

ICERYX

VOLUME 06 ISSUE 03

THE VOICE OF ICE



ICE

DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

SARANATHAN COLLEGE
OF ENGINEERING

FOREWORD :

The students of department of Instrumentation and Control Engineering are nurtured with the resources for upliftment in terms of technical activity. The students are encouraged for taking forward the technical resources and mould themselves for technical outcome. The hard work, team work and spirit in students bring the developed nation. The magazine ICERYX is an attempt to mould the students in this aspect.

FROM THE EDITORIAL BOARD :

Dear readers,

ICERYX is the platform where you can share your achievements, academic or co curricular, your project details and any technical or non technical stuff. It's the student driven initiative and your involvement matters a lot. Make sure you read the every edition of the magazine and use the facility to the fullest. Feel free to get in touch with PR team for any clarifications. Submissions to the PR team can be done through official mail ID only. Happy reading!

PR TEAM

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CONTENTS

THE HAPPIEST DAY OF YOUR LIFE

FDP (FACULTY DEVELOPMENT PROGRAMME)

7 HEALTHY LIFESTYLE TIPS FOR STUDENTS

ECKOVATION-CAMPUS AMBASSADOR PROGRAM

DETAILS ABOUT VARIOUS GOVERNMENT EXAMS

LABVIEW SESSIONS

**WHAT WOULD HAPPEN IF WE LIVE TOO MANY YEARS
IN SPACE**

WORDS OF WISDOM

BOOK REVIEW : RELATIVITY – ALBERT EINSTEIN

APTI PREPZ

HOW TO PROGRAM ARDUINO

PROJECTS AROUND

OUT OF BOX

ART GALLERY

PHOTO GALLERY

THE HAPPIEST DAYS OF YOUR LIFE?

School days should be a happy time in a young person's life. What can make people's lives a misery during this time, then? In my opinion there is one word which answers this question –bullying.

Unfortunately, bullying is quite common in schools where I live. It can affect students of any age, and both boys and girls. A friend of mine had a very negative experience at school last year as an older boy continually called him names and sometimes used to post nasty messages about him on Facebook . Obviously, my friend felt very upset about this and it affected his self-confidence. Some days, he didn't want to come to school at all.

teachers need to be aware that bullying may be happening in the classes and be very strict when they have a case of bullying. Another thing teachers could do is prepare lessons to talk about the problem with the pupils, which might make bullies realize how badly they hurt their victims. As for students, if they find out a classmate is being bullied, they should support them as much as possible and let a teacher know.

Bullying can be a nightmare but there are things we can do to prevent it. Hopefully, one day all students will be able to go to school without fear of being bullied.

**- Sindhuja C
Pre Final Year**

What can people do to stop this problem? Personally, I think

FDP

S. NO	TOPIC	CONDUCTED BY	ATTENDED BY	HELD ON
1	Sensors and actuators	IISC BANGALORE	Dr.A.Gopikrishnan Mr.P.Thirumurugan	May , 2019
2	Process control and optimization technique	NIT TRICHY	Mr.Satish Kumar Mr.Seetharaman Ms.Ezhilarasi	May 2019



7 Healthy Lifestyle Tips for Students

A parent always wants their children to live a long healthy life. Unfortunately, not everyone is able to boast that they have no problems in this area. Many students find it difficult to maintain a healthy lifestyle in college. Classes and lectures, reading and essay writing assignments, extracurricular activities, work commitments, tight budgets and food choices all can be stressful and harm health. Luckily, there are a few simple ways to stay on track. Keep reading to find out seven tips that could be just what your teen children need. Also see Essay Service info graphic with brain hacks for students - this might help to be more effective and less tired.

1. Making healthy food choices

Healthy diet may not sound that thrilling. But it can help one stay fit and live one's life to the fullest.

Poor concentration, fatigue, laziness, and frustration are signs that

your children need to recharge power bank. Never let them miss breakfast. One can make a whole meal toast, porridge or a whole grain cereal. That will boost energy levels.

Main meals should consist of basics like pasta, rice and lentils, and side dishes like casseroles, soups, and stews. And more fruit and vegetables. Students can pack lunch. There are a lot of videos on YouTube on how to cook for a few days (even a week!) ahead. With packed meals in your fridge, your teenagers be less likely to buy junk food nearby.

2. Staying hydrated

Our bodies are made up of more than 70% of watery liquid. It is responsible for the overall body function. To keep proper hydration levels, one should drink up to six or eight glasses of water a day. Choose simple water instead of soda, coffee or tea.

Drinking lots of water improves concentration and prevents over-eating. It charges body so that one feels cheery throughout the day. It's preferable to carry a bottle wherever one goes.

3. Getting enough sleep

While it may be tempting to stay up late to finish writing one's research paper or hang out with friends, make sure your children don't get used to it. Sleep deprivation can reduce brain function, cause fatigue, headaches and weight problems.

College students need about eight hours of sleep to stay healthy. Napping during the day will also make one feel rested.

4. Getting plenty of physical activity

Doing enough exercise helps to maintain a healthy body and sharp

mind. Many students cannot stick to an exercise routine because of a lack of time or money. But staying physically active doesn't necessarily mean working out every day. One can walk or bike to classes instead of going by bus or car.

The fitness facilities at many schools are outstanding. One can visit the gym before or between classes. If the schedule is too tight, one can do physical exercises in the dorm room. The Internet is full of work out and fitness tutorials. Sport increases muscle strength, helps to control the body weight, and improves mood.

5. Following personal health practices

Maintaining personal hygiene is vital for preventing the development and spread of infections. Even such a simple action as



washing hands can help to avoid a plethora of illnesses.

If your kids are experiencing symptoms that have lasted for a few days, it may be high time to see a doctor or go to the campus clinic. Check this in order to prevent a more serious problem.

Don't neglect the dental health. One must visit the dentist every six months.

6. Getting rid of bad habits

Avoid sugary and caffeinated drinks. One may cheer while doing homework late at night. But they are harmful in the long run. If one needs an energy boost, it's good to eat more foods which contain protein and fiber.

One should quit smoking. It will lower the risk of diabetes, help one's heart, lungs, and teeth, and prolong the years of life!

Drink responsibly. It is possible to enjoy dorm parties without consuming much alcohol. It dehydrates the body and causes hangovers.

7. Keeping a journal to avoid study stress

It goes without saying that college life can be overwhelming. All the above tips help students avoid anxiety and depression. But journaling is a very powerful tool for managing stress. It helps to clarify your child's thoughts and feelings. Even occasional entries can tune on a positive vibe. Another benefit of journaling is a boost of writing skills and creativity. That means that one will complete the academic papers better and faster, cutting out more time for other obligations or rest.

The best advice students can get on leading a healthy life is to assert themselves. By letting someone else make uncomfortable health decisions for them, they are giving up their personal power. To be or not to be healthy – it's up to every student!

**- SNEKA
PRE FINAL YEAR**

A yellow banner featuring the Eckovation logo (a stylized 'e' in a circle) on the left, followed by the text 'Eckovation' in black and 'CAMPUS AMBASSADOR PROGRAM' in red. Below this is a red 'Join Now!' button with a white outline. On the right side of the banner is a black silhouette of a man and a woman in superhero-style costumes with red outlines, standing in a dynamic pose.

 **Eckovation**
CAMPUS AMBASSADOR PROGRAM

**Join
Now!**



ECKOVATION-CAMPUS AMBASSADOR PROGRAM

We're glad to announce the launch of our Campus Ambassador Program (CAP). We're looking for an awesome 'Campus Ambassador, who is ambitious, highly motivated and has excellent networking & interpersonal skills. The Eckovation CAP is an exclusive opportunity to learn new skills, build self-confidence, gain entrepreneurial experience & earn money while studying!

About Eckovation:

Eckovation is a social learning platform used by schools, coaching institutions and universities across India. It was started by IITians with the aim to provide quality education to all through technology. The platform is used

by around 7,00,000 users and is active across all states in India.

What you would do?

- You will be responsible to promote and create awareness about Eckovation as a social learning platform in your campus through events and social media tools
- Planning and executing Sales Promotion of Eckovation courses
- Actively increase the sign-ups on Eckovation App

 Eckovation

What's in it for you?

- Experience entrepreneurship first-hand, on-campus with IITians! Learn, apply and see the

results in real time.

- Dress up your resume! Associate with one of India's fastest growing Social Learning Platform. Get experience certificate as Eckovation Campus Ambassador.
- Top performing campus brand managers will get pre placement interviews offer for full time job
- Get rewarded! Earn for every sign-up you generate*. Best part? There is no upper limit! Learn-Earn-Grow.

What we are looking for?

- Enrolled full time in second year/third year of undergraduate program or first year/second year in post-graduate program
- Self-starter, driven individuals with a strong entrepreneurial spirit.
- Thrives and delivers results in a fast-paced, sometimes am-

biguous environment.

- Strong and confident communication, interpersonal and leadership skills.

Apply to the Eckovation Young Leadership Program and get a chance to intern at India's fastest growing Social Learning Platform! In case of any questions, feel free to reach out at cap@eckovation.com.

Eckovation Ambassador from Saranathan.

R.Milan Patel of Final year Department of Instrumentation and Control Engineering have successfully completed the Eckovation Campuss Ambassador program. He represented the firm from December-2018 till April-2019. He was certified and was acknowledged for his tremendous work by Eckovation.



DETAILS ABOUT VARIOUS GOVERNMENT EXAMS

1. Nehru Yuva Kendra Sangathan

Job Category: Central Govt Jobs

Total No of Vacancies: 93

Job Location: All Over India

Name of the Post & No of Vacancies:

NYKS Invites Applications for the Following Posts

SL. NO	NAME OF THE POST	NO. OF POST
1	Stenographer Grade-II	58 (UR-23, SC-9, ST-4, OBC-16, EWS-6, PWD-2, ESM-6)
2	Lower Division Clerk	12 (UR-5, SC-2, ST-1, OBC-3, EWS-1, PWD-1, ESM-1)
3	Multi-Tasking Staff	23 (UR-10, SC-3, ST-2, OBC-6, EWS-2, PWD-1, ESM-2)
TOTAL		93

Educational Qualification:

1	Lower Division Clerk	i) 12th Class or Equivalent qualification from a Board of University. ii) A Typing Speed of 35 wpm in English or 30 wpm in Hindi on Computer
2	Multi-Tasking Staff	Matriculation or equivalent.
3	Stenographer Grade-II	i) 12th Class pass or equivalent from a recognized Board or University ii) Skill Test Norms: Dictation: 10 mts @80wpm; Transcription: 50 mts (Eng.), 65 mts (Hindi) on computer iii) Equivalent speed of 100/80 wpm in English & Hindi stenography and 40/25 wpm in typewriting in English & Hindi iv) Working knowledge of computer

Salary Details:

1	Stenographer Grade-II	Level-6: 35400-112400/-
2	Lower Division Clerk	Level-2: 19900-63200/-
3	Multi-Tasking Staff	Level-1: 18000-56900/-

Selection Procedure:

NYKS may follow the following process to select the candidates.

1. ONLINE EXAM
2. PERSONAL INTERVIEW

Application Fee/Exam Fee:

Name of the Community	Fee Details
Gen/ OBC	Rs. 750/-
UR/ EWS/ OBC (FEMALE)	Rs. 350/-
SC/ST/PWD	Nil

2. Tamil Nadu Forest Uniformed Services Recruitment Committee

Job Category: Tamilnadu Govt Jobs

Total No of Vacancies: 564

Job Location: Tamil Nadu

Name of the Post & No of Vacancies:

TNFUSRC Invites Applications for the Following Posts

Name of Post	GT	BC	BCM	MBC/ DC	SC	SC(A)	ST	TO- TAL
Forest Watcher	144	123	16	93	70	14	5	465
Forest Watcher (ear-marked to ST youths from specified Districts only)**	-	-	-	-	-	-	99	99
Total	144	123	16	93	70	14	104	564

Educational Qualification:

Qualification	Must have passed S.S.L.C Public Examination or its equivalent with eligibility for admission to Higher Secondary Courses of Studies
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Age Limit:

SL. NO	Category of Candidates	Minimum age (should have completed)	Maximum age (should not have completed)
1	“General” (ie., Candidates not belonging to SCs, SC(A)s, STs, MBCs/DCs, BCs and BCMs)	21 Years	30 Years
2	SCs, SC(A)s, STs, MBCs/DCs, BCs and BCMs and DWs of all Castes	21 Years	35 Years
3	Ex-servicemen	21 Years	30 Years

Salary Details:

SL. NO	Name of Post	Pay scale
1	Forest Watcher	Level –3 Rs. 16,600/- to Rs.52,400/-

Selection Procedure:

TNFUSRC may follow the following process to select the candidates.

1.ONLINE EXAM

2.CERTIFICATE VERIFICATION, PHYSICAL STANDARDS VERIFICATION AND ENDURANCE TEST

Application Fee/Exam Fee:

Name of the Community Fee Details	Fee Details
Examination Fee for the Post of Forest watcher	Rs.150/- + applicable Service Charges

3. National Consumer Disputes Redressal Commission

Job Category: CentralGovt Jobs

Total No of Vacancies: 26

Job Location: All Over India

Name of the Post & No of Vacancies:

NCDRC Invites Applications for the Following Posts

SL. NO	Name of Post	No. of Post
1	LDC (Group 'C')	12 (Gen.-7, EWS-1, SC-1, OBC-3)
2	MTS (Group 'C')	14 (Gen.-8, EWS-1, SC-1, ST-1, OBC-3)
TOTAL		26

Educational Qualification:

Sl No	Name of Post	Qualification
1	LDC (Group 'C')	12th class pass from a recognized board or university
2	MTS (Group 'C')	Matriculation pass from a recognized board

Age Limit:

Name of the Category	Age Limit
For Gen/ UR Candidates	18- 27 years

The Upper age limit is relaxed by 5 years for SC/ST; 3 years for OBC, 10 Years for Persons with Disabilities (15 years for SC/ST PWD's & 13 years for OBC PWD's) and for Ex-S as per Govt. of India rules. Candidates Relaxation in Upper Age limit will be provided as per Govt. Rules. Go through NCDRC official Notification 2019 for more reference.

Salary Details:

SL. NO	Name of Post	Pay scale
1	LDC (Group 'C')	Level-02 (19900 - 63200/-)
2	MTS (Group 'C')	Level-01 (18000 - 56900/-)

Selection Procedure:

NCDRC may follow the following process to select the candidates.

- 1.WRITTEN EXAM
- 2.INTERVIEW

Application Fee/Exam Fee:

Name of the Community	Fee Details
Gen/ OBC	A non-refundable online fee of 350/- (Rupees Three Hundred & Fifty Only) along with applicable transaction charges will be payable by General, EWS and OBC candidates and 200/- Page 5 of 7 (Rupees Two Hundred Only) along with applicable transaction charges will be payable by the candidates belonging to the categories of SC/ST/Ex-Servicemen/ Persons with disabilities. Fee shall not be accepted in any other form. The fee shall be paid online through payment gateway provided by AXIS Bank. It is clarified that the fee once paid shall not be refunded under any circumstances. It is also clarified that no chargeback will be entertained. Therefore, the candidates, before applying, should ensure that they are eligible for the post.

4. Navodaya Vidyalaya Samiti

Job Category: Central Govt Jobs

Total No of Vacancies: 2370

Job Location: All Over India

Name of the Post & No of Vacancies:

NVS Invites Applications for the Following Posts

Name of Post/ Subject	No. of Posts
Lower Division Clerk (Group C)	135 (UR-63, EWS-6, OBC-36, SC-20, ST-10)
Grand Total	135

Educational Qualification:

Lower Division Clerk (Group C)	Senior Secondary (Class XII) certificate from a recognized Board with 50% marks and possessing a minimum speed of 30 words per minutes in English typing OR Passed + 2 level or Senior Secondary Certificate from CBSE/State Govt.
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Age Limit:

Lower Division Clerk (Group C)	18 and 27 years
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The Upper age limit is relaxed by 5 years for SC/ST; 3 years for OBC, 10 Years for Persons with Disabilities (15 years for SC/ST PWD's & 13 years for OBC PWD's) and for Ex-S as per Govt. of India rules. Candidates Relaxation in Upper Age limit will be provided as per Govt. Rules. Go through NVS official Notification 2019 for more reference

Salary Details:

Name of Post	Pay Scale
Lower Division Clerk (Group C)	Level-2 (Rs. 19900-63200) in the

Selection Procedure:

NVS may follow the following process to select the candidates.

1. Written Examination / Computer Based Test (CBT)
2. Interview / Personal Interaction

Application Fee/Exam Fee:

Name of Post	Fee
Lower Division Clerk	Rs. 1,000/-
SC/ST/PH categories and Female candidates	Nil

5.Sashastra Seema Bal

Job Category: CentralGovt Jobs

Total No of Vacancies: 150

Job Location: All Over India

Name of the Post & No of Vacancies:

SSB Invites Applications for the Following Posts

Name of game	No. of Post
Football	5
Basketball	15
Hockey	7
Shooting (Sports)	9
Archery	5
Athletics	30
Gymnastics	7
Wrestling	21
Boxing	5
Judo	10
Weight Lifting	6
Body Building	2
Cycling	3
Equestrian	3
Badminton	4
Taekwondo (Kyurugi)	8
Total	150

Educational Qualification:

Essential Qualification	Matriculation or its equivalent from a recognized board/institute
Sports Qualification	Players who have participated in any recognized International events representing the country since 01.01.2017 Or Players participated in last Olympic Games, World Cups and AsianGames Or Players who have won Medal in recognized National Level sports tournament since 01.01.2017 to last date of receipt of application Le. 30 days from the publication of this advertisement in Employment News.

Age Limit:

Name of the Category	Age Limit
For Gen/ UR Candidates	18 to 23Years

The Upper age limit is relaxed by 5 years for SC/ST; 3 years for OBC, 10 Years for Persons with Disabilities (15 years for SC/ST PWD's & 13 years for OBC PWD's) and for Ex-S as per Govt. of India rules. Candidates Relaxation in Upper Age limit will be provided as per Govt. Rules. Go through SSB official Notification 2019 for more reference

Salary Details:

SI No	Name of Post	Pay scale
1.	Constable GD	Rs.21700-69100/-

Selection Procedure:

SSB may follow the following process to select the candidates.

1. Written Exam
2. PET, PST, Medical Exam, etc

States/UTs/Regions	Min. height in Cms.		Chest in Cms
For all except the categories given below	Male	170	Minimum-80 Min. expansion-5
	Female	157	Not applicable
Candidates falling. in the categories of Garhwalis, Kumaonis, Gorkhas, Dogras, Marathas, and candidates belonging to the States of Sikkim, Nagaland, Arunachal Pradesh, Manipur, Tripura, Mizoram, Meghalaya, Assam, Himachal Pradesh and the State of J&K.	Male	165	Minimum-78 Min. expansion-5
	Female	155	Not applicable
Candidates belonging to Scheduled Tribes of all States/UTs except S/ No.4 & 5 below.	Male	163	Minimum-76 Min. expansion-5
	Female	150	Not applicable

For all Scheduled Tribe candidates hailing from the North-Eastern States	Male	157	Minimum-76 Min. expansion-5
	Female	148	Not applicable
Schedule Tribe candidates hailing from Left-Wing Extremism affected districts	Male	160	Minimum-76 Min. expansion-5
	Female	148	Not applicable
Candidates hailing from Gorkha territorial Admin. comprising of the three Sub-Divisions of Darjeeli Distt namely Darjeeling Kalimpong and Kurseong and includes the . following 'Mouzas' Sub.:.Div. of these Distts:- (1) LohagarhTeaGarden (2) Lohagarh Forest (3) Rangmohan (4) Barachenga (5) Panighata (6) ChotaAdalpur (7) Paharu (8) Sukna Forest (9) Sukna Par-I (10) Pantapati . Forest-I (11) Mahanadi Forest (12) Champasari Forest (13) SalbariChhatpart-II (14) Sitong Forest (15) Sivoke Hill Forest (16) Sivoke Forest (17) ChhotaChengga(18) Nipania	Male	163	Minimum-77 Min. expansion-5
	Female	153	Not applicable

Application Fee/Exam Fee:

Name of the Community	Fee Details
Gen/ OBC	Rs.100/-
ST/SC/Ex-s	Nil

**- NARESH .V
PRE-FINAL YEAR**

LABVIEW SESSIONS

LabVIEW is systems engineering software for applications that require test, measurement, and control with rapid access to hardware and data insights.

LabVIEW offers a graphical programming approach that helps you visualize every aspect of your application, including hardware configuration, measurement data, and debugging. This visualization makes it simple to integrate measurement hardware

from any vendor, represent complex logic on the diagram, develop data analysis algorithms, and design custom engineering user interfaces

The final and pre final year students attended training by Trainers from Optithought, Chennai.

Mr.Prakash handled the session for Final years and Mr.Balaji handled for the pre final year students.

WHAT WOULD HAPPEN IF WE LIVE TOO MANY YEARS IN SPACE

- Your finger nails will be lost. This phenomenon is known as FINGERNAIL DELAMINATION.
- Some fascinating things that happen to the human body in space
- You will stop snoring
- After too much time in space, your vision will start to blur. It usually does not last but for some people. It can take years to back

normal.

- You will grow taller but don't worry though, once you are once you are subject to gravity, again your spine will shrink down to its normal size. The most you can expect to grow is about 3% of your normal height.

**- MEENU ASHWINI .R
PRE-FINAL YEAR**

WORDS OF WISDOM

5 Simple Ways to Keep Your Mind Sharp

The importance of keeping your mind sharp cannot be overstated. We're all part of a fantastic intellectual and information economy, which thrives on ideas, creativity and intelligence. Keeping your mind sharp is sure to give you the edge over the competition, and more importantly lead to your own higher levels of happiness. Running a top PR agency takes its toll, and mindfulness is crucial. When your mind is in top shape, you will:

- Have greater motivation and focus
- Get more done
- Come up with more creative ideas
- Find inspiration more often
- Remember more
- Experience a better life

TIP 1: Continue reading, absorbing knowledge and experiencing culture

Education is not preparation for life, education is life itself. It should be something pleasurable and

done for intrinsic reasons above all else. Read blogs on subjects both within your field and in new fields you know nothing about; read books; watch lectures on fascinating new subjects; read about ancient societies; take in a new form of art you've never experienced; you get the idea. Challenge your mind to continually broaden your horizon and soak up new information like an infinite sponge (that's pretty much what it is, you should use it to do just that).

TIP 2: Learn a skill or craft you've never tried before like playing an instrument, composing music, painting, building a model airplane, or even coding computer programs.

Engage your mind in learning a new skill. You're never too old to do this, but this is definitely something you should start as young as you can. I started composing my own music at around 17, and in retrospect

I wish I had started even younger. You'd be surprised how much

learning a new skill will open up many new paths in your mind and help you become even better at whatever you are already an expert at.

You'll also open yourself up to tons of new connections and intellectual social circles by engaging yourself in a new hobby, form of art, or trade.

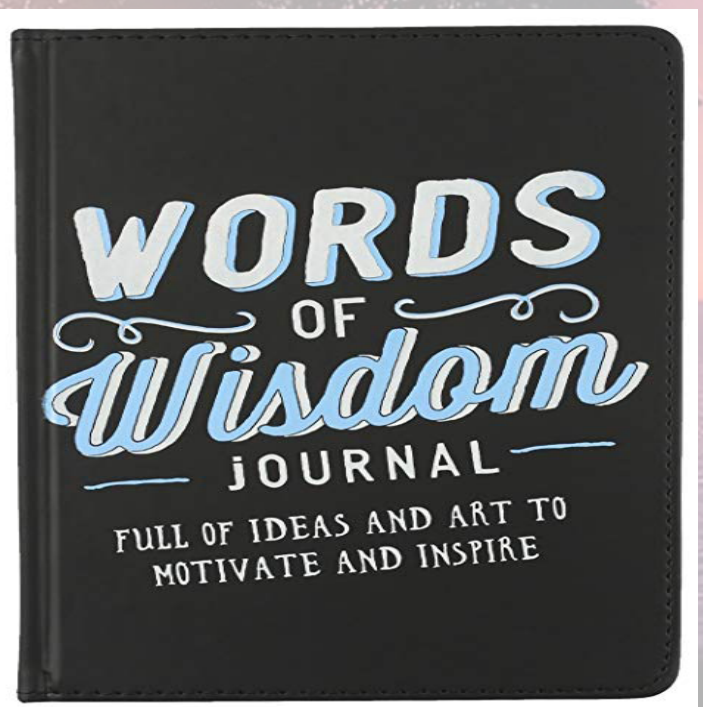
TIP 3: To improve memory don't write everything down

If you can, try this for a week: write down everything you need to do at the beginning of the week, as you normally would, but take your list and put it out of sight. Instead of keeping that list visible at your desk, internalize your projects and simply remember and know what needs to be done, prioritize it in your mind, and do it. Your brain is extremely powerful and you'll find that, in time, you may not have to write anything down to remember everything (you can still keep a list for reference, but it's great not to need it).

TIP 4: Give your mind time to assimilate knowledge

We live in a culture where we

are constantly experiencing and learning new things and taking in new information. This is a great thing, I'm not going to go into the information overload spiel, I don't really believe in that anyway (you are in total control over how much information you take in at once). But in your process of absorbing new skills, knowledge and life experiences; internal analysis of yourself, what you have learned and where you are going is vital to put everything in proper perspective. Some people do it well during running, others through listening to music, and some people through making art. Find your own place that allows you to assimilate all you have learned and frequent it often.



TIP 5: Eat well, sleep well and exercise often

Giving your mind the proper rest and energy is essential to getting the best performance out of it. This one is pretty self explanatory, but people often forget that you need proper fuel and proper rest to function optimally. Also, putting your physical body through the paces is a surefire way to rejuvenate yourself mentally. If you're ever feeling stressed, out of inspiration, or depressed, a few days of nutritious food, good sleep and vigorous exercise will put you back to your full self soon enough.

**- SURYA .S
PRE-FINAL YEAR**

BOOK REVIEW **RELATIVITY – ALBERT EINSTEIN**

A book in which one great mind explains the work of another great mind. Max Born is a Nobel Laureate (1955) and one of the world's great physicists. In this book he analyzes and interprets the theory of Einsteinian relativity. The result is undoubtedly the most intelligible of all the books that have been written to explain the revolutionary theory that marked the end of the classical and the beginning of the modern era of physics.

The author follows a quasi-historical method of presentation. The book begins with a review of the classical physics, covering such topics as origins of space and time measurements, geometric axioms, Ptolemaic and Copernican astronomy, concepts of equilibrium and force, laws of motion, inertia, mass, momentum and energy, Newtonian world system, laws of optics, electrodynamics (including magnetic induction, electromagnetic theory of light, electromagnetic ether, electromagnetic laws of moving bodies, electromagnetic mass, and the contraction hypothesis). Born then takes up his exposition

of Einstein's special and general theories of relativity, discussing the concept of simultaneity, kinematics, Einstein's mechanics and dynamics, relativity of arbitrary motions, the principle of equivalence, the geometry of curved surfaces, and the space-time continuum, among other topics. Born then points out some predictions of the theory of relativity and its implications for cosmology, and indicates what is being sought in the unified field theory.

This is a careful discussion of principles stated in thoroughly acceptable scientific form, yet in a manner that makes it possible for the reader who has no scientific training to understand it. Only high school algebra has been used in explaining the nature of classical physics and relativity, and simple experiments and diagrams are used to illustrate each step.

**- NISHA FRANCY
PRE-FINAL YEAR**

APTi PREPZ

1. A man sitting in a train is counting the pillars of electricity. The distance between two pillars is 60 meters, and the speed of the train is 42Km/hr. In 5 hours, how many pillars will he count?

- a) 3501 b) 3600
c) 3800 d) none of these

2. A train 110 meters long is running with a speed of 60kmph. In what time it pass a man who is running at 6kmph in the direction

opposite to that in which the train is going?

- a) 5sec b) 6sec
c) 7sec d) 10sec

3. In what ratio must a grocer mix two varieties of pulses costing 15rs and 20rs per Kg respectively so as to get a mixture worth 16.50rs per Kg?

- a) 3:7 b) 5:7
c) 7:3 d) 7:5

4. How many liters of water should be added to a liter mixture of milk and water containing milk and water in the ratio of 7:3 such that the resultant mixture has 40% water in it?

- a) 5 b) 2
c) 3 d) 8

5. Ram borrows 520rs from Gaurav at a simple interest of 13%per annum. What amount of money should Ram pay to Gaurav after 6months to be absolved of the debt?

- a) 353.80 b) 453.80
c) 552.80 d) 553.80

6. A takes twice as much time as B or thrice as much time as C to finish a piece of work. Working together, they can finish the work in 2 days. B can do the work alone in

- a) 4 days b) 6 days
c) 8 days d) 12 days

7. Kim can do a work in 3 days while David can do the same work in 2 days. Both of them finish the work together and get 150rs. What is the share of Kim?

- a) 30rs b) 60rs

- c) 70rs d) 75rs

8. 12 men can do a piece of work in 24 days. How many days are needed to complete the work, if 8 men do this work?

- a) 28 b) 36
c) 48 d) 52

9. A car covers a distance of 432 km at the speed of 48 Km/hr. In how many hours will the car cover this distance?

- a) 6 hours b) 7 hours
c) 9 hours d) 12 hours

10. Find the square root of $4a^2 + b^2 + c^2 + 4ab - 2bc - 4ac$.

- a) $(2a + b - c)$
b) $(a + b)$
c) $(2a - b + c)$
d) $(a - b)$

**- KIRTHIKA .V
PRE-FINAL YEAR**

ATTRACTIVE PRIZES FOR
THE TOP THREE
SCORERS OF APTI !!!

Send your response to
iceprteam2@gmail.com
FIRST COME FIRST SERVE

How To Program Arduino

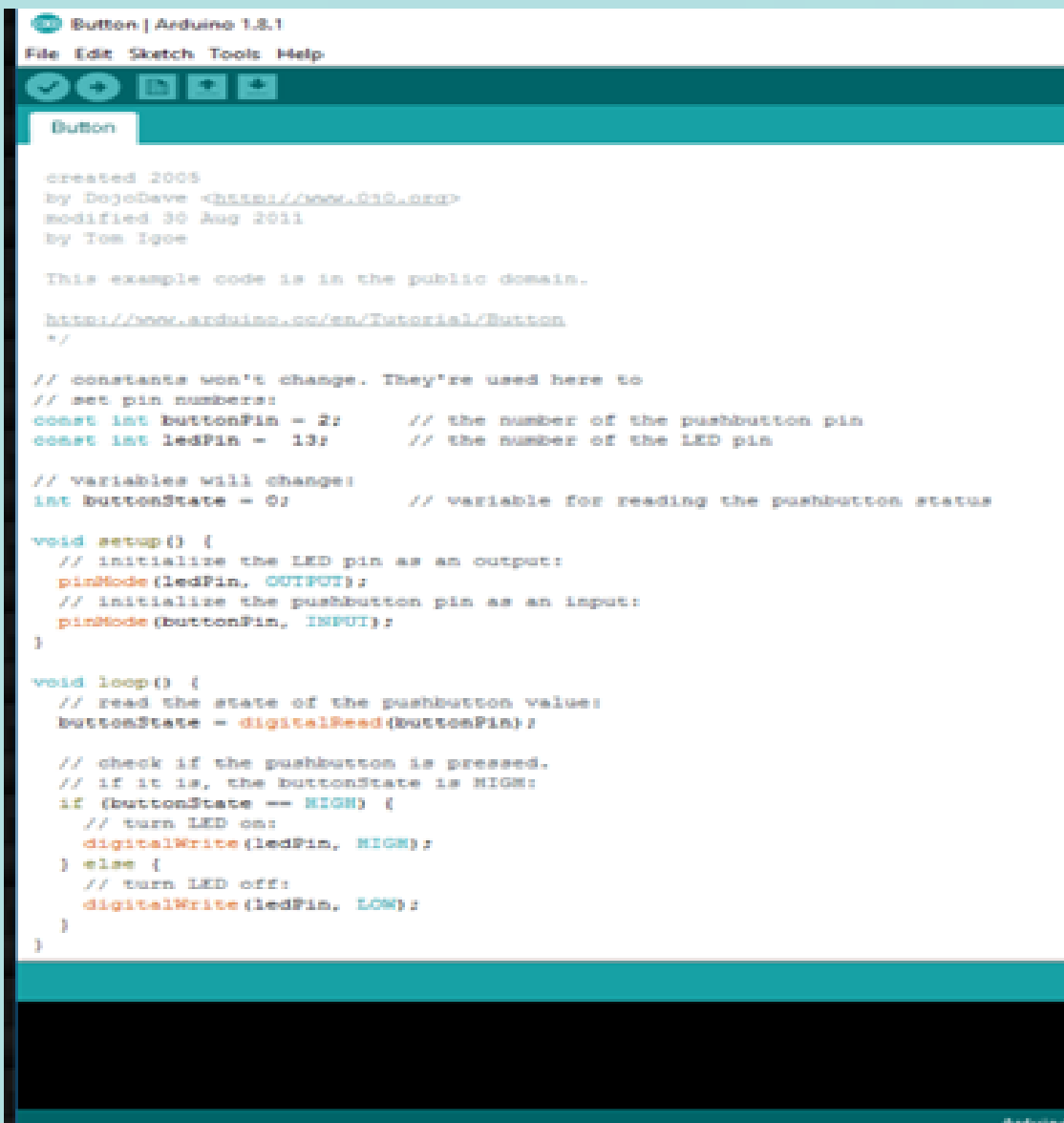
Once the circuit has been created on the breadboard, you'll need to upload the program (known as a sketch) to the Arduino. The sketch is a set of instructions that tells the board what functions it needs to perform. An Arduino board can only hold and perform one sketch at a time. The software used to

create Arduino sketches is called the IDE which stands for Integrated Development Environment. The software is free to download and can be found at <https://www.arduino.cc/en/Main/Software>

Every Arduino sketch has two main parts to the program:

`void setup()` – Sets things up that have to be done once and then don't happen again.

`void loop()` – Contains the instructions that get repeated over and over until the board is turned off.

A screenshot of the Arduino IDE interface. The title bar reads 'Button | Arduino 1.8.1'. The menu bar includes 'File', 'Edit', 'Sketch', 'Tools', and 'Help'. Below the menu bar is a toolbar with icons for opening, saving, and running. The main text area shows the following code:

```
created 2005
by DojoDave <http://www.032.org>
modified 30 Aug 2011
by Tom Igoe

This example code is in the public domain.

http://www.arduino.cc/en/Tutorial/Button
*/

// constants won't change. They're used here to
// set pin numbers:
const int buttonPin = 2;    // the number of the pushbutton pin
const int ledPin = 13;      // the number of the LED pin

// variables will change:
int buttonState = 0;        // variable for reading the pushbutton status

void setup() {
  // initialize the LED pin as an output:
  pinMode(ledPin, OUTPUT);
  // initialize the pushbutton pin as an input:
  pinMode(buttonPin, INPUT);
}

void loop() {
  // read the state of the pushbutton value:
  buttonState = digitalRead(buttonPin);

  // check if the pushbutton is pressed.
  // if it is, the buttonState is HIGH:
  if (buttonState == HIGH) {
    // turn LED on:
    digitalWrite(ledPin, HIGH);
  } else {
    // turn LED off:
    digitalWrite(ledPin, LOW);
  }
}
```


How Everything Works Together

Check out our quick Arduino video to see how a breadboard, Arduino, jumper wires and the sketch work together to perform a function. In this video, we use a momentary push button switch to blink an LED.

<https://www.youtube.com/watch?v=tCaiPQxt3vM&feature=youtu.be>

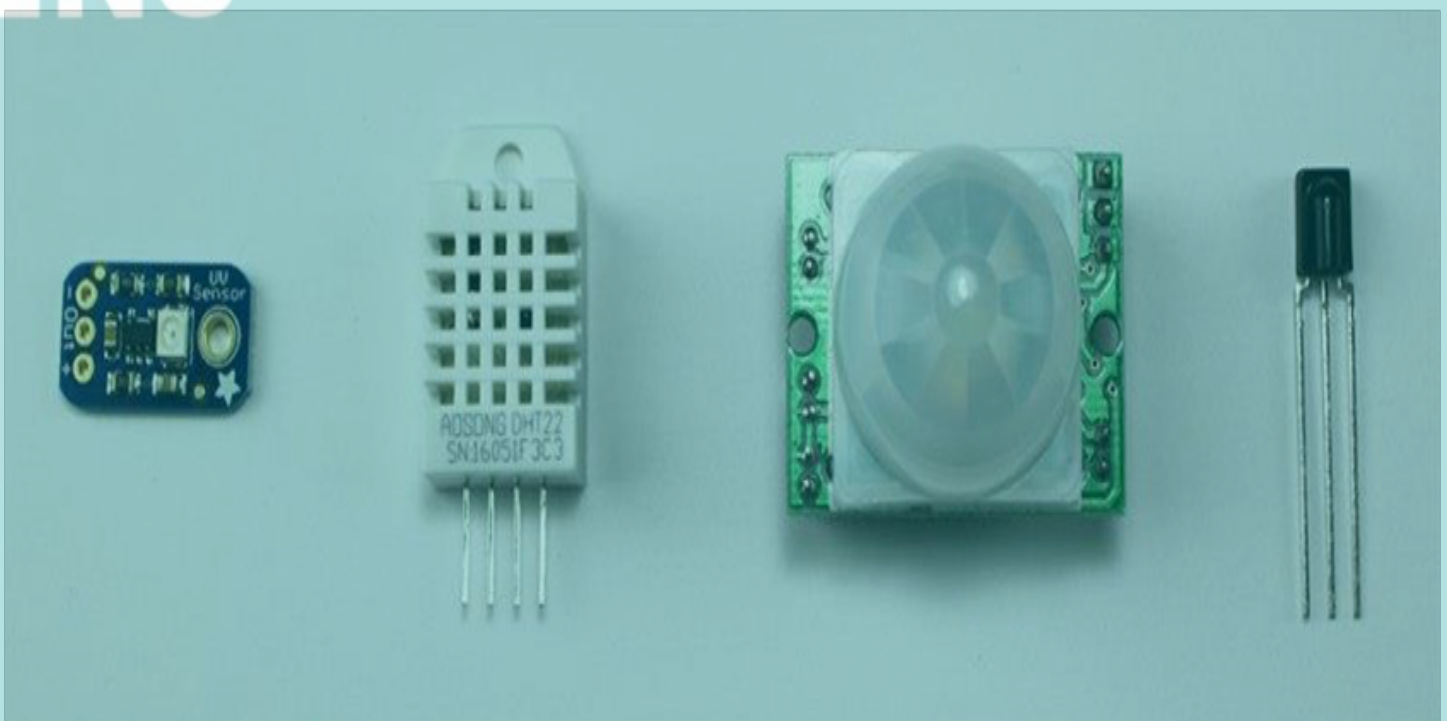
Arduino Sensors

If you want your Arduino to sense the world around it, you will need to add a sensor. There are a wide range of sensors to choose from

and they each have a specific purpose. Below you will find some of the commonly used sensors in projects.

- Distance Ranging Sensor
- PIR Motion Sensor
- Light Sensor
- Degree of Flex Sensor
- Pressure Sensor
- Proximity Sensor
- Acceleration Sensor
- Sound Detecting Sensor
- RGB and Gesture Sensor
- Humidity and Temperature Sensor

**- MAHALAKSHMI .S.P
PRE-FINAL YEAR**



PROJECTS AROUND

Aim:

To design an automated water sprinkler system which will provide water to the field if the water level goes below the threshold level so that the farmer can see the moisture content using a mobile phone application in real time

Brief Working:

MSP430G2553 launchpad is connected to soil moisture sensor, HC05 Bluetooth and a SPDT relay. As soon as the sensor takes the reading it is fed to microcontroller, which processes the signal and take action as per the program that is fed in to it. The relay gets a trigger signal for switching ON or OFF the pump depending on the current soil moisture level.

Pump is turned ON in case the moisture level is less than the threshold value.

The user can get the real time value of the soil moisture through the moity app which connects with the hardware through bluetooth.

Applications:

By this method we can save a lot of water

It is a cost effective method

It helps the crops to grow in efficient & scientific manner.

Farmers can use this method for proper irrigation their crops.

This device can also be used at homes to water plants.

For more details , visit <https://texasinstruments.hackster.io/155425/automated-water-sprinkler-system-ad3179>

**- SHARVIN SHAKESH .P
PRE-FINAL YEAR**



OUT OF BOX



There Port lived with his daughter....



Karthi was a ugly, old, unattractive looking guy....



**Karthi filled the bag with two black pebbles....
She noticed that...**



Now she had three options...Refuse to pick a pebble from the bag. Take both pebbles out of the bag and expose the loan-shark for cheating. Sacrifice herself for her father's freedom.

oh....No...I have
dropped the
pebble which I
took

"Oh, how clumsy you are.
Never mind, if you look
into the bag for the one
that is left, you will be
able to tell which pebble
you picked."



**The pebble left in the bag is
obviously black,**



**and seeing as Karthi didn't want to be exposed, he had to play
along as if the pebble the daughter dropped was white, and clear
her father's debt.**

such a
brilliant girl





Board by
RAVIKIRAN.B
PRE FINAL YEAR

art gallery

- LAVANYA .B, PRE-FINAL YEAR

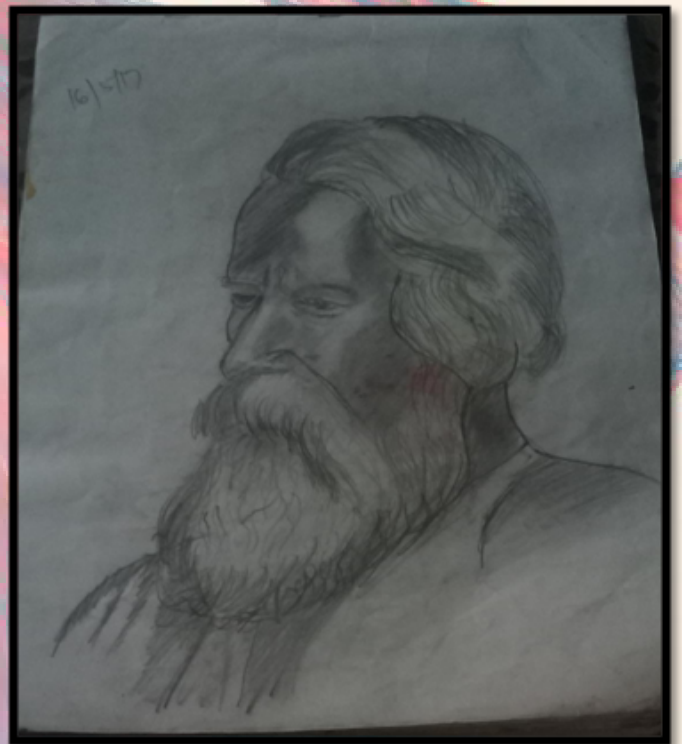


PHOTO GALLERY



**R.G. HARIHARAN
FINAL YEAR**



**SHIVA SHANKAR
SECOND YEAR**



**Brought to you by the Public Relations team of
The department of Instrumentation and Control Engi-
neering, Saranathan College of Engineering, Trichy.**

**Post your valuable feedback to
iceprteam2@gmail.com**