



July - December 2021

Book 15 Issue 2

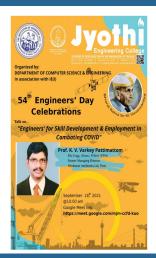


Amphitheater @ JEC

The Amphitheater was blessed and inaugurated on July 7 by H.E. Mar Tony NilankaNeelankavil. Auxiliary Bishop of Trichur

Teacher's day celebration 2021

Staff club of Ivothi Engineering College, Cheruthuruthy conducted a webinar on 6th September 2021 at 3pm in connection with Teacher's day 2021. The theme of 2021 teacher's day is "young Teacher's Future of profession". The function started with silent prayer. Rev. Dr. Jose Kannampuzha, Director of Academics, gave the welcome address. Rev. Fr. Roy Joseph Vadakkan, Secretary & Campus Head, gave a special address to the faculty of JECC. Chief guest was Dr. Job Kurian, Retd, Professor, Dept. of Aero Space Engineering, IIT Madras. He gave a beautiful message on how to be a good teacher. He also commented on the tips for a good teacher. Vote of thanks was done by Ms Minu Jos K,AP,BSH. The programme ended with national anthem by 4.10 pm



54th ENGINEERS' DAY

54th Engineers' Day Celebrations' was organized by IE(I) in association with department of Computer Science & Engineering on 18th September 2021 at 10.00 AM through google meet. The chief Guest of the day was Prof. K.V.Varkey Pattimattom, Former Managing Director of Hindustan Antibiotics Ltd, Pune. Around 85 participants attended the event. The chief guest Prof. K.V. Varkey Pattimattom, Former managing director of Hindustan Antibiotics Ltd, Pune delivered the inaugural address and officially inaugurated the event. Mr. Sasidharan Achari M N MIE, honorary secretary, IEI Local center Thrissur fecilitated the gathering. After that, Prof. K.V. Varkey Pattimattom, Former managing director of Hindustan Antibiotics Ltd, Pune delivered an informative session on the theme "Engineers for Skill Development & Employment in Combating COVID". In his session he explained the Engineers' role in combating COVID, prevention of the pandemic by Engineering, post-COVID economic growth & suste-



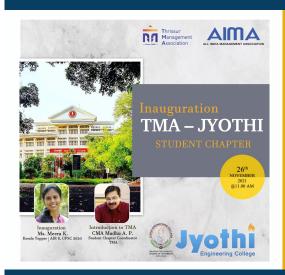












Inauguration of TMA – JYOTHI Student Chapter



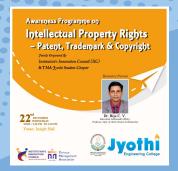
Placement & Training Dept. Jyothi engineering college, has successfully coordinated and conducted the inaugural function and MoU signing of the TMA(Thrissur Management Association) – JYOTHI student chapter, on Thursday, 25th November 2021, from 11.00 AM to 12.00PM, at Room No 415 & 416. Ms. Meera K, the pride of Kerala with All India Rank 6 (Kerala Topper) in the UPSC 2020 examination, has inaugurated the student chapter and interacted with our students.

JYOFEST'21

College Union of Jyothi engineering college consists of the elected class representative from among the students. It is the body that addresses the concerns, needs and welfare of the student community. Its ultimate goal is to strive to meet the various needs of the students, both academic and cultural.

The renewed panel of COLLEGE UNION for the academic year 2021-2022 was formulated by an election process conducted under the manifestation of Staff advisors Mr. Jithin K. Jose (Assistant Professor, EEE) and Ms. Shiny M. I. (Assistant Professor, ECE). Mr. Kiran Shelly, S7 ME was elected as the Chairman, Ms. Keerthi M, S7 EEE as the Vice Chairperson, Mr. Benat Jose, S5 MR as General Secretary, Ms. Jyotsna Joshy, S5 CSE as Joint Secretary, Mr. Anshad C A, S5 CE as Arts Club Secretary, Ms. Krishnendhu, S1 ECE as Magazine Editor, Mr. Kishor V Gopal, S3 ME as Sports Secretary, Mr. Akshay P, S7 EEE and Ms. Gayathri M K, S7 ECE as University Union Councilors.





Awareness programme on

"Intellectual property right – Patents, Copyright and Trademarks"

In association with Thrissur Management Association (TMA) Students chapter at Jyothi Engineering College, Institution's Innovations Council (IIC) organized an awareness programme "on Intellectual property rights – Patents, Copyright and Trademarks" for young talented Entrepreneurs of the institute at Insight Hall at 2.30 pm on 22nd Dec. 2021. *Thirty Seven undergraduate engineering students attended the programme. Mr. Bibin Joy, Placement and Training (PAT) officer coordinated the technical event. Ms. Mekha Rajagopal, member of the TMA student's chapter welcomed the gathering. Registrar of the College and Past President of TMA Dr. V.M. Xaviour presided over the function.

FELIZ (CHRISTMAS CELEBRATION 2021)

The Christmas Celebration 2021 conducted by the College Students Union celebrated on 23rd December 2021, Thursday in the College Auditorium. The Christmas Celebration started with Carol song competition at 8.45 am. It was followed by a Christmas papa dance competition. Dr. Sunny Joseph Kalayathankal (Principal, JECC) and Fr. Roy Joseph Vadakkan (CEO, JECC) addressed the students and wished that this Christmas fills everyone's life with new hope, positivity and joy. Fr. John Tharayil (Professor, BSH) gave a beautiful Christmas Message. The Union Chairman did the welcome speech.

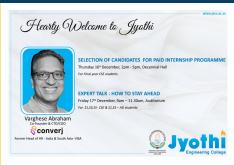
The College Union in association with the program coordinators conducted the function. After the Christmas Message in the presence of Santa Claus cake cutting ceremony was done. Christmas cakes were distributed to the students. The main attractions of the programme was band set by New Sangeeth, Tirur. It was well-received by the audience. A crib was made by the students. Even though the situations were not in our favour due to covid-19 everyone participated and thoroughly enjoyed the celebrations.



COLLEGE NEWS

Selection of candidates for Internship & Expert talk 'How to stay ahead'

The placement & training department was extremely delighted to welcome Mr.Varghese Abraham, Co-Founder & CTO/COO of Converj Global Pvt. Ltd (https://converj.com/) for a 2 day visit to our campus on 16th & 17th December 2021 . Converj Global Pvt. Ltd (formerly NPK B2B Pvt. Ltd.) has hired 6 JYOTHIANS from B.Tech 2021 passed out batch, with a salary package of 8.88 Lakhs Per Annum. Mr.Varghese Abraham is a vastly experienced technocrat and was the former 'Head of HR-India & South Asia' for VISA (https://www.visa.com/)







Department News

BASIC SCIENCE & HUMANITIES





20 Days Crash Course

Ms. Minu Jos K and Ms. Viji E P engaged 20 Days Crash Course for all B.Tech aspirants with Diploma background focused on DTE LET Exam -2021. (06/10/21-22/10/21)

Conducted Bridge Corse for newly admitted students (2021 admission) from 25th October 2021 to 19th November 2021.

Conducted the Induction ceremony of 20th Batch of B. Tech. aspirants on 22/11/2021

Orientation Programme for 2021 admission students started on 23/11/2021.

Faculty Achievements

Mr. Rich K J has attended 5-day fdp "on Digital VLSI design and verification", organized bydept. of ECE, Bangalore institute of technology in association with Entuple Technologies and IEEE-BIT CAS from 23rd to 27th August 2021.

Mr. Rich K J has participated in One Week Online International Faculty Development Programme on "Advanced Methodologies for Contemporary Research"- A Pragmatic Approach organized by Department of Management & Department of Management & Contemporary Research Centre, GovernmentRamnarayanChellaram College of Commerce and Management from 16th to 23rd August2021.



Ms. Viji E P has participated in National Technology and Entrepreneurship summit conducted by Petrichor, IIT Palakkad from 16th September 2021 tp 19th September 2021.



Student Achievements

Mr. Ageto Sunny of S1 CSE has been selected to APJ Abdul Kalam Technological University Volleyboll Team for All India Inter University Tournament.



FELIZ (CHRISTMAS CELEBRATION 2021)

The Christmas Celebration 2021 conducted by the College Students Union celebrated on 23rd December 2021, Thursday in the College Auditorium. The Christmas Celebration started with Carol song competition at 8.45 am. It was followed by a Christmas papa dance competition. Dr. Sunny Joseph Kalayathankal (Principal, JECC) and Fr. Roy Joseph Vadakkan (CEO, JECC) addressed the students and wished that this Christmas fills everyone's life with new hope, positivity and joy. Fr. John Tharayil (Professor, BSH) gave a beautiful Christmas Message. The Union Chairman did the welcome speech.

The College Union in association with the program coordinators conducted the function. After the Christmas Message in the presence of Santa Claus cake cutting ceremony was done. Christmas cakes were distributed to the students. The main attractions of the programme was band set by New Sangeeth, Tirur. It was well-received by the audience. A crib was made by the students. Even though the situations were not in our favour due to covid-19 everyone participated and thoroughly enjoyed the celebrations.



TOPPERS OF FIRST SEMESTER UNIVERSITY EXAMINATION (2020-2024)



DIVYA PILLAI EBIN CZEBY SGPA: 9.74 SGPA: 9.65



ANGELA SOFIA GEORGE

THERESSA CHIYEZHAN



DHINOO CELIA BABU



HARIKRISHNA R NAIR SGPA: 9.94



AJITH



Computer Science

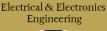
SRUTHIPA ROSMIN JOHN C SGPA:10 SGPA: 9.94



ATHIRA FRANCIS

SAJAYAN

SGPA: 9.65





ALBA MARIYA JOSHY



Mechanical Engineering



SGPA: 9.41

SHONETS



IOBIN C I



Mechatronics



CHERU ASHISH IOY



MSARATH



MILAN ROY C

Robotics and Automation





Bito K.B.

CONCRETE MIX DESIGN

ONDERNIE WORKSTHOP

22nd Oct 2021

Jyoth



Congratulations

Department News

CIVIL ENGINEERING

WEBINAR

RECENT INNOVATIONS IN THE PREPARATION OF TERNATIVE BUILDING BLOCKS 10th July 2021 ineering Association JECC Association with ee Registration For All 9 You Tube Jyothi

RECENT INNOVATIONS IN THE PREPARATION OF ALTERNATIVE BUILDING BLOCKS

Conducted a webinar on "Recent innovations in the preparation of alternative building blocks" with association of CEA and ICI on 10th July 2021.

SMART CITIES

Conducted a webinar on "Smart Cities" with the association of Department of civil engineering and IST student chapter on 22nd July 2021.



CONCRETE MIX DESIGN - THEORY TO PRACTICE

Department of Civil Engineering JECC in association with ISTE students' chapter, is conducting an Online Workshop on "Concrete Mix design - Theory to Practice on by Dr Jagadish Vengala, (Head, EDC & EDC); Innovation Centre Associate Professor, Department of Civil Engineering on October 2021.



ADVANCED TECHNIQUES IN **SURVEYING**

ISTE (student Chapter), conducted an expert talk "Advanced techniques in surveying" on December 9th,2021, Thursday (1.30pm-4 pm). The resource person was Dr. Anitha Jacob, Govt. Polytechnic College, Chelakkara.

CHALLENGES AND INNOVATIVE TECHNIQUES IN CONCRETE STRUCTURES

The Department of Civil Engineering organized a One Week International Online **Faculty** Development Programme on "CHALLENG-AND **INNOVATIVE** TECHNIQUES IN CON-CRETE STRUCTURES" from 25th-29th Oct 2021.

On the occasion of World Habitat Day, Department of Civil Engineering, Jyothi Engineering College, Thrissur and Institute of Engineers (India) organized a Webinar on "Climate Change: An Environmental Quagmire!" on 04/10/2021 @ 2:00 pm

Resource Person:

Dr. S. Sandeep, Senior Scientist, Dept. Of Soil Science, Sustainable Forest Management Division, KSCSTE-KFRI



Faculty Achievements

Dr. Alwyn Varghese felicitated an international online lecture series conducted by the department of geology, Sahrdaya college of advanced studies.



Ms. Carol Varghese Published "Mode Choice Analysis: Conventional and Advanced approaches" in International Research Journal of Engineering and Technology", Vol. 8, Issue 7, July 2021





Ms. Soorya M Nair successfully participated in an online International Faculty Development Programme (FDP) on The Art of Doing Research jointly organized by Jyothi Engineering College, Thrissur, India, CHRIST (Deemed to be University), Bangalore, India and Pelita Bangsa University, Indonesia in association with Internal Quality Assurance Cell (IQAC), Jyothi Engineering College, Thrissur, India during 12-22 July, 2021

Ms. Soorya M Nair actively participated in an online ATAL FDP on "Emerging Topics in Civil Engineering" from 27/07/2021 to 31/07/2021 at IET Lucknow.

Ms. Neeraja P G successfully participated in an online International Faculty Development Programme (FDP) on The Art of Doing Research jointly organized by Jyothi Engineering College, Thrissur, India, CHRIST (Deemed to be University), Bangalore, India and Pelita Bangsa University, Indonesia in association with Internal Quality Assurance Cell (IQAC), Jyothi Engineering College, Thrissur, India during 12-22 July, 202

Dr. Alwyn Varghese felicitated an international online lecture series conducted by the department of geology, Sahrdaya college of advanced studies.

Dr. Alwyn Varghese successfully completed a course titled Building Resilience with certification from Linked in LEARN-ING.

Dr. Alwyn Varghese successfully completed a course titled Embracing Unexpected Change with certification from Linked in LEARNING.

Ms. Soorya M Nair joined for Doctor of Philosophy in the stream of Civil Engineering in karunya Institute of Technology and Sciences

Dr. Alwyn Varghese completed the review of a paper in the journal of "Journal of Industrial Textiles" (SCI indexed) on 18-08-2021.

Dr. Alwyn Varghese participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Modern Trends in Civil Engineering & Construction Industry" from 02/08/2021 to 06/08/2021 at College of Engineering Kidangoor.

Ms. Neeraja P G successfully participated in a Faculty Development Programme on The Art Gallery of Engineering Graphics from 2nd August to 6th August 2021, organised by the Department of Mechanical Engineering, Sree Chitra Thirunal College of Engineering, Pappanamcode, Thiruvananthapuram.

Ms. Soorya M Nair participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Structural Dynamics and Earthquake Resistant Design of Structures"" from 24/08/2021 to 28/08/2021 at Government College of Engineering, Salem

Ms. Soorya.M.Nair has successfully completed one month online internship programme on "RESEARCH TRAINING "from 05.07.2021 to 5.08.2021 by MSME-Technology Development Center (PPDC), approved by GOI

Mr. Parthiban P participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on " Modern Trends in Civil Engineering & Construction Industry" from 02/08/2021 to 06/08/2021 at College of Engineering Kidangoor.

Mr. Parthiban P and Ms. Anju M J both has presented a paper in the Second National Virtual Conference on RECENT ADVANCES IN TECHNOLOGY & ENGINEERING (CRATE-2021) on 13-14, August 2021 at VEMU Institute of Technology, Chitoor, Andhra Pradesh Durability Study On Fly Ash Aggregate Concrete With Respect To Carbonation Test Experimental Study Of Sugarcane Bagasse Ash And Quarry Dust In Partial Replacement Of Brick Material

Mr. Parthiban P has presented a paper in the conference 3rd Symposium On Industrial Science And Technology (SISTEC'21) with the title "A Review on Environmental Impact Assessment of Limestone Mining Operations" on 25 – 26 August 2021 by Faculty of Industrial Sciences and Technology in collaboration with Universitas Lambung Mangkurat (ULM) and Japan Advanced Institute of Science and Technology (JAIST).



Jisha Akkara presented the paper entitled Effect of Non-urban Two Lane Highway Geometry on Car and Bus Drivers – A Physiological Study at the 24th Euro Working Group on Transportation Meeting (EW-GT2021). This virtual event was organized by the University of Aveiro from 8th to 10th of September 2021.

Ms. Soorya M Nair ,Mr. Parthiban P and Ms. Anju M J presented a paper in the First International Conference on Recent Advancements in Civil Engineering (ICRACE) 2021 held during 17th to 19th September 2021 in NIT Silchar Paper entitled is:UHPC Steel Composite Girder: Numerical Studies on Flexural Behaviour in Negative Moment Region



Ms.Soorya M Nair (First Author) Published "Efficiency of vetiver filter in defluoridation of water" in AIP Conference Proceedings, Vol. 2396, Issue 1, September 2021

Dr. Alwyn Varghese presenting the research paper entitled "Effect of Cover on the Performance of Self-Compacting Concrete under Elevated Temperature" in the Second International Conference on Advances in Physical Sciences and Materials (ICAPSM 2021) held at Coimbatore, Tamil Nadu, India (Scopus indexed). Dr. Alwyn varghese (First author) published a titled "Investigation of the Post-Fire Performance and Flexural Behaviour Modeling of FRC Exposed to a Standard Fire" in the journal "Structural Engineering International" (SCI indexed



Mr. Cyriac M G, Ms. Vincy Verghese and Dr. Agnes Anto C received certificate of appreciation from Water Resource Department, Govt. of Kerala for their contribution to the preparation of DPR for abatement of pollution and rejuvenation of 21 rivers in Kerala.

Dr. Jacob Chandapillai reviewed a paper titled "Discharge redistribution as a key process for heuristic optimization of energy production with pumps as turbines in a water distribution network" for the international journal "Water Resources Management"



Ms. Soorya M Nair, Parthiban P and Anju M J presented a paper titled "Use of Tamarind Seeds to remove Fluoride from Water" in 2nd International Conference on Instigating research in Materials, Energy and Environment (ICIRMEE) organized by Easwari Engineering College, on O6th & O7th October, 2021





Dr. Alwyn Varghese successfully participated in the Panel discussion on precast execution challenges - Erection planning, machinery and methods organized by



Student achievements

Ms. Lekshmi J S (PGCE 2019-21) acknowledged for her volunteer work for COVID 19 by Kattayikonnam Ward, TVM on 28.08.21

University Result Toppers





S5 2018-2022



AI and its Applications in Research

The department of Computer Science & Engineering in association with Computer Society Of India (CSI) conducted an online five day Faculty Development Programme on "AI and its Applications in Research" from December 27th to 31st, 2021.



Faculty Achievements

Dr. Vinith R published a paper "JP-DAP: An Intelligent Data Analytics Platform for Metro Rail Transport Systems" in IEEE Transactions . Dr. Vinith R published a paper in Neural Computing and Applications for Kochi Metro-DST research project





Dr. Saju P John led sessions as a speaker on the topic "Trust Based Approaches for Secure Mobile Edge Computing Environment" on 11/8/2021 at Sathyabama Institute of Science and Technology



Ms. Aswathy Wilson authorised a paper titled COVID-19 CASES PREDICTION USING DIFFERENT LSTM MODELS AND COMPARISON OF EFFECTIVE-NESS OF DIFFERENT MODELS submitted to the 4th International conference on Big data and cloud computing organized by the Dept.of CSE, Karunya Institute of Technology and Sciences during 20, 21st august 2021.

Ms. Aswathy Wilson and her team has been selected to compete in the regional level techfest organized as part of TECHFEST-2021 of KSCSTE. Under her guidance, S-Box was selected for the project proposal in FOUNDATION FOR ADVANCEMENT OF EDUCATION AND RESEARCH(FAER) and the proposal is published in the technical compendium with a certificate. S-Box was selected for the Bronze prize. Prize consists of Rs. 10,000/- as cash award and certificate to the student team and the mentor. Under the guidance of Ms. Aswathy Wilson, "Deep Fake Detection using Machine Learning" was selected for the project proposal in FOUNDATION FOR ADVANCEMENT OF EDUCATION AND RESEARCH(FAER) and the proposal is published in the technical compendium with a certificate.



Dr. R vijayakumar joined as Professor in CSE Department

Dr. Swapna B Sasi authorised a paper titled COVID-19 CASES PREDICTION USING DIFFERENT LSTM MODELS AND COMPARISON OF EFFECTIVENESS OF DIFFERENT MODELS submitted to the 4th International conference on Big data and cloud computing organized by the Dept.of CSE, KArunya Institute of Technology and Sciences during 20, 21st august 2021.





Mr. Anil Antony led sessions as a speaker on the topic "Innovations and Entrepreneurship" on 04/11/2021 at GVHSS Vattenad, Palakkad .Organized by NSS unit, in the role of IEDC Nodal officer in Jyothi Engineering College.

Ms. Lufiya George C has successfully Completed three AICTE 12 week course of National Initiative for technical Teachers training from Online Swayam Platform .She presented research paper in international conference on Dec 16 in topic: A survey on Arrhythmia disease detection using Deep Learning methods



Ms. Lufiya George C has successfully Completed three AICTE 12 week course of National Initiative for technical Teachers training from Online Swayam Platform .She presented research paper in international conference on Dec 16 in topic: A survey on Arrhythmia disease detection using Deep Learning methods

Student Achievements













PLACEMENTS

Maneesh Manoj,Sangeetha C P ,Sangeetha Orathapan, Avin joseph, Bibin Thomas, BinwincViju,Rashi M,Amala K S,Aleena Shaji and Cecilia Joe of S8 CSE got placement in







Vani Choyyan from S7 CSE- B have been awarded a GHC Student Scholarship to attend the 2021 Virtual Grace hopper celebration.

JOEL JAMES KARIKKANDATHIL has been selected as the new Lead of the Google Developer Students Club - Jyothi Engineering College Chapter(DSC Lead -JEC) for the tenure 2021 - 2022 by Google

Ideas Elite Ideathon was an event conducted as a part of their fest UberTech 21 by SRM VDP. The event was conducted on Sep 22, 2021. Event consisted of 2 rounds. Top 9 teams were selected from Round 1 to compete in the finals(i.e. Round 2). Amongst those 9 teams our team UnicornDev was given the Special Mention Prize in EdTech domain. Team Members - Sidharth S Unnithan(Team Lead - S4 CSE B) Sidharth P (S4 CSE B) Deo Saju (S4 CSE A)















"Deep Fake Detection using Machine Learning" was selected for the project proposal in FOUNDATION FOR ADVANCEMENT OF EDUCATION AND RESEARCH(-FAER) in association with McAFee 2020-2021 under the guidance of Ms. Aswathy Wilson Ap, CSE Department were the finalists out of 30 teams nationwide. The proposal is published in the technical compendium with a certificate. Group members are Karthik P C, Adithya Vijayan, Sanjana S, Thushara P

Project entitled S-Box has been selected to compete in the

regional level techfest organized as part of TECHFEST-2021

of KSCSTE. The students from S6 CSE- B Raphel K Moyalan,

Shelmy Babu, Tiya Thomas, Tomson Pavoo P were guided by

S-Box was selected for the project proposal in FOUNDA-TION FOR ADVANCEMENT OF EDUCATION AND RESEARCH(FAER) in association with McAFee 2020-2021 under the guidance of Ms. Aswathy Wilson Ap, CSE Department were the finalists out of 30 teams nationwide. The proposal is published in the technical compendium with a certificate.(Raphel K Moyalan, Shelmy Babu, Tiya Thomas, Tomson Pavoo P)











Aswathy Wilson







Our students Shafna, Amal Sebastian, Adithya Haridas, Jeswin Jojy of S7 CSE got placed in QUEST









Team UnicornDev was given the Special Mention in EdTech domain as a part of Ideas Elite - Ideathon #Ubertech '21 at SRM, VDP

Team UnicornDev won the 1st Runner-Up in the T-HAcks 4.0 HAckathon conducted as a part of Technorax v7.0. Students are Sidharth S. Unnithan, Sidharth P, Āmal Shibu, Deo Saju





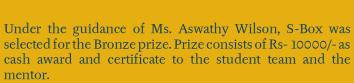






Vani from S7 CSE completed NPTEL online course in Introduction to Internet of Things







Placements

Our students of S3 M. Tech Divya placed at TCS

Marlabs placed students from S7 CSE - Amal Sebastian, Harsha, Shafna, Edwin T Joy



Harsha K S From S7 CSE got placed in Technologics Global Pvt. Ltd., Bangalore









Our students of S7 CSE Kevin varghese, Kailasanath, K Ajishkumar, Nithin Madhu, Jeswin, Srelakshmi, TIya, Shiza, Shafna, Midhun, Amal Sebastian, Anugraha, Alen Varghese, Alan George, Gokul Das, Adarsh, Delicia, Adithya Haridas, Ann theresa got placed in TCS



Our students of S7 CSE Amal Sebastian, ashrul, jissy, jumana, kevin,rachael, rockson, sarath, shafna, shiza, tiya, gayathri got placed in IBS































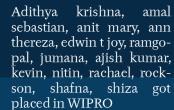
























Our students from S7 CSE Akhil Azeez, Aravindh S, Harsha, Jissy, Sourav, Vaishnav got placed in Poornam Info Vision

Adithya haridas, alen varghese, anit mary, ramgopal, kevin, midhun, sarath sasi, shelmy, sreehari are got placed in Hexaware



















Our students from S7 CSE amal sebastian, edwin t joy, jissy, vani prakashan, adarsh kumar, Ajishkumar, anit mary, athira k p, harsha k s, jeswin jojy, kailasanath, midhun, sarath sasi, shafna, sijo george, sreehari, vaishnav are placed in Cognizant































