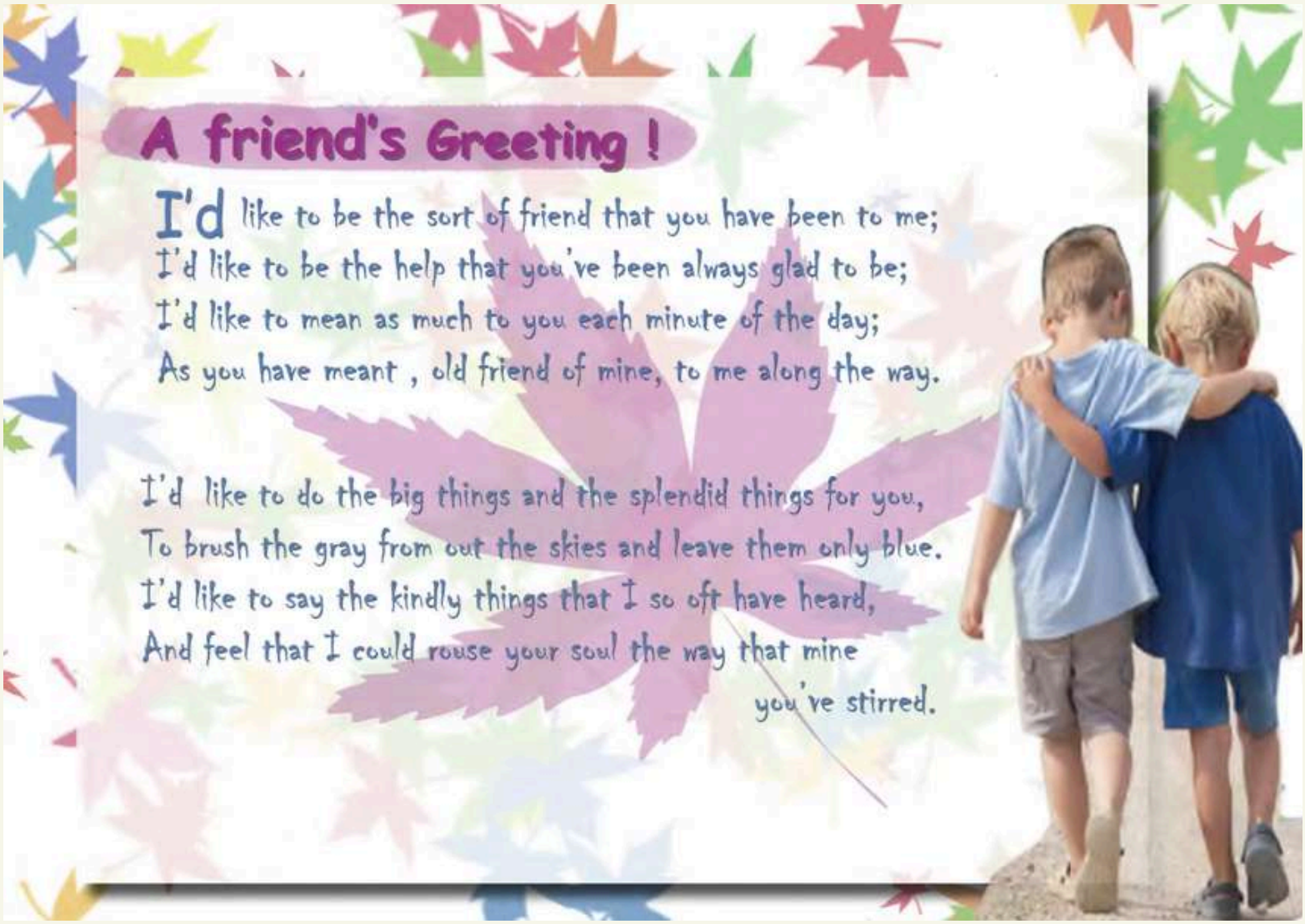

SNEHAL BABURAV BHADKE, B.TECH

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DIPALI PRAKASH MANE

B.TECH