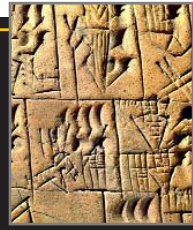




THE TIMES OF INDIA

www.toistudent.com
**TODAY'S
EDITION**

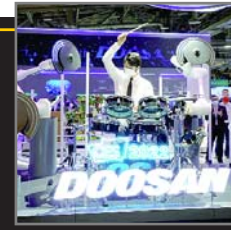
➤ The art of communication has a long history and evolved over a period of time. Trace man's journey of communication & refinement
PAGE 2



➤ Know why former President Dr APJ Abdul Kalam, the man who ignited a billion minds, continues to inspire this generation
PAGE 3



➤ Check out some of the visionary technology on display at the CES' 22 in The GadgetLife
PAGE 4


STUDENT EDITION

TUESDAY, JANUARY 11, 2022


CLICK HERE: PAGE 1 AND 2

AQUAMATION

Desmond Tutu, the South African archbishop, who passed away recently, was cremated through aquamation. Tutu had always wanted a simple funeral ceremony, and expressed his wish for a cheap coffin and an eco-friendly cremation...


X-PLAINED

WHAT

Aquamation, or alkaline hydrolysis, is a process in which the body of the deceased is immersed for a few hours in a mixture of water and a strong alkali in a pressurised metal cylinder and heated to around 150 degree centigrade.

WHY this process: It is a new eco-alternative to burial and cremation. With shortage in avail-

ability of land for burials and cremation producing around 150 kilograms of carbon dioxide per body, and as much as 200 micrograms of toxic mercury, aquamation is being touted as the greenest method for disposing of your mortal remains. According to John Humphries, the chief executive of Aquamation Industries in Gold Coast, Queensland, Australia, who developed the technology, aquamation uses only 10 per cent of the energy of a conventional cremation and releases no toxic emissions. It simply speeds up

the natural way that flesh decomposes in soil and water.

HOW

is it done: The corpse is placed into a steel container and potassium is added, followed by water heated to 150 degree centigrade. The flesh and organs are completely decomposed in four hours, leaving bones as the only solid remains. This is similar to what's left after cremation, where the "ashes" are in fact bones hardened in the furnace and then crushed.

IS IT NEW?

■ Aquamation has been used to destroy cattle infected with mad cow disease. It has also been used in the US for the disposal of bodies donated to science, a process referred to as resomation

■ The process was developed and patented in 1888 by Amos Herbert Hanson, a farmer who was trying to

develop an ingenious way to make fertiliser from animal carcasses

■ The first commercial system was installed at Albany Medical College in 1993. Thereafter, the process continued to be in use by hospitals and universities with donated body programmes

■ It was only in 2011 that the process was used in the funeral industry, at two funeral homes in Ohio and Florida (Source: ANI/Wikipedia)

**WORDS
OF THE
DAY**

■ Aquamation
■ Resomation

Want to learn
new words?

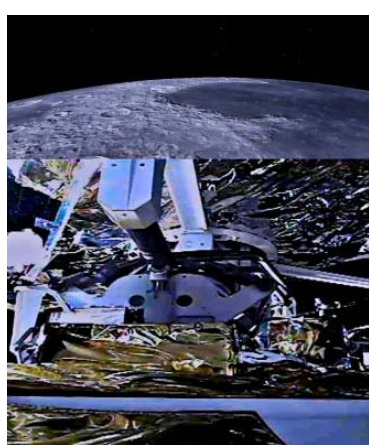
**WATCH THIS
SPACE!**

China's Chang'e 5 lunar probe finds first on-site evidence of water on moon's surface

China's Chang'e 5 lunar lander has found the first-ever on-site evidence of water on the surface of the moon, lending new evidence to the dryness of the satellite. The study revealed that the lunar soil at the landing site contains less than 120 parts-per-million (ppm) water or 120 grams water per ton, and a light, vesicular rock carries 180 ppm, which are much drier than that on the Earth. The presence of water had been confirmed by remote observation but the lander has now detected signs of water in rocks and soil.


SPACE

- A device on-board the lunar lander measured the spectral reflectance of the regolith and the rock and detected water on the spot for the first time.
- The water content can be estimated since the water molecule or hydroxyl absorbs at a frequency of about three micrometres, the state-run Xinhua news agency reported, citing researchers from the Chinese Academy of Sciences (CAS)



James Webb Space Telescope fully deployed in space: NASA



The James Webb Space Telescope completed its two-week-long deployment phase on Saturday, unfolding the final mirror panel as it readies to study every phase of cosmic history...

- The most-powerful space telescope ever- built and the successor to Hubble, Webb blasted off in an Ariane 5 rocket from French Guiana on December 25, and is heading to its orbital point, a 1.5 million kilometres from Earth
- Though Webb will reach its space destination, known as the second Lagrange point, in a matter of weeks, it still has around another five and a half months of setup to go
- Next steps include aligning the telescope's optics, and calibrating its scientific instruments



Change your car's colour with an app: BMW unveils colour-changing car

German carmaker BMW has unveiled the world's first "colour-changing" car at the Consumer Electronics Show (CES) in Las Vegas. The concept car, called the BMW iX Flow, uses electronic ink technology normally found in e-readers to transform the car's exterior into a variety of patterns in grey and white. "This is really energy-efficient colour change using the technology E Ink," said BMW research engineer Stella Clarke. "So we took this material - it's kind of a thick paper, and our challenge was to get this on a 3D object like our cars," he added.

- 1 When stimulated by electrical signals controlled by a phone app, the material brings different pigments to the surface, causing the car to take on a different shade or design, such as racing stripes
- 2 In the future, the changes would also be controlled by a button on the car's dashboard or perhaps even by hand gestures, Clarke said
- 3 No energy is needed to maintain the colour the driver selects, according to BMW
- 4 Though the vehicle displayed at CES could only alternate between grey and white, the technology will be expanded to cover a spectrum of colour, according to BMW

Teenager Bharath Subramaniyam becomes India's 73rd chess Grandmaster

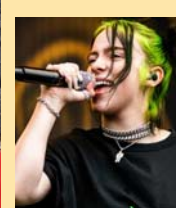


Fourteen-year-old Bharath Subramaniyam, on Sunday, became India's 73rd chess Grandmaster (GM), after completing his third and final GM norm at Vergani Cup Open in Italy. Subramaniyam scored 6.5 points from nine rounds along with four others to finish seventh overall in the event. He secured his third GM norm and also touched the requisite 2,500 (Elo) mark.

Notably, to become a GM, a player has to secure three GM norms and cross the live rating of 2,500 Elo points

Will Smith wins his first Golden Globe, takes accolade for 'Best Actor'

American actor, rapper, and film producer Will Smith won a Golden Globe on Monday for his role of Richard Williams in the 2021 movie 'King Richard'. This is the first time that Will Smith has won a Golden Globe. The actor has been nominated for the accolade six times in his career.



- Singer Billie Eilish won the best singer award for the title track of the latest James Bond movie 'No Time To Die'
- Australian actor Kodi Smit-McPhee won a Golden

Globe in the category of 'best supporting actor - motion picture'. Steven Spielberg's remake of 'West Side Story' was named best musical or comedy film

EVOLUTION OF COMMUNICATION

EXAMS R Fun
SUBJECT:
HISTORY,
CLASS X,
CBSE

Communication has been the essence of existence of human beings. From the stone age to modern era, communication has played a vital role in the development and advancement of civilization through different stages of understanding. With the advancements of modern technology, communication methods have been changing. The life we all are leading today would have been difficult to imagine without communication. From pigeons to the mountain bluebird, we along with our communication methods have evolved at a significant pace. Let us try to understand the timeline of the evolution of communication.

Communication can be broadly classified into verbal and non-verbal communication. Humans have been using different methods to communicate from the beginning.



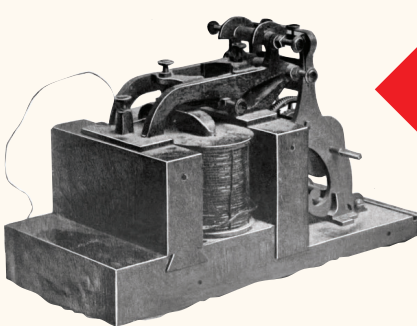
CAVE PAINTINGS

Cave paintings are the oldest methods of communication. They were used to mark territories. Major events were also recorded through these paintings. They are usually found on the walls and ceilings of caves. Symbolic as well as religious functions were shown in these paintings. Chauvet Cave in France has the oldest cave painting. That painting was made around 30,000 B.C. South Sulawesi, Indonesia, and Coliboaia Cave in Romania has the earliest cave paintings.



SMOKE SIGNALS

Even though used very limitedly, this was an effective way of communication, which is still used in different situations.



TELEGRAPH

The first electrical communication system to send text messages was called Telegraph. Sending letters required energy and patience to wait for a reply. Telegraphs were introduced to send text messages more quickly than written messages. It helped in sending information across states and nations.



RADIO

Radios are a source of news as well as entertainment for people. Wireless signals were studied and tested in detail. The scientists practiced using wireless power to share content. Radios are even installed in mobile phones, car systems. They were once a very important medium of communication.



NEWSPAPER

Newspapers are still a wide form of communication used. Every other house has a newspaper delivery every day. These papers deliver written news and also other important national events taking place. Two types of newspapers are national and international. The first printing press system was introduced in 1440 by German Johannes Gutenberg. The newspaper started to get more attention and changed communication forever.



TELEVISION

Even today, televisions are a great source of entertainment. They are a mode of indirect communication to the larger audience. Many people in history put in tremendous efforts to introduce televisions. The early televisions displayed black and white pictures after the World War II. But with tech advancement, colours were added to the screen. Today, there are several features in televisions that provide us more entertainment and information.



INTERNET

The year 1969 marked the beginning of a new age. This year was the launch of the ARPANET (Advanced Research Projects Agency Network); what we commonly know now as the Internet. Then in 1994, came the emergence of the World Wide Web; in 1997, the coming of instant messaging or internet chat, and in 1999, blogging.



SOCIAL MEDIA

People share their life events on social media. Social media platforms help people share pictures, videos, and almost everything on the internet. It is the latest mode of communication in the digital world. Smart phones have made this more convenient. Social media apps can be downloaded on smart phones. Users of social media in this generation are obsessed with these platforms. Social media has revolutionized the way we communicate. We can see what other people are doing through their social media profiles. It is now easy to check on your friends who live far.



SYMBOLS

It all started with Rock Carvings (Petroglyphs), which were introduced as early as 10,000 BC. These rock paintings drew pictures to convey stories. The carvings on the rock surface were also known as Rock Art. Later on, graphic symbols were used to present ideas or concepts. Chinese created characters for communication as well. Alphabets were created at the last. Evolution of communication was easier after the alphabet.



TELEPHONE

The telephone was introduced by Alexander Graham Bell in 1876. Within years of its invention, telephones became an essential part of every household and office. The devices transmitted human audio into signals. These signals were then transmitted through wires. Landline telephone service began in 1900s. People could talk on calls for hours through long distances. It was the most reliable form of the communication system. Mobile phones were introduced in 1973 and the mode of communication was changed entirely.



POSTAL SYSTEM

With the need for communication growing, people started using courier services. Letters were delivered from one person to another through postal services. These systems were very organized in India, China, Persia, and Rome. A Frenchman De Valier started a postal system in 1653. The use of mailboxes and delivery of letters was done through the system.



The older methods of communication were cave paintings, smoke signals, symbols, carrier pigeons, and telegraph. The latest and modern ways are more convenient and efficient, example- television, phones, internet, e-mails, social media, and text messaging. Communication technology has made progress over thousands of years. This evolution will continue with the changing world. Communication has

broadened the capabilities of science through expanding the amount of information in circulation. Numerous things, such as advancing technologies and mediums, have allowed more people to not only understand science but to engage in it as well. Advancements in the field of communication are inevitable as more ways are being discovered to provide reliable service using the least amount of effort.

Y SANDHYARANI, Social Department, Chitturi High School, Vijayawada



SHARPEN YOUR SKILLS IN PHYSICS

EXAMS R Fun
MOCK PAPER
SUBJECT:
CHEMISTRY,
CLASS XII, CBSE

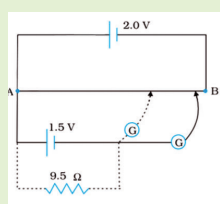
QUESTIONS SET BY KOSURU MARUTHI, PHYSICS FACULTY, WESTBERRY HIGH SCHOOL, BHIMAVARAM, AP

Q1. Coulomb's law for electrostatic force between two point charges and Newton's law for gravitational force between two stationary point masses, both have inverse-square dependence on the distance between the charges/masses.

(a) Compare the strength of these forces by determining the ratio of their magnitudes (i) for an electron and a proton and (ii) for two protons.
(b) Estimate the accelerations of electron and proton due to the electrical force of their mutual attraction when they are 1 \AA ($= 10^{-10} \text{ m}$) apart? ($m_p = 1.67 \times 10^{-27} \text{ kg}$, $m_e = 9.11 \times 10^{-31} \text{ kg}$)

Q2. Two charged conducting spheres of radii a and b are connected to each other by a wire. What is the ratio of electric fields at the surfaces of the two spheres? Use the result obtained to explain why charge density on the sharp and pointed ends of a conductor is higher than on its flatter portions.

Q3. Figure shows a 2.0 V potentiometer used for the determination of internal resistance of a 1.5 V cell. The balance point of the cell in open circuit is 76.3 cm . When a resistor of 9.5Ω is used in the external circuit of the cell, the balance point shifts to 64.8 cm length of the potentiometer wire. Determine the internal resistance of the cell.



Q4. For a circular coil of radius R and N turns carrying current I , the magnitude of the magnetic field at a point on its axis at a distance x from its centre is given by,

$$B = \frac{\mu_0 I R^2 N}{2(x^2 + R^2)^{3/2}}$$

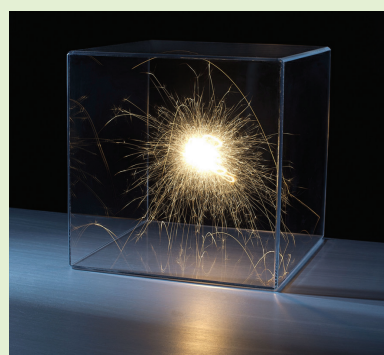
(a) Show that this reduces to the familiar result for field at the centre of the coil.

(b) Consider two parallel co-axial circular coils of equal radius R , and number of turns N , carrying equal currents in the same direction, and separated by a distance R . Show that the field on the axis around the mid-point between the coils is uniform over a distance that is small as compared to R , and is given by,

$$B = 0.72 \frac{\mu_0 N I}{R}$$

approximately. [Such an arrangement to produce a nearly uniform magnetic field over a small region is known as Helmholtz coils.]

Q5. A 1.0 m long metallic rod is rotated with an angular frequency of 400 rad s^{-1} about an axis normal to the rod passing through its one end. The other end of the rod is in contact with a circular metallic ring. A constant and uniform magnetic field of 0.5 T parallel to the axis exists everywhere. Calculate the emf developed between the centre and the ring.
Q6. An LC circuit contains a 20 mH in-



ductor and a $50 \mu\text{F}$ capacitor with an initial charge of 10 mC . The resistance of the circuit is negligible. Let the instant the circuit is closed be $t = 0$.

(a) What is the total energy stored initially? Is it conserved during LC oscillations?
(b) What is the natural frequency of the circuit?
(c) At what time is the energy stored (i) completely electrical (i.e., stored in the capacitor) (ii) completely magnetic (i.e., stored in the inductor)?
(d) At what times is the total energy

shared equally between the inductor and the capacitor?

(e) If a resistor is inserted in the circuit, how much energy is eventually dissipated as heat?

Q7. Answer the following questions:
(a) The angle subtended at the eye by an object is equal to the angle subtended at the eye by the virtual image produced by a magnifying glass. In what sense then does a magnifying glass provide angular magnification?
(b) In viewing through a magnifying glass, one usually positions one's eyes very close to the lens. Does angular magnification change if the eye is moved back?
(c) Magnifying power of a simple microscope is inversely proportional to the focal length of the lens. What then stops us from using a convex lens of smaller and smaller focal length and achieving greater and greater magnifying power?
(d) Why must both the objective and the eyepiece of a compound microscope have short focal lengths?
(e) When viewing through a compound

microscope, our eyes should be positioned not on the eyepiece but a short distance away from it for best viewing. Why? How much should be that short distance between the eye and eyepiece?

Q8. In double-slit experiment using light of wavelength 600 nm , the angular width of a fringe formed on a distant screen is 0.1° . What is the spacing between the two slits?

Q9. In an accelerator experiment on high-energy collisions of electrons with positrons, a certain event is interpreted as annihilation of an electron-positron pair of total energy 10.2 BeV into two γ -rays of equal energy. What is the wavelength associated with each γ -ray? ($1 \text{ BeV} = 10^9 \text{ eV}$)

Q10. The number of silicon atoms per m^3 is 5×10^{28} . This is doped simultaneously with 5×10^{22} atoms per m^3 of Arsenic and 5×10^{20} per m^3 atoms of Indium. Calculate the number of electrons and holes. Given that $n_i = 1.5 \times 10^{16} \text{ m}^{-3}$. Is the material n-type or p-type?

A WIDE SPECTRUM OF ARTISTIC TALENT ON SHOW

Healthy competition makes one strive to better oneself. Pallavi Aware International School conducted Spandan 2021-21, an inter-school competition in various fields of art keeping in mind the development stages of children.

The competitions under the Kathakathana category brought out the oratory skills of the students. Show-and-Tell, Performance Poetry, Twisted Tales, Ad Mad and Monologue contests were held under this category.

The competitions under the Kalamkari category showcased the brilliant artwork made by students. The art pieces ranged from clay modelling to traditional folk art to fascinating finger and face paintings.

Kalakrithi, on the other hand,



Pallavi Aware International School, Hyderabad

aimed at reusing waste products. The competitions of Wealth out of Waste, Coconut Shell Art, and Innovative Jewellery Making encouraged students to create marvelous pieces of craftwork out of waste

Folk, provided the students with a virtual stage to dance off against their fellow students, while bringing different forms of dance styles on to one stage.

Spandan 2021-22 was a resonating success with the participation of over 15 schools in 19 different competitions arranged for classes PP - 1 to IX.

products.

Raga Manjari presented a delight to the judges and the audience with the rhythmic voices of the children. The Beats and Tunes, the Sur-sangam, the Indian Folk, and the Retro Music gave students a chance to display their musical talents.

Finally, the Rang Manch, consisting of competitions such as Rock with Prop, Rock and Roll, Solo Classical, Solo Western, and Solo



BE AWARE OF GADGET ADDICTION

"These days we have smart phones, smart cars, smart boards, smart everything, but if the technology is getting smarter, does that mean humans are getting dumber?"

Students of Delhi World School presented a skit on gadget addiction and how to overcome it, conveying the pros and cons of technology.

The major question is how do we know we are addicted to our cell phone? Some of the pointers are when a person uses the cell phone most of the day, unable to cut back on its usage and uses it as a solution to boredom. Also, if one develops a feeling of anxiety or depression when the phone is out of range, then it is a cause for concern.

Sujatha VP, Principal, Delhi World School, Chintal, Hyderabad



When cell phone use becomes an addiction, the behaviour becomes stressful leading to health issues. Cell phone addiction is negatively correlated with academic performance.

Mobile addiction not only leads to physical health problems but also psychological and academic at the same time.

Sleep deficit, anxiety, stress, and depression are all associated with excessive gadget usage. The skit concluded with highlighting the right way of utilising the gadgets.

FOR THE LOVE OF MATHEMATICS

In recognition of the work of mathematical genius Srinivasa Ramanujan, the National Mathematics Day was celebrated at PBDVA Model School.

The guests of honour were Seetaram Murthy, a renowned Vedic Maths teacher, and Sudhakar Reddy, the Chairman for SV Group of Colleges. They were welcomed by principal Prabhakar, co-ordinator Lakshmi Srinivasan and the students.

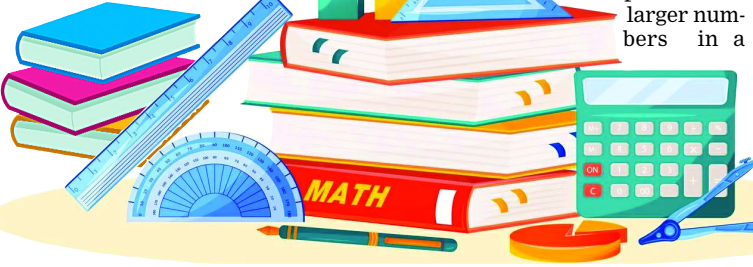
Guests shared their views on the life of Srinivasa Ramanujan and his contributions in the field of mathematics. They focussed on the importance of mathematics in our daily life. A Math theme based assembly was conducted by the children. "Yatha Shikha mayuranam, na-

PBDVA Model School, Hyderabad

ganaam manyoh yatha; tadh vedan-gashastranam ganitam murghni varthathe" was the shloka chanted and briefed by primary class tiny tots.

A conversation on the contributions of great mathematicians was presented. Students of High School presented a dance on Math-based concepts like place values, numbers, rounding, patterns, etc. Children of class X engaged the audience with brain-teasers. Chief guest Sitaram conducted a seminar on solving magic squares using logical reasoning and Vedic Math basics. Lat-

er children of high school performed a group song titled "Varasulam, Ganita shastra Sadhakulam, Parisodhakulam, Ganitaniki premikulam" reflecting their love for the subject. A programme "Legends in Mathematics" involving introduction of the recent achievement in the field of mathe-



matics was taken up by the middle school children.

Jayasree Rangarajan took a session on tricks in multiplication based on Vedic Mathematics. All the children as well as the parents were number crunching and were able to find the squares and products of larger numbers in a

fraction of second through simple tricks.

The idea of celebrating Mathematics Day was to make children ultimately fall in love with the subject. Prizes were distributed to the winners of various co-curricular activities. The prize distribution was undertaken by Ruksana and Rema, the CCA co-ordinators of the school.

Prizes were also given to the children who passed Special Hindi exams conducted by the Dakshin Hindi Prachar Sabha, which are guided by the Hindi Co-ordinator Ruksana. The children were felicitated with shawls and certificates by the chief guests. Vaishali, a senior faculty from Mathematics department, gave the vote of thanks.

POSTCARD TO THE FUTURE: INDIA IN '47

India Post organised a '75 lakh Postcard Campaign' as part of the Azadi Ka Amrit Mahotsav celebrations. The students of DDMS P Obul Reddy Public School took this initiative as an opportunity to inscribe their vision for India in 2047 in different languages.

The school arranged for postcards for all the students through the local post office. The postcards were decorated with

DDMS P Obul Reddy Public School, Hyderabad

the tricolour and students also wrote about many unsung heroes of our country and handed them over to the local postal authorities. It was a rewarding experience for the students to learn more about these hidden and forgotten gems of India.

Painters' Gallery



SHIVAY: VINAY, class IX, Gayatri Grammar High School, Hyderabad

CHAKRASANA - THE WHEEL POSE

The Wheel Pose- Cultural Asanas for forward bending of the spine. The body takes a wheel-like, semi-circular posture while performing this Asana. The dynamic variation of the anterior-posterior Chakrasana, evolved by Shri Yogendraji, offers an excellent exercise to the mid-trunk and the spine especially, the cervical and lumbar regions.

Starting position: Stand erect with hands at their respective sides. Keep the feet parallel to each other and maintain a distance of 20 inches between them. Keep the neck straight, chest thrown well forward, the abdomen in normal contour and the chin drawn in. Focus the eyes at one point, straight ahead. Return to starting position (for all Phases)

PHASE-1
1. Inhaling clench the fists and raise the arms up, keeping

the arms close to the ears.
2. Interlacing the fingers of the up-stretched arms, above the head, arch back the spine, keeping the lower body below the waist fixed. Complete the above steps in 3 seconds, while inhaling.
3. Immediately, exhaling, in 3 seconds, unlocking the fingers, bend forward and downwards with the up-stretched arms in position (i.e. kept close to the ear) to touch the ground.

4. Maintain this position for 6 seconds, with the breath suspended (final position).

PHASE-2 (AFTER MASTERING PHASE-1)

1. After attaining the final position of Phase-1, continue to bend the upper part of the body, till the forehead comes in line with the knees.
2. Maintain this position for 6 seconds, with the breath suspended (final position).

PHASE-3 (AFTER MASTERING PHASE-2)

1. After attaining the final position of Phase-2, freely swing the arms, held straight, upward and backward until they come to a vertical position.
2. Maintain this position for 6 seconds, with the breath suspended (final position).
3. Then slowly lift the body to return to the upright starting

leverage it to extend the bend of the body till the head crosses the knees.
2. Maintain this position for 6 seconds, with the breath suspended (final position). Inhaling, bring the arms down to touch the ground (unlock the fingers in Phase-4).
3. Then slowly lift the body to return to the upright starting

RECOMMENDED PRACTICE

Practice 3 rounds, with pause in-between rounds. In case of static pose, maintain the final position for 30 seconds, gradually taking it up to 1/2 minutes with regular practice. Breathing should be normal-slow and rhythmic.

BENEFITS OF CHAKRASANA THE WHEEL POSE

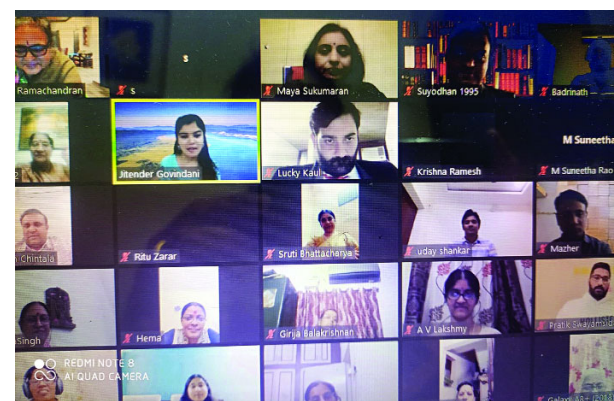
- 1 Strengthens both the superficial and deep muscles of the chest and waist.
- 2 Develops the muscles of the back, neck, spine and shoulders.
- 3 The anterior stretching of the major and deep abdominal muscles causes favourable changes in the abdominal pressure and stimulates the intestines.
- 4 Rouses sluggish liver and colon and provides relief in case of constipation.

position, ensuring the arms and head are kept in position, to complete 1 round. Complete the above steps in 3 seconds, while inhaling.

Courtesy: The Yoga Institute, Santa Cruz, Mumbai. Estd.1918

Yoga should be practiced under the supervision of Yoga Guru. The views expressed in the above article are those of the author and the newspaper takes no responsibility for it.

Alumni meet held



Gitanjali Senior School held its Alumni association meet recently. The rich values imbibed by the students of the school were reflected upon by the former students who expressed their gratitude to their alma mater.

Gita Karan, the Founder Director of the school, addressed the gathering and

Gitanjali Senior School, Hyderabad

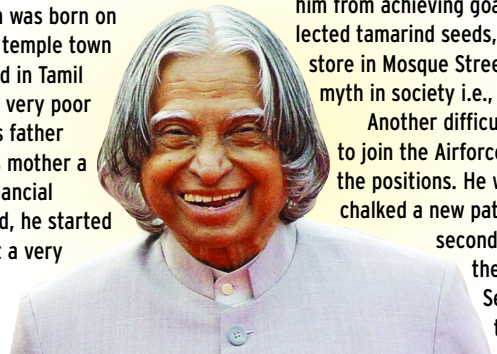
expressed how delighted she was to be connected with the alumni. The bond and the enthusiasm to support each other were emphasised by the alumni president Suyodhan from the batch of 1985.



DR APJ ABDUL KALAM - AN INSPIRING SOUL

Greats are not born every day; they are born once in a rarity and are remembered for millenniums to come. One such great, Dr APJ Abdul Kalam, 'The Missile Man of India', the 11th President of India and the child lover was a kind-hearted person with a positive attitude. There is always a story behind every success, Dr APJ Abdul Kalam said.

Dr APJ Abdul Kalam was born on October 15, 1931, in the temple town of Rameswaram, located in Tamil Nadu. He was born to a very poor Tamil Muslim family. His father was a boatman, and his mother was a housewife. Since his financial conditions was not good, he started to support his father at a very young age of eight and when his classes were over, he along with his



DR APJ ABDUL KALAM INSPIRING ICONS

cousin Shamsuddin started distributing newspapers around the town. However, poverty did not stop him from achieving goals. He sold newspapers, collected tamarind seeds, and sold them to a provision store in Mosque Street. He also faced the biggest myth in society i.e., social inequality.

Another difficult phase was when he wanted to join the Airforce, but could not get through the positions. He was disappointed and this chalked a new path for him. He opted for the second option and joined DTD&P at the Ministry of Defence as a Senior Scientific Assistant and then he did several projects in

which he built a hovercraft named 'Nandi'. He worked at NASA, then went to Goddard Space Flight Centre (GSFC) in Maryland. Later, he joined ISRO and became the project director of SLV3. As Kalam never stopped and kept going, India launched its first ever satellite into the orbit named 'ROHINI' on July 18, 1980. And what a great story he made, becoming the 'Missile Man of India'. When the rule of K R Narayanan's presidency came to an end, the country needed an inspirational leader and Dr APJ Abdul Kalam became the President of the people to serve the country.

Just as a boy from a small village can overcome all obstacles in his life and go on to achieve stupendous success in his life, every person has the potential to outshine everything in the world and set examples for the rest.

ZAINA SHAHRAN, CLASS VII, CITY MONTESSORI SCHOOL, CHOWK, LUCKNOW



Public Speaking Workshop

Attend this workshop for free and give your child a chance to master the art of public speaking.

A prestigious participation certificate to all the students.

Age Group - 4 to 13

Register Now



Gadget Watch @CES

Check out visionary technology on display at the world's largest annual consumer technology trade show, which was held at Las Vegas, Nevada in January this year



GENTEX VAPORSENS NANOFIBER

sensor technology for monitoring a vehicle's cabin air quality and identifying potential airborne contaminants are displayed during the Consumer Electronics Show (CES) on January 6, 2022 in Las Vegas, Nevada. - Air purifiers, sensors to prevent a child from being forgotten in the car, intelligent sun visors: there are more and more tools available to make motorists feel safe in their car. The idea is to transform the vehicle 'into a sort of healthy cocoon



AN ATTENDEE SITS for a demonstration in a model of the Hyundai Heavy Industries (HHI) Group's Avikus autonomous cruising leisure boat during the Consumer Electronics Show (CES) on January 6, 2022 in Las Vegas, Nevada.



AN ATTENDEE SITS for a demonstration in a model of the Hyundai Heavy Industries (HHI) Group's Avikus autonomous cruising leisure boat



THE INDY AUTONOMOUS

Challenge's Dallara AV-21 fully autonomous race car



DOOSAN MOBILITY INNOVATION'S DS30W hydrogen fuel cell drone



A DRUMMER PERFORMS with a drum robot moving four electronic drums as part of a demonstration at the Doosan booth at CES 2022



KIRSTEN MACKIN GETS a massage at the Massage Robotics booth

THE MEGANEX VR GLASSES

by Japanese startup Shiftall



THE DOOSAN ROBOTICS The robot can be used for smart farming with the ability to measure the sweetness of fruits and harvest them without bruising. It can also be used for seeding, watering, planting and pesticide spraying.

TOP med gadgets

Pulse Oximeter
₹500 to ₹2,500



Pulse Oximeter has become one of the most important medical gadgets during the pandemic that everyone should have at home. As it is important to monitor blood oxygen level of coronavirus patients. Just make sure to go with the one that also shows pulse reading. Oximeters are available starting from Rs 500 to Rs 2,500 online as well as offline medical stores.

Contactless thermometer
₹1,000



Contactless or IR thermometers can measure body temperature from a distance of 1-2 inch distance without any physical contact. This helps reduce the chance of contamination. These thermometers can be easily found on online and offline stores for as low as Rs 1,000.

Digital blood pressure monitor
₹3,000



Digital blood pressure monitor is also a handy medical device to keep at home. A decent blood pressure monitor costs around Rs 3,000.

Glucometer
₹500 - ₹3,000



Glucometer is a must for all diabetic patients to keep track of their blood sugar levels. Price of a decent glucometer ranges between Rs 500 and Rs 3,000.

UV Steriliser
₹1,000



UV radiation is known as disinfectant for non-porous surfaces, air and water. Gadgetsnow