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SPECIAL STORY

Hon'ble President : Smt. Droupadi Murmu

(Written By : Our Correspondent)

Droupadi Murmu (born on 20th June 1958), is an Indian politician serving as the 15th and current President of India since 25 July 2022. She is a member of the Bharatiya Janata Party (BJP). She is the first person belonging to the indigenous, scheduled tribe community to be elected as the President of India. Prior to her presidency she served as the ninth Governor of Jharkhand between 2015 and 2021, and held various portfolios in the cabinet of Government of Odisha between 2000 to 2004

Before entering politics, she worked as a clerk in the State Irrigation and Power Department from 1979 to 1983, and then as a teacher in Rairangpur until 1997.

Droupadi Murmu was born to a Santali family, in the Baidaposi area of Rairangpur, Odisha. Her name given by her family was Puti Tudu. She was renamed by her school teacher to Droupadi. Her name was changed several times and she was also named Durpadi, Dorpdi in past. Her father and grandfather were traditional heads of the village council. Murmu is an arts graduate of Rama Devi Women's College.

From 1979 to 1983, Murmu worked as a junior assistant at the irrigation department of the Government of Odisha. She then worked as a teacher at Sri Aurobindo Integral Education Centre, Rairangpur and taught Hindi, Odia, Maths and Geography.

Droupadi Murmu joined the Bharatiya Janata Party (BJP) in Rairangpur. In 1997 she was elected as the councillor of the Rairangpur Nagar Panchayat.

She won the 2000 Odisha Legislative Assembly election from Rairangpur Assembly constituency and served two terms in the Odisha Legislative Assembly between 2000 and 2009. During the BJP and BJD coalition government in Odisha, she was the Minister of State with Independent Charge for Commerce and Transportation from March 6, 2000, to August 6, 2002, and Fisheries and Animal Resources Development from August 6, 2002, to May 16, 2004.

In 2009, she lost the Lok Sabha election from Mayurbhanj Lok Sabha constituency as the BJD and BJP alliance had ended.

Murmu was sworn in as the Governor of Jharkhand on 18 May 2015, becoming the first woman to hold the position. The BJP was in power in the Jharkhand Government for most of her six-year tenure as a governor and was also in power in the Union Government throughout her tenure.

In June 2022, the BJP nominated Murmu as the National Democratic Alliance (NDA)'s candidate for President of India for the 2022 election the following month. Yashwant Sinha, was nominated as the candidate for President by the opposition parties. During her election campaign, Murmu visited various states seeking support for her candidature. Several opposition parties like BJD, YSRCP, JMM, BSP, SS, JD(S) among others had announced support for her candidature prior to polling. On 21 July 2022, Murmu secured a clear majority in the 2022 Presidential election defeating common opposition candidate Yashwant Sinha with 676,803 electoral votes (64.03% of total) in 21 of the 28 states (including in the union territory of Puducherry) to become the 15th President of India.

She was elected as the President of India and assumed office on 25 July 2022. She took oath of office on the Central Hall of Parliament by the Chief Justice N. V. Ramana.

She was the first person from India's indigenous designated tribal communities to be elected as the president. She is the youngest and first individual born after India's independence in 1947 to have been elected as the President. Murmu is only the second woman after Pratibha Patil to serve as the President of India.

THE CINE EXPRESS COLUMN

Rakul Preet Singh : Queen of Tollywood

(Written By : Our Correspondent)

Rakul Preet Singh (born 10 October 1990) is an Indian actress who predominantly works in Telugu, Tamil and Hindi films. She made her acting debut with the Kannada film *Gilli* (2009) and has received three

Filmfare Awards South nominations and is a recipient of a SIIMA Award.

Singh established herself in Telugu and Tamil cinema with successful films including *Venkatadri Express* (2013), *Loukyam* (2014), *Pandaga Chesko* (2015), *Sarrainodu* (2016), *Dhruva* (2016), *Rarandoi Veduka*

Chudham (2017), *Spyder* (2017) and *Theeran Adhigaaram Ondru* (2017). She has also starred in the Hindi films *Yaariyan* (2014) and *De De Pyaar De* (2020).

Early Life

Rakul Preet Singh was born on 10 October 1990 in a Sikh family in New Delhi. Rakul did her schooling from Army Public School, Dhaula Kuan and later studied mathematics at Jesus and Mary College. Her father was an army officer. Her mother is Rajender Kaur and father is Kulwinder Singh. Her younger brother, Aman Preet Singh, is set to make his Bollywood debut with film *Ram Rajya*.

As of 2020, Singh lives in Hyderabad and has a house in Mumbai.

Career

Singh, who said that she had always dreamt of being an actress, began her career in modelling at age 18 while she was still in college. In 2009 she made her acting debut in the Kannada film, *Gilli*, a remake of Selvaraghavan's *7G Rainbow Colony*. She stated that she signed up the film "with the aim to earn a little extra pocket money" and that she was unaware "how big south Indian films were". She won critical acclaim for her role in the film before returning to complete her degree and compete in the 2011 Femina Miss India pageant. Apart from the People's Choice Miss Indiatimes, she won four subtitles at the pageant including Pantaloons Femina Miss Fresh Face, Femina Miss Talented, Femina Miss Beautiful Smile and Femina Miss Beautiful Eyes.

She returned to films in 2011, featuring opposite Siddharth Rajkumar in *Keratam* which was released both in Telugu and Malayalam languages, though critics noted that "she got very little screen time". The film was also made in Tamil simultaneously titled as "Yuvan" with the same cast but different director. In 2012, she appeared in a supporting role in the Tamil film *Thadaiyara Thaakka*.

In Jan 2013 she appeared in a Tamil film titled *Puthagam*. In November 2013 she was seen in *Venkatadri Express* in Telugu, the latter becoming a commercial success and earning her first Best Actress nomination at the 61st Filmfare Awards South.

In 2014, she debuted in a starring role in Bollywood with Divya Kumar's directorial debut *Yaariyan*,[27] after which her third Tamil film *Yennamo Yedho* released. By mid-2014, she was working on three Telugu films simultaneously,[28] which were directed by Sriwass,[29] G. Nageswara Reddy,[30] and Gopichand Malineni. Sriwass's *Loukyam* and G. Nageswara Reddy's *Current Theega* were her next releases. She received positive reviews for her performances in both films, with *123Telugu* claiming that she was "slowly becoming a star actress". She received her second Best Actress nomination at 62nd Filmfare Awards South. Her next released film was *Pandaga Chesko* in which she was starred opposite Ram Pothineni and directed by Gopichand Malineni.

Career fluctuations (2015-2018)

Singh was then selected as the female lead in half-a-dozen, four of which are high-profile Telugu films: Surender Reddy's *Kick 2* opposite Ravi Teja, Srinu Vaitla's *Bruce Lee* opposite Ram Charan, Sukumar's *Nannaku Prematho* opposite Jr. Ntr and Boyapati Srinu's *Sarrainodu* opposite Allu Arjun. She earned her first Best Actress (Telugu) award at 6th South Indian International Movie Awards. In January 2016 she signed the film *Jaya Janaki Nayaka* under the direction of Boyapati Srinu opposite Bellamkonda Sreenivas[38] In February 2016 she signed Surender Reddy's *Dhruva* starring opposite Ram Charan for the second time.

In early March 2016 she signed Gopichand Malineni's film *Winner* starring with Sai Dharam Tej for the first time. In early July 2016, she signed to AR Murugadoss' bilingual film opposite to Mahesh Babu, titled *Spyder*. In September 2016 she signed another Telugu film titled *Rarandoi Veduka Chudham* directed by Kalyan Krishna starring opposite Naga Chaitanya. The movie was released on 26 May which was a huge blockbuster.

In Dec 2016, she signed her next film titled *Theeran Adhigaaram Ondru* to pair opposite Karthi. After a small sabbatical in Hindi films, she appeared in Neeraj Pandey's *Aiyaary* starring opposite Sidharth Malhotra, released in February.

2019-present

In 2019, she starred in a guest role in Nandamuri Balakrishna's *NTR: Kathanayakudu* as Sridevi. She then went on to play the female lead in *Dev* opposite Karthi for the second time. Singh appeared with Ajay Devgn and Tabu in Luv Ranjan's Bollywood romcom, *De De Pyaar De*, released in May 2019. The same month, she appeared in Selvaraghavan's *NGK* opposite Suriya. Her fifth release of 2019 was a Telugu romantic comedy film *Manmadhudu 2*, produced by Nagarjuna Akkineni and directed by Rahul Ravindran.[50] In the same year, she appeared in Milap Milan Zaveri's action drama *Marjaavaan*, alongside Ritesh

Deshmukh, Sidharth Malhotra and Tara Sutaria.

In 2021, Singh starred in the Chandra Sekhar Yeleti-directed film *Check,* alongside Nithiin and in *Sardar Ka Grandson* opposite Arjun Kapoor. Her Telugu film *Konda Polam* directed by Krish alongside Panja Vaisshnav Tej was released on 8 October. In her review about the film, Neeshita Nyayapati of *The Times of India* wrote about Singh that "Rakul is a delight as Obu and the dubbing for her character seems almost pitch-perfect, fitting right into the skin of the character. She's a ray of sunshine in an otherwise muted film".

Her first release in 2022 came with the action film *Attack*, co-starring John Abraham and Jacqueline Fernandez, a Lakshya Raj Anand's directorial debut. It received mixed reviews. This was followed by the release of *Runway 34* in which she starred alongside Ajay Devgn and Amitabh Bachchan.

Upcoming projects

Singh has seven upcoming films in various stages of production. She has signed two Tamil films: S. Shankar's vigilante-action film *Indian 2* and the science fiction film *Ayalaan* opposite Sivakarthikeyan. She has four upcoming Hindi films. She will also be featured in Indra Kumar's slice-of-life comedy *Thank God* alongside Devgn and Sidharth Malhotra, and Anubhuti Kashyap's *Doctor G* in which she is paired opposite Ayushmann Khurrana. She will play the lead in the social family entertainer film *Chhatriwali* directed by Tejas Prabha Vijay Deoskar. Rakul will pair up with Akshay Kumar in *Mission Cinderella*. She also has a Tamil-Telugu bilingual titled *31 October Ladies Night*.

Other Works

In 2017, Singh was appointed the brand ambassador for Beti Bachao, Beti Padhao programme by Government of Telangana.[64] She has an active franchise of three functional training gyms of F45 Training. Two of them are in Hyderabad, located in the suburbs of Gachibowli and Kokapet, while the other is in Visakhapatnam.

THE EXAMINATION COLUMN

Brief Facts of OAS Exam Syllabus

(Written By : Pradeep Kumar Panda, Economist)

Odisha Administrative Service (OAS) Exam Syllabus is specified by the Odisha Public Services Commission (OPSC) for the Odisha Civil Services exam that is held annually. To be able to crack the exam, the candidates should be able to know the OAS syllabus thoroughly that is divided into Prelims and Mains. Prelims syllabus for OPSC consists for 400 marks. It has two papers namely, General Studies Paper 1 and General Studies Paper 2. OPSC Mains syllabus is the second stage that is descriptive in nature. It has 5 compulsory papers and 4 optional papers.

Later on, a personality test or interview is held to find the suitable candidate for the Odisha Civil Services examination. OPSC Prelims syllabus has two papers, General Studies Paper 1 and General Studies Paper 2. Thereafter, Mains exam is held that is descriptive in nature. It has both optional and OPSC Mains papers. The candidate needs to choose two optional subjects with each having 2 paper in each. The third and final stage is the personality test or generally known as the Interview round.

Candidates need to have a good knowledge of the OPSC syllabus to be able to crack the Odisha civil service exam.

OAS Syllabus for Prelims

OPSC OAS Prelims syllabus consists of two papers, General Studies Paper 1 & Paper 2. Both papers are equally important for every candidate willing to crack the exam. You can check out the OAS syllabus for Prelims below along with the list of important topics for the exam.

OPSC General Studies Syllabus for Paper 1

The OPSC GS syllabus for paper 1 has topics that are to be known by any candidate who is preparing for the exam. He/She needs to know about all the important subjects such as History, Polity, General Science, Current Affair issues, etc. Here are the important topics covered in it.

- Current affairs that hold international and national significance.
- Indian Geography from both Social and Economic perspectives. Physical Geography of the country and the world.
- General Science
- Development from both Social and Economic perspectives, Poverty, Study of Human Population with the help of Statistical tools with special emphasis on size and distribution (Demography), Introductory assertive steps taken in the Social Sector, Maintainable (Sustainable) Development
- Indian Politics, Indian Governance, Constitution of India, Indian Political Structure, Indian Rural Governance also called Panchayati Raj, Issues pertaining to Public Policy, Prevalent issues regarding Human Rights
- Indian History, Details of Indian National Movement
- Prevalent issues regarding Environmental Ecology, pressing issues concerning Climate Change, Significance and necessity of Bio-Diversity

OPSC General Studies Syllabus for Paper 2

OAS GS Paper 2 syllabus covers English Language and Comprehension, Reasoning, DI and Mental Ability. You can check out the list of topics below.

- Comprehension of the English language is tested.
- Interactional skills/Communication skills
- Analytical and reasoning skills
- Problem Solving and Decision Making
- Numeracy (secondary examination level)
- Data Interpretation
- Mental Ability

OPSC OAS Mains Syllabus

Candidates who qualify the Prelims will be able to appear for the Mains exam which is the foremost crucial stage of the OPSC exam. The marks btained in this stage along with the interview marks shall be used for the final allotment of candidates. OPSC Mains syllabus has 5 compulsory paper and 4 optional ppaers. Below you can check out the OPSC OAS syllabus for Mains.

OPSC OAS Odia Language Syllabus

- Odia comprehension
- Precis Writing
- Translating of English to Odia
- Short essays
- Odia Grammar,
- Odia language usage
- Odia Vocabulary

OPSC OAS English Language Syllabus

- English comprehension
- Precis Writing
- Translating of Odia to English
- Short essays
- English Grammar,
- English language usage
- English Vocabulary

OPSC OAS English Essay Syllabus

The candidate will have to express their views on a particular topic that will be provided by the Odisha Public Service Commission (OPSC).

OPSC OAS GS 1 Syllabus

- Indian Culture and History of Modern India.
- Latest National Events and other topics that hold social relevance
- Issues related to legal matters,
- Environmental Issues
- Indian Geography.
- Indian Polity

OPSC OAS GS 2 Syllabus

- India and the world.
- Indian Economy.
- International affairs and International Institutions.
- Developments related to the field of science and technology,
- Developments taking place in the field of communications,
- Development taking place in the field of space.
- Statistical Analysis, Graphs, and Diagrams.

OPSC OAS Interview

The aim of the OPSC OAS Personality Test or Interview round is to assess the candidates' attitude and to test how well the candidate handles mishaps, adversities, and challenges thrown their way. The interviewers test the mental capabilities of the candidate and judge the personality traits that they possess and how those traits might assist them in the field while working as a civil servant. The candidate's knowledge and understanding of the latest events and issues are tested as well.

From Page 4 (12 Ways You Can...)

11. Use your purchasing power for good.

The positive thing about being a consumer is that we have the power to choose where we spend our hard-earned dollars. Think of your money as your voice and your vote for a cleaner planet. Spend it wisely on goods, services and experiences that leave a smaller carbon footprint. Choose to do business with companies that support sustainability efforts, utilize renewable energy sources and walk the walk when it comes to protecting the environment.

Money talks—if enough people use their purchasing power for the good of the Earth, it will create a demand for sustainable practices. Businesses will either have to comply … or be left behind.

12. Conserve electricity.

As you can guess, we're quite fond of this method of protecting the environment! Anytime you can use less electricity, it's a win for the planet. Try some of these quick ways to conserve energy around your home:

Trade incandescent bulbs for more energy-efficient CFLs or LEDs.

Use smart power strips, which turn off the power to electronics when they're not being used. (Or, simply unplug power cords from the wall when items aren't in use.)

Use a programmable or smart thermostat.

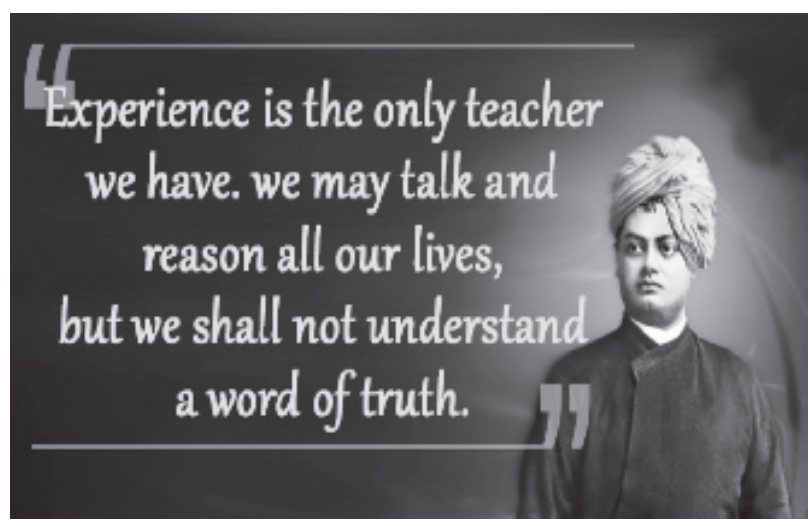
Maintain your heating, ventilating and air conditioning (HVAC) system.

When it's time to buy a new appliance, choose an Energy Star-certified model.

Seal air leaks around doors and windows.

Make sure your home is properly insulated to the recommended level of heat resistance ("R-value") for where you live.

Use ceiling fans to circulate warm air in the winter and cold air in the summer.



ENVIRONMENT & AGRICULTURE COLUMN

12 Ways You Can Protect The Environment

(Written By : Our Correspondent)

Unfortunately, humans have not been very good stewards of the Earth over the years. To protect the environment and preserve the planet for our children and future

generations, we all need to take proactive steps toward cleaner living habits. *Most of the damage to our environment stems from consumption: what we consume, how much we consume and how often.*

Whether it's gas, food, clothing, cars, furniture, water, toys, electronics, knick-knacks or other goods, we are all consumers. The key is not to stop consuming, but to start being mindful of our consumption habits and how each purchase or action affects the ecosystem.

The good news is that it's often not too difficult, expensive, or inconvenient to become more environmentally friendly. It can even be a fun challenge to implement among your family or coworkers. And though small changes at the individual level may seem trivial, just think how much cleaner the planet would be if everyone adopted even a few of the following behavior modifications.

1. Consume less.

Curbing consumption can have a huge impact on the environment.

The three "R's"—reduce, reuse and recycle— get a lot of attention, but the planet could benefit from some focus on the most important and most underrepresented "R": refuse.

When you refuse, you say "no," which is not always easy. Freebies at events, cheap goods on clearance, the hot new children's toys or the latest gadgets that promise to make your life better—none of these are essential. And they almost always end up either in the trash or forgotten in the back of a closet. Next time you're tempted to purchase or accept a non-essential item, think about whether it would truly improve your life. If not, it's ok to just say, "No, thanks!"

Bonus: Refusing to allow unneeded items into your life can save you money and reduce the amount of clutter in your home.

2. Compost.

Another “R” that doesn't get much attention but has important environmental implications is

“rot.” As in, let your food and yard waste rot naturally in the soil instead of sending it to the landfill. In other words: compost.

Composting your food scraps and yard waste offers double rewards: it keeps an incredible amount of trash out of the waste stream, and it produces free, rich soil to use in your garden. Some cities now pick up organic waste alongside regular trash and recycling pick up. If your area doesn't offer this service, no worries— you can set up a low-maintenance compost pile in your backyard.

3. Choose reusable over single-use

Think about how many people you see each day drinking beverages from disposable cups or disposable bottles, sipping from disposable straws, carrying disposable grocery bags, eating

from disposable plates or containers and using disposable utensils. All that single-use plastic has to go somewhere, and it's had a devastating effect on our soil, oceans and marine life.

All of the above items (and more) have more environmentally responsible counterparts. Switch to reusable items and make a commitment to use them as often as possible. You'll have less trash piling up at your curb, and you'll be helping to protect the environment in a major way.

4. Upcycle more.

Get creative with your useless or unwanted items by upcycling—basically, turning trash into treasure. Creating something new such as artwork, toys or jewelry is both satisfying and one of the best ways to protect the environment. Not only does it keep items out of the trash, it can prevent having to purchase new items, which require lots of resources to produce. Children love making things; so instead of heading to the craft store, check out your recycle bin first and let their imaginations soar!

5. Recycle properly.

If you can't refuse it…and you can't rot it…and you can't reduce it…and you can't upcycle or reuse it…then it's time to turn to the final “R”—recycling. Educate yourself on what can and cannot be recycled in your bins at home. Throwing the wrong items in the recycle bin can result in an entire load being rejected, which means … back to the landfill.

You can also easily find out how to recycle special items such as electronics, batteries and appliances. Check with your local municipality for drop-off sites, and make an effort to get your items to the proper disposal sites.

6. Shop secondhand.

Did you know it takes over 700 gallons of water to grow enough cotton to make just one plain t-shirt?

Instead of heading to the mall to buy new clothes, consider looking first in a thrift store or vintage shop, or trading clothes with friends. You can breathe new life into your wardrobe without wasting the precious resources needed to produce new clothing.

Shopping secondhand also applies for many other categories of consumer goods: children's games and toys, shoes, appliances, furniture, cars and more.

7. Buy local.

While we're on the topic of shopping, it's important to think about the path your stuff takes just to get to you. All that packaging, combined with the fuel needed for delivery, really

takes a toll on the environment. Instead, check out your local farmers market for fresh, package-free food; try eating at a farm-to-table restaurant; and buy from local artists, clothing makers, and retailers before you click for that two-day shipping.

8. Use fewer chemicals.

Want to protect the environment? Use fewer harmful chemicals and you'll be on the right track. It's hard to be sure about the long-term negative effects chemicals can have, both on our bodies and on the planet, so it's best to avoid them if possible. Opt for chemical-free lawn and garden care; all-natural beauty and hygiene items; natural household cleaners; and organic food. The Earth will thank you!

9. Walk, bike or carpool.

According to the U.S. Environmental Protection Agency (EPA), a typical passenger vehicle emits about 4.6 metric tons of carbon dioxide per year.1 Any amount of that we can cut back on will help. For short trips, try walking or biking—you'll also get a healthy dose of exercise in, without setting foot in a gym. If travelling on foot or two wheels isn't feasible, try carpooling with a friend, neighbor or coworker to a mutual destination. And if all else fails and you need to drive your car, line up errands in the most efficient route to save time and miles driven.

10. Use less water.

Conserving water at home is one of the easiest ways to protect the environment. Think of all the times you consume water, both inside and outside your home; then, make adjustments as you can. For example:

Turn off the tap while you brush your teeth.

Fix leaky faucets.

Make your water use more efficient by aerating faucets, using sprinklers that reduce runoff and installing low-flow toilets and efficient shower heads.

Collect and use rainwater for watering plants.

Shorten your shower by a few minutes—or skip it altogether if you don't really need one that day.

Only run your dishwasher or washing machine when it's full

These are just the basics—you can get really creative when it comes to conserving water.

Continued Page 3

HEALTH AND FAMILY WELFARE COLUMN

15 EASY WAYS TO BE AND LIVE HEALTHIER

(Written By : Our Correspondent)

More and more research is showing that the key to lifelong good health is what experts call "lifestyle medicine" — making simple changes in diet, exercise, and stress management. To help you turn that knowledge into results, we've put together this manageable list of healthier lifestyle tips to help inform others how to have a healthy body!

We asked three experts — a naturopathic physician, a dietitian, and a personal trainer — to tell us the top five simple-but-significant lifestyle-medicine changes they recommend to improve your health and start living a healthier lifestyle.

Besides giving you three different takes on how to pick your health battles, this list gives you choices you can make without being whisked off to a reality-show fat farm — or buying a second freezer for those calorie-controlled, pre-portioned frozen meals. Read on to discover ways to live healthier.

JAMES ROUSE, N.D.

NATUROPATHIC PHYSICIAN, TRIATHLETE, CHEF, AUTHOR AND HOST OF TV'S "OPTIMUM WELLNESS," HEALTH-TIP SEGMENTS FEATURED ON NBC AFFILIATES IN SEVERAL MAJOR CITIES.

1. THINK POSITIVE AND FOCUS ON GRATITUDE

Research shows a healthy positive attitude helps build a healthier immune system and boosts overall health. Your body believes what you think, so focus on the positive. This is a great first tip for how to ensure you have a healthy body and mind in order to live a healthier lifestyle!

2. EAT YOUR VEGETABLES

Shoot for five servings of vegetables a day — raw, steamed, or stir-fried. A diet high in vegetables is associated with a reduced risk of developing cancers of the lung, colon, breast, cervix, esophagus, stomach, bladder, pancreas, and ovaries. And many of the most powerful phytonutrients are the ones with the boldest colors — such as broccoli, cabbage, carrots, tomatoes, grapes, and leafy greens.

3. SET A "5-MEAL IDEAL"

What, when, and how much you eat can keep both your metabolism and your energy levels steadily elevated, so you'll have more all-day energy. A "5 meal ideal" will help you manage your weight, keep your cool, maintain your focus, and avoid cravings which will lead to living a healthier lifestyle.

4. EXERCISE DAILY

Did you know that daily exercise can reduce all of the biomarkers of aging? This includes improving eyesight, normalizing blood pressure, improving lean muscle, lowering cholesterol, and improving bone density. If you want to live well and live longer, you must exercise! Studies show that even ten minutes of exercise makes a difference — so do something! Crank the stereo and dance in your living room. Sign up for swing dancing or ballroom dancing lessons. Walk to the park with your kids or a neighbor you'd like to catch up with. Jump rope or play hopscotch. Spin a hula hoop. Play water volleyball. Bike to work. Jump on a trampoline. Go for a hike. These are all great things to do to improve your health.

5. GET A GOOD NIGHT'S SLEEP

If you have trouble sleeping, try relaxation techniques such as meditationand yoga. Or eat a small bedtime snack of foods shown to help shift the body and mind into sleep mode: whole grain cereal with milk, oatmeal, cherries, or chamomile tea. Darken your room more and turn your clock away from you. Write down worries or stressful thoughts to get them out of your head and onto the page. This will help you put them into perspective so you can quit worrying about them.

CHRISTINA REITER, M.S., R.D.

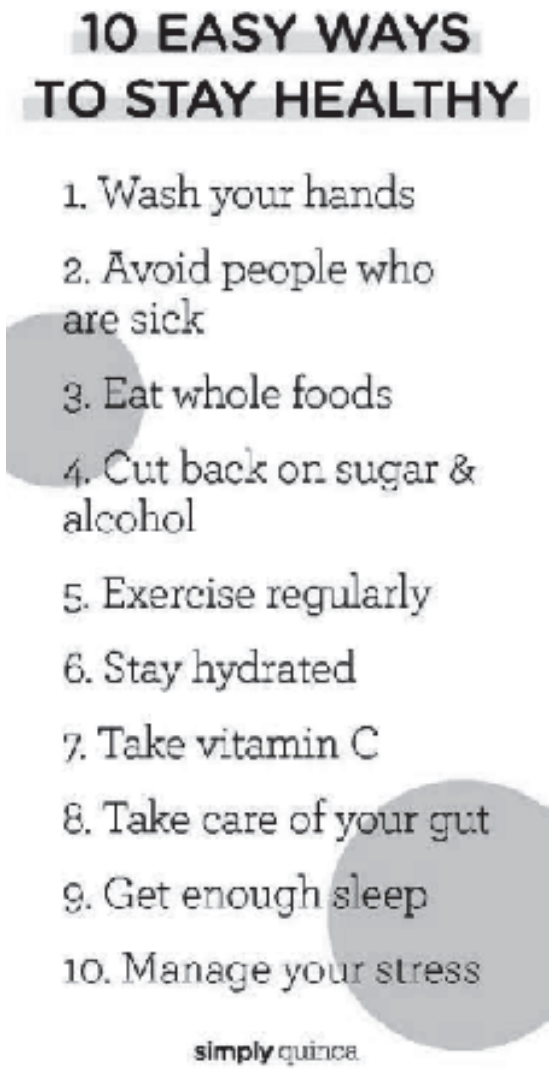
RESIDENT CONSULTING DIETITIAN AT THE UNIVERSITY OF COLORADO–BOULDER WARDENBURG HEALTH CENTER FOR NUTRITION EDUCATION AND THERAPIES AND FORMER DIRECTOR OF THE NUTRITION PROGRAM AT METROPOLITAN STATE COLLEGE OF DENVER.

1. CHECK YOUR FOOD 'TUDE

What we eat and how we feel are linked in very complex ways. A healthy approach to eating is centered on savoring flavor, eating to satisfaction, and increasing energy, rather than focusing on weight. Our tip to live a healthy life is to check your balance of low-calorie foods, nutrient-dense foods (providing many nutrients per calorie), and foods that are calorie dense but nutrient poor. Most Americans need to eat more fresh whole foods (in contrast to processed, highly refined foods). Try to add more whole grains, fresh fruits and vegetables, and legumes into your meals. Pair these carbohydrate-rich foods with a healthy fat or lean protein to extend satisfaction.

2. EAT LIKE A KID

If adding more fruits and vegetables sounds ominous, look to "finger food" versions that preschool kids love — carrot and celery sticks, cherry tomatoes,



broccoli florets, grapes, berries, and dried fruits. All are nutritional powerhouses packed with antioxidants which will lead to living a healthier lifestyle. Eating like a kid is one of our tips on how to maintain good health.

3. BE A PICKY EATER

Limit saturated fats and trans fats, and aim to eat more foods rich in anti-inflammatory omega-3 fatty acids to cut your risk of cardiovascular disease and maybe even improve your health and depressed moods. The equivalent of just one gram of EPA/DHA (eicosapentaenoic acid/docosahexaenoic acid) daily is recommended. Eating cold-water oily fish (wild salmon, herring, sardines, trout) two to three times per week will provide both EPA and DHA. Adding up to two tablespoons of ground flaxseed and eating meat, milk, and cheese from grass-fed animals will provide you with a healthy dose of omega-3s.

4. USE FOODS OVER SUPPLEMENTS

Supplements are not a substitute for a good diet. Although many health experts recommend taking a multivitamin and mineral supplement that provides 100 to 200 percent of your recommended daily value, each and every supplement should be carefully evaluated for purity and safety. Specific supplements have been associated with toxicity, reactions with medications, competition with other nutrients, and even increased risk of diseases such as cancer, heart disease, and diabetes.

5. GET SATISFACTION

Both eating and physical activity are fun, sensory experiences! In both, aim for pleasure — not pain. Pay attention to the nutritional value of the foods you choose to eat, as well as your sense of satisfaction, relaxation, tension, exhilaration, and fatigue when you sit down to eat. Check in with yourself as you eat, rekindling your recognition of hunger, fullness, and satisfaction when considering when and how much to eat.

RICK OLDERMAN, M.S., P.T.

A PHYSICAL THERAPIST AND OWNER OF Z-LINE TRAINING IN DENVER, COLORADO, OFFERING REHABILITATION, PERSONAL TRAINING, PILATES INSTRUCTION, MOTIVATIONAL INJURY-PREVENTION SEMINARS, EMPLOYEE FITNESS PROGRAM DEVELOPMENT, AND CUSTOM FOOT ORTHOTICS CASTING.

1. GIVE YOURSELF A BREAK

"I spend countless hours doing cardio and never seem to lose that last ten pounds!" is a common complaint I hear from clients. Give yourself permission to shorten your workout. Believe it or not, overtraining could be the problem. Your body can plateau if not given adequate rest to restore itself, ultimately leading to a decline in performance. Fatigue, moodiness, lack of enthusiasm, depression, and increased cortisol (the "stress" hormone) are some hallmarks of overtraining syndrome. Creating a periodization program — breaking up your routine into various training modes — can help prevent overtraining by building rest phases into your regimen. For example, you might weight train on Monday and Wednesday, cycle on Tuesday and Thursday, run on Friday and rest on Saturday and Sunday. You can also help balance your program by simply incorporating more variety.

2. THINK SMALL

Often the biggest deterrent to improving health is feeling overwhelmed by all the available advice and research. Try to focus first on one small, seemingly inconsequential, unhealthy habit and turn it into a healthy, positive habit. If you're in the habit of eating as soon as you get home at night, instead, keep walking shoes in the garage or entryway and take a quick spin around the block before going inside. If you have a can of soda at lunchtime every day, have a glass of water two days a week instead. Starting with small, painless changes helps establish the mentality that healthy change is not necessarily painful change. It's easy to build from here by adding more healthy substitutions.

3. KEEP GOOD COMPANY

You can do all the right things — but if you have personal relationships with people who have unhealthy habits, it is often an uphill battle. The healthiest people are those who have relationships with other healthy people. Get your family or friends involved with you when you walk or plan healthier meals. Making healthy changes with a loved one can bring you closer together as well as motivate you.

4. MAKE A LIST...AND CHECK IT TWICE

Take a few minutes and write down all the reasons you can't begin an exercise program. Then look at the basis of each reason. For instance, if you wrote, "No time" as one of your reasons, then perhaps that's based on a belief that an exercise program takes a lot of time. Starting with even five minutes a day will have a positive effect because you will have created a healthy habit where one didn't exist before, and that's a powerful mental adjustment. A closer look at your list will expose those false beliefs hiding behind each excuse.

5. SIGN UP FOR AN EVENT

Let's face it, exercising just for the sake of exercising or losing weight can get boring. Spice things up by signing up for an event like a run/walk race or a cycling ride where you can be part of a team. Doing so gives your workouts a new purpose, and it's fun to be around others who are exercising just like you — not to mention that most events benefit nonprofit organizations, which doubles your feel-good high.

SCIENCE & TECHNOLOGY COLUMN

7 Science Innovations That Are Changing Conservation

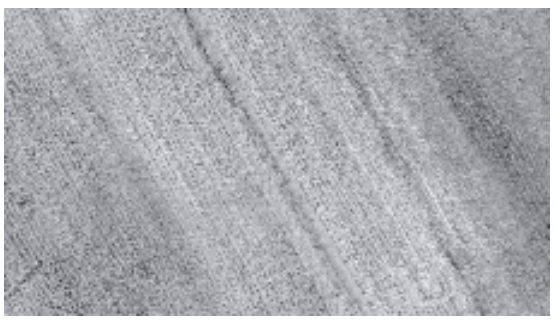
(Written By – Our Correspondent)

In our still relatively brief existence, humans have evolved our way to an era many are now calling the Anthropocene – a new geological epoch defined by human impact on Earth. But our unparalleled creativity is a double-edge sword. We are undeniably contributing to many of the global challenges now facing our species, and all species who share this planet.

At the same time, it is because of our impact that the world needs human

innovation now more than ever. We know we must stabilize our climate. We know we must meet the resource needs of a growing global population. We know we must save the ecosystems that sustain all life. And we know we won't get there on our current path.

Science makes new paths possible. It underpins the lives of each and every one of us—from the medicines we give our children to the vast networks of information at our fingertips. And at The Nature Conservancy, science has guided



everything we do for more than 65 years. Today, more than 600 Conservancy scientists are working all over the world to discover and apply solutions to the biggest challenges facing people and the planet. From new bio-energy solutions to the increasing mapping precision of drones, here are some of our favorite recent scientific innovations.

Facial Recognition Technology, for Fish

How do you recognize a fish's face? Serious question.

Consider the state of global fisheries. The old business adage, "If it doesn't get measured, it doesn't get managed" applies to fisheries, too. And of more than 10,000 fisheries in the world, fewer than 440 are assessed.

With fish catches taking place at

computer applications capable of identifying a person from a digital photograph or video frame. For people, it is often used in solving crimes. FishFace will be used to identify information on the species and numbers of fish caught, as well as measuring the length of each fish – all information needed to assess the condition of the fishery and manage it well. Every fish caught and processed can then be identified and traced through the supply chain with accurate information of what it is.

It's being tested in Indonesia's deep-water snapper and grouper fisheries and in the Western Central Pacific tuna fisheries with the potential to be rolled out for fisheries elsewhere.

Batteries Powered By Blood

Batteries powered by blood or salt instead of lithium? Alternative energy production modeled on the cells of giant clams? Science to determine how soil can be used to fight climate change? This isn't science fiction or even wishful thinking, it's the ongoing and applied work of The Nature Conservancy's NatureNet Science Fellows.

The fellows work on the future-forward science the world needs to mitigate climate change, including nanotechnology research and development for viable large-scale clean energy production and storage.

The program is a partnership between the Conservancy and leading research universities (including Penn, Harvard, Yale, Princeton, UCLA, Stanford, Cornell and others), and "signals to the world that conservation needs to base its work not just in ecology and biology, but in an interdisciplinary approach to science and evidence," says Roy Vagelos, a founding funder of the NatureNet Science Fellows program, member of the Conservancy's board of directors and former president, CEO and chairman of Merck & Co.

Vagelos sees the program as a way to "push the Conservancy and the world in new and necessary directions as we work to solve global sustainability challenges around energy, water and agriculture."

'Camera Traps: What Critters Do When Were Not Watching

Perhaps no technology has connected more people to the wonder and mystery of the natural world than the camera, and its direct descendant: the ever-more versatile and useful camera trap.

The development of the camera trap itself is a story of human curiosity and innovation rooted in the cultural fascination with nature photography that flourished in England around the end of the 19th century. That was when photographer George Shiras developed one of the first successful remote camera traps by hacking together a camera, a flashlight and an ious system of trip wires. When animals tripped the wires they ographed themselves. No human ed to release the shutter.

And sure, using cameras to ograph and record wild animals tely – without human presence in nd or behind a telephoto lens – s obvious now, but it took a fair unt of innovation and imagination et where we are today: with compact, low-weight, long-lived, high resolution, motion-sensitive cameras that can be strapped to trees or mounted on rocks or otherwise left unattended in the wild to record and store massive amounts of high resolution images, sounds, videos and other data collected over weeks or months.

Modern cameras can be powered by solar energy, withstand humidity, heat, rain and cold (really cold – some remote cameras are rated to -20 F), use infrared and motion sensors instead of trip wires, and even transmit real-time images over cellular networks to the smart phone in your pocket.

All of which makes the camera trap one of conservation science's most versatile tools. Scientists all over the world – from researchers to citizen scientists – use them. Some scientists even use them to capture gallery-worthy images. At the Conservancy, scientists continue to develop innovative ways to use camera traps to measure biodiversity conservation, including watching for Venus flytrap poachers in North Carolina's Green Swamp, 'measuring the impact of feral camels on watering holes in Australias remote Martu country, monitoring the effectiveness of prescribed fire, and

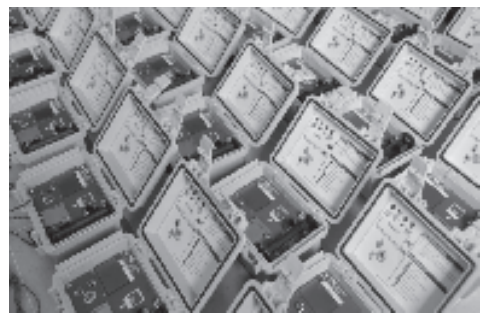
documenting some of the world's most elusive creatures, from snow leopards in Mongolia to birds-of-paradise in Papua New Guinea.

Drones, Lasers and Artificial Intelligence: New Technologies Revolutionizing Field Science

If you want to get technical about it, the practice of remote sensing began in the 1840s, when intrepid observers combined cameras and balloons to take pictures of the Earth below. Over the next 170 years, remote sensing (the term itself was coined and defined by Evelyn Pruitt of the U.S. Office of Naval Research in the 1950s) has moved so far beyond those first aerial photographs it would make Jules Verne's head spin.

Today, remote sensing – the art and science of "identifying, observing, and measuring an object without coming into direct contact with it" encompasses an array of tools – from high-resolution satellite imagery to lasers that measure minute shifts in glaciers and shorelines to small, unmanned aerial vehicles (drones) that can photograph, map and record vast amounts of data to resolutions of 2 centimeters.

Conservancy scientists, like Steve Schill, are at the forefront of developing and applying all the tools of remote sensing – including drones – to inform and guide conservation and development decisions around the world. In Gabon, scientists used drones to map 9000 km2of otherwise largely inaccessible wetlands. In the Caribbean, Schill mapped and surveyed habitats above and below the



water with a drone that could take off and land on water. (The secret to its amphibious capabilities: a common Tupperware container. Schill and one of his students modified an existing drone to make it both buoyant and waterproof). In the United States, scientists are testing the facility of drones equipped with multispectral cameras for monitoring water quality in small streams and wetlands.

As UAV technology continues to advance – drones get smaller, more capable and less expensive – their utility for field science may be almost limitless.

Other technologies have similarly advanced. Terra-i, is an artificial intelligence program that uses real-time rainfall data to predict how green a given habitat should be — and then matches that prediction up against images of the habitat from an Earth-monitoring satellite. And lidar, a way of remotely mapping forests with lasers, has proven to be an effective and accurate tool to measure the effects of reduced-impact logging in Indonesia.

'Bioacoustics: Capturing the Rainforests Wall of Sound

Stand outside in any natural environment, close your eyes, and listen. You'll hear birds calling, or crickets chirping, or frogs croaking. Those sounds of the natural world are bioacoustics, and they're more than just a nice soundtrack — they're valuable data for scientists and conservationists.

An emerging field of research, called bioacoustics, is now using the entire scope of data, often called the soundscape, as a rough measure of biodiversity.

Researchers deploy sensitive acoustic and ultrasonic recorders in the forest. The acoustic recorders

capture sounds between 1 and 24 kilohertz, roughly within the normal range of human hearing, including vocalizations from birds, some bats, frogs, mammals, and most insects. The ultrasonic recorders pick up sound up to 96 kilohertz, allowing us to gather data on bats and insects that vocalize at frequencies beyond the range of human hearing.

These acoustics provide a rough estimate of biodiversity, enabling researchers to determine if conservation activities are working. Bioacoustics is currently being deployed by The Nature Conservancy to determine the best forest management practices for wildlife conservation in Borneo, and to determine the conservation effectiveness of land use plans in Papua New Guinea.

Precision Agriculture: Saving Money, Saving Water

In many parts of the world, farmers rely on irrigation to water their crops. It's a very effective tactic for growing food in more arid regions, but it can also result in a lot of wasted water. Water can be lost to irrigation, and areas like wetlands or rock outcroppings where crops don't grow are often watered too.

Often, farms treat large fields as a single unit, applying the same amount

of water (or fertilizer or pesticide) across the entire area. But conditions can vary widely, so a lot of resources end up wasted.

Farmers are increasingly looking to precision agriculture to reduce costs and to reduce inputs. Using a combination of technologies – including drones, computer applications and sensors – farmers can determine the right levels of inputs for each square foot of a field.

Improvements to irrigation technology and precision agriculture are being deployed by The Nature Conservancy and partners in the Flint River of Georgia, where they are saving billions of gallons of water a year while still producing crops. The water that doesn't go onto fields remains for wildlife, like native fish and imperiled freshwater mussels. At 'Idahos Silver Creek, a globally famous trout stream, the brewer MillerCoors has worked with the Conservancy to install new sprinklers, nozzles, and computer-controlled irrigation on adjacent farms that save millions of gallons of water every day.

Soil Ravioli and Bat-Saving Bananas

Savvy conservationists are increasingly looking to other research fields, new industry developments and even local home supply stores to find the solutions to challenging conservation problems.

A common bacterium being tested to inhibit fungal growth on supermarket bananas was found to also be the first successful treatment for bats suffering from the devastating White-Nose Syndrome.

Oregon conservationists struggled to find ways to get native sagebrush seeds to survive planting – until they created a special soil mix using a pasta maker. These "ravioli" seed pellets have a 70 percent better chance of survival than if the seeds were just scattered on the land.

Advances in how we understand microbes have applications from healthcare to creating new materials. Microbes can also assist in conservation. For instance, soil microbes may be the best way to attack cheatgrass, an invasive, non-native plant that has thus far proven impervious to other control measures.

And sometimes research finds solutions at the local hardware store. Using PVC pipe and a generator, conservationists can create the sounds of running water that lure migratory shad into shipping locks. This gets them over dams and to their spawning habitat. On Florida's Apalachicola River, this simple fix increased the shad getting past the dam from 10,000 fish to 250,000 fish in two years.

THE ART & CULTURE COLUMN

Traditions And Culture of Mizoram

(Written By : Our Correspondent)

The songbird of the northeast, Mizoram is an adorning state glamoured with scenic spots and

vibrant cultural entity. Based mainly on the tribal communities inhabiting this alluring state, referred to as the Mizos, the cultural boundary of Mizoram is reflective in its own way. Known as the land of diverse tribes and races of people living together, the different tribes and communities here have unique features of their own.

Tribes of Mizoram

The Mizo population consists of several ethnic groups. The diversity of these ethnic groups reflect historical immigration patterns. Some of the major tribes in Mizoram are the Hmar, Ralte, Lai, Lusei.

Festivals of Mizoram

The festivals exhibit the vast cultural diversity of the state. The festival season is the season of harvest. The festivals are celebrated with great vigour and enthusiasm. Festivals thus play a major role in shaping the

brotherhood bonds of the tribes, also helping them to perform their old traditions and rituals while renewing some old bonds and ties. Each tribe has its own festival and rituals.

1. Mim Kut

Being one of the most important festivals of Mizoram, it is celebrated in the months of August and September. This colourful, bright fiesta includes dancing and singing and continues for four to five days. It is a maize festival. This involves paying patronage and tribute to their ancestors. These include offering bread, vegetables and other maize, items.

2. Chapchar Kut

Considered as the oldest festival of Mizoram, during this festival, farmers cut bamboo forests to make places for seasonal

farming. They wait for the bamboo heaps to get dry and then burn them. Portraying the liveliness of the culture, people dress up wearing traditional clothes and hats made from parrot's feathers and beads. A traditional bamboo dance is performed where the women dance gracefully while the men sit on the ground and beat each other with bamboo sticks while singing the traditional songs.

3. Pawl Kut

This vehement festival is like both the other kuts. This is also to celebrate the great harvest of straw. This is celebrated in December and is also considered as the Thanksgiving festival and is celebrated three months after the Mim Kut. Meat and egg are a customary part of the feast of the festival. Rice beer is primarily consumed during this festival with lots of gaiety and fun.

4. Thalfavang Kut

Celebrated and solemnised in the months of November, this fiesta is also concerning harvest. It marks the onset of harvest. Many cultural events like games are also a part of this festival. Tribes and communities gather around and

pitch in their collections in the form of feasts and happily spend their time.

Dance Forms of Mizoram

The state of natural splendour also has one of the most captivating dance forms. The residents of Mizoram love to indulge in dances, making their lives as cheerful and vibrant as possible. The diverse Mizoram dance forms are delightful and interesting reflecting the jubilant spirit of the Mizos. Most of these dances are performed during the festivals

and are group dances.

1. Cheraw

This is the major dance form of Mizoram which is also referred to as the bamboo dance. This is one of the oldest dances of the Mizos. Long bamboo staves are used in this dance form. In this dance form, the men sit face to face on the ground, holding the bamboo sticks. They tap pairs of horizontal and cross bamboo staves open and close in rhythmic beats. This dance form is

performed with great care and precision. The main instruments are gongs and drums.

2. Khuallam

This is the dance of the guests. Guests are invited from the other villages. Gongs known as Darbu remain the most relevant instruments of the dance. No songs are sung during the dance. The traditional handwoven Mizo cloth is wrapped around the shoulder. The dance is performed by swaying the fabric.

3. Chailam

This dance form is performed during the Chapar Kut festival. This is performed by men and women standing in a circle, where men hold the shoulder of the women while the women hold the waist of the men. The musicians are placed in the middle of the circles; they play the drums and the Mithun's horn.

4. Sarlamkai

This traditional and one of the oldest dance forms of the Mizo people, Sarlamkai is performed as a part of celebration after winning a war. Men and women stand in their places while the hero dances holding his shield and his sword, swinging it to the tune of gong beats.

Food of Mizoram

The Mizoram cuisine is reflective of rich cuisine and focuses mainly on non-vegetarian dishes served on banana leaves. Mustard oil is used for food preparations along with the use of spices like garlic, ginger and chilli. Their food is less spicy as compared to other regions. Rice remains a staple of their diet, with several vegetarian and non-vegetarian curries. Bamboo shoots are used to give the dishes the aroma. Some of the traditional Mizo cuisines include Bai, Vawksa Rep, and Arsa Buhchiar.

Art and Craft of Mizoram

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The markets of Mizoram are occupied with a large variety of art and craft works. Textiles, bamboo, cane works, and basketry remains the main section of craft work. Many women indulge in weaving and basketry, whereas the bamboo cane sector blooms and flourishes as Mizoram is known for its specialisation in bamboo cane craftwork.

Mizoram Marriage Culture

- Mizoram, the land of blue mountains, has a pretty popular wedding trend. It has the most number of inter-caste marriage. The Mizo tribes follow the tradition of bride pricing, a custom where payment is made by the groom's side to the bride's kin.
- Knowing how open-minded the Mizos are, the boy and the girl are given an extended courtship period, and then the engagement follows. The boy approaches the girl's family to settle the price. Most of the weddings take place in the church and thus makes Mizo wedding entirely different and unique.
- One of the interesting traditions followed in a Mizo wedding is that a bride gives a Puandum to the groom which is a traditional rug. This rug is wrapped around him at the time of burial.

Continued Page 8

THE CORPORATE & BUSINESS COLUMN

Shiv Nadar : One of The Most Successful Businessmen of India

(Written By – Our Correspondent)

Shiv Nadar (born 14 July 1945) is an Indian billionaire industrialist and philanthropist. He is the founder and chairman emeritus of HCL Technologies Limited and the Shiv Nadar Foundation. Nadar founded HCL in the mid-1970s and transformed the IT hardware company into an IT enterprise over the next three decades by constantly reinventing his company's focus. In 2008, Nadar was awarded Padma Bhushan for his efforts in the IT industry. Nadar, nicknamed by friends as Magus (Old Persian for "wizard"), since the mid-1990s he has focused his efforts on developing the educational system of India through the Shiv Nadar Foundation. According to Forbes, He is the 3rd richest person in India and the 60th richest person in the world with an estimated net worth of US$23.9 billion as of July 6, 2022

Nadar was born in 1945 in Moolaipozhi Village, about 10 kilometres (6.2 mi) from Tiruchendur in Thoothukudi district (present), Tamil Nadu, India. His parents were Sivasubramaniya Nadar and Vamasundari Devi. His mother, Vamasundari Devi, is the sister of S. P. Adithanar, founder of Dina Thanthi newspaper.

Nadar studied at Town Higher Secondary School, Kumbakonam. He also studied in the Elango Corporation Higher Secondary School, Madurai. He was admitted into the first form (Sixth Standard) in June 1955 and continued his education in Town High School until June 1957. Later, he joined St. Joseph Boys Higher Secondary School, Trichy, and completed high school education here. Nadar received a pre-university degree in the American College, Madurai and a degree in Electrical and Electronics Engineering from PSG College of Technology, Coimbatore.

Nadar began his career at Walchand group's Cooper Engineering Ltd. in Pune in 1967. He soon gave it up to begin his own venture, in partnerships with several friends and colleagues. These partners were Ajai Chowdhry (Ex-Chairman, HCL), Arjun Malhotra (CEO and chairman, Headstrong), Subhash Arora, Yogesh Vaidya, S. Raman, Mahendra Pratap and DS Puri.

The initial enterprise which Nadar and his partners began was Microcomp, a company which focused on selling teledigital calculators in the Indian market. HCL was founded in 1976, with an investment of Rs. 187,000.

In 1980, HCL ventured into the international market with the opening of Far East Computers in Singapore to sell IT hardware. The venture reported Rs 1 million revenue in the first year and continued to address the Singapore operations. Nadar remained the largest shareholder without retaining any management control.

In July 2020, Nadar handed over to his daughter Roshni Nadar, who became the first woman chair of a listed Indian IT company. In July 2021, Nadar also stepped down as managing director of HCL Technologies, and was succeeded by C Vijay Kumar, HCL Tech CEO, for a five-year term.

In October 2021, he was ranked by Forbes magazine as the third richest person in India with an estimated net worth of US$31 billion (Rs.2,36,600 Crores).

In 1996, Nadar founded SSN College of Engineering in Chennai, Tamil Nadu in the name of his father, Sivasubramaniya Nadar. Nadar took an active role in the college activities, including the gifting of Rs. 1 million worth of HCL shares to the college. In 2006, Nadar announced that the college will promote research apart from ensuring that students benefit from foreign university tie-ups. Nadar joined the executive board of Indian School of Business in 2005. In March 2008, Nadar's SSN Trust announced the setting up of two Vidyagyan schools in UP for rural students, where free scholarship will be provided for 200 students from 50 districts of Uttar Pradesh. He visited Town Higher Secondary School in February 2011 and donated computers and other equipment worth Rs. 80 lakhs. He served as chairman of the board of governors, Indian Institute of Technology Kharagpur (IIT Kharagpur or IIT-KGP), a technical institute until 2014.

His only daughter Roshni Nadar is now chairwoman of HCL.

His wife Kiran Shiv Nadar is an Indian art collector and philanthropist.

- In 2008, the Government of India awarded Nadar with a Padma Bhushan, the third highest civilian award, for his contribution to the IT industry.
- In 2007, Madras University awarded him an honorary doctorate degree.
- Shiv Nadar was awarded E&Y Entrepreneur of the Year 2007 (Services).
- In 2011, he was counted amongst Forbes' 48 Heroes of Philanthropy in Asia Pacific.
- In April 2017, India Today magazine ranked Nadar #16th in India's 50 most powerful people of 2017 list.
- Shiv Nadar has committed more than $1 billion to philanthropy.

From Page 7 (Traditioins and Culture of Mizoram...)

- Symbolising serenity and purity, the brides wear a white gown, covering their hair with a veil and holding a bouquet of flowers, while some choose to wear their traditional dress, Puanchei.
- The groom wears a black suit, enhancing his looks. What suggests the importance of the Mizo wedding is that the white wedding gown is to be preserved and kept with the utmost care and maintaining the novelty of the fabric too.

Dresses

Mizoram's culture and heritage are reflected in their garments too. The traditional clothing of Mizoram has quite a lot of similarity with the costumes of other North-east states. These garments are symbolic of the ethnic heritage of the inhabitants.

Women

- There are many traditional dresses of Mizo women. But, the most favourite one is the Puan, which is quite similar to a churidar and kurta, with three pieces of clothing - top clothing, legging and a headcloth resembling a dupatta.
- Puanchei is worn on occasions and weddings. It is basically a two-piece with a long skirt type lower and a top or shirt worn above it. This comes in many varieties - Chapchar Kut, Mim Kut and Pawl Kut. Traditionally, these are brightly coloured, with checkered designs.
- During dances, the women wear a headdress, which is a beautiful part of the Mizo Lusei dress. It is built of coronal, which is made of brass and coloured cane. There are porcupines on these headgears, the upper edges of which are characterized by green feathers of parrots.
- Some of the attractive blouse worn by the Mizo women above Puanchei during dances are Kawrchei and Ngotekherh.
- Kawrchei is made of cotton material and is usually hand woven. Another beautiful piece of blouse, Zakuolaisen is made with crimson stripes. This is worn by the unmarried females. The married females wear Puon Pie.

Men

- The simplicity of men in Mizoram is very well reflected in their clothes, as they simply put on a long piece of clothing, which is their traditional garment.
- During winters, they add on coats to drape their garment.
- Mizo males prefer red and white coloured coats. During the summers, they can be seen wearing outfits around their waist and a turban on their head to shield them from the heat.
- The males of the Lusei tribes always prefer cotton clothing.

Mizoram is in itself a lovely and serene state with diverse culture to uphold and reflect, with people having an everlasting charming and merry personality to deal with. The Mizo culture is reflective of the brotherhood, happiness, festivity, and an urge to keep up the ethnicity which is deep-rooted.

THE GENERAL KNOWLEDGE COLUMN

Current Affairs

1. PM inaugurated Deoghar Airport and several other development projects

- **Prime Minister Narendra Modi** officially inaugurated and set the cornerstone for a number of construction projects totaling more than **16,800 crores** of rupees in **Deoghar.**
- At a public event held on the grounds of Deoghar College, the prime minister declared that the government is funding religious institutions in order to preserve our culture and faith for future generations.
- The inauguration of flights to **Ranchi, Delhi, and Patna,** as well as the trip from Deoghar to Kolkata, made the prime minister happy. He revealed that work was ongoing on the airports in **Bokaro and Dumka.**

2. India's 1st elevated urban expressway "Dwarka" to be operational by 2023

- **The Dwarka Expressway,** which is being developed as the first elevated urban expressway in India, will be operational in **2023,** said Minister for Road Transport and Highways **Nitin Gadkari**.
- Dwarka Expressway will reduce pressure on the **Delhi-Gurgaon Expressway** (part of the Delhi-Jaipur-Ahmedabad-Mumbai arm of the Golden Quadrilateral) and arterial roads that experience severe traffic congestion, primarily from the commuters of West Delhi.
- It will be a **16-lane** access-controlled highway with the provision of a minimum three-lane service road on both sides.

3. I&B Ministry unveils New Logo of Prasar Bharati on its Silver Jubilee

- India's public broadcaster **Prasar Bharati** unveiled its **new logo** on **July 11, 2022,** in its silver jubilee year.
- The new logo was released by the secretary of I&B **Apurva Chandra,** secretary, Ministry of Information and Broadcasting (I&B) in the presence of Mayank Kumar Agrawal, CEO, Prasar Bharati, DPS Negi, Member (Finance), Prasar Bharati, and officers of Ministry of I&B and Prasar Bharati.
- The elements in the central circle and map of India signify the service of trust, security, and perfection to the Nation, its colour, 'Dark Moderate Blue' represents both the sky and the sea and is associated with open spaces, freedom, intuition, imagination, inspiration, and sensitivity, the broadcaster said in an official statement.

Important takeaways for all competitive exams:

- Prasar Bharati CEO: Shashi Shekhar Vempati (2017–);
- Prasar Bharati Founded: 23 November 1997;
- Prasar Bharati Headquarters: New Delhi.

4. NIFT, Panchkula officially inaugurated by Union Minister Piyush Goyal

- The 17th campus of the **National Institute of Fashion Technology (NIFT)** in Panchkula was officially opened by Haryana Chief Minister **Manohar Lal Khattar** and Union Minister **Piyush Goyal**, who referred to it as the "fulcrum of development of the textile sector in the state."
- According to Khattar, 20% of seats at this institute will be earmarked for people from Haryana in accordance with **NIFT** rules. He said that this campus' foundation stone was set on December 29, 2016, by **Smriti Irani**, who was the Union Textiles Minister at the time.

Appointments News

5. Sanjai Kumar recommended for post of CMD, Raitel

- The **public enterprise's selection board (PESB)** has selected **Sanjai Kumar** for the post of Chairman & Managing Director, **RailTel Corporation of India Ltd (RCIL).**
- Currently, he is serving as Director (Network Planning & Marketing) and (Project, Operations & Maintenance - Additional Charge) in Railtel.
- Kumar holds a bachelor's degree in technology in electronic and telecommunication engineering from the University of Allahabad and a post-graduate diploma in management from Management Development Institute, Gurgaon.

6. Pratik Pota hired by Advent International to head Eureka Forbes

- **Pratik Pota** was appointed by PE firm **Advent International to run Eureka Forbes,** one of its portfolio companies. Pratik will join Eureka Forbes as **Managing Director & CEO.**
- Pratik will guide the management group in continuing to grow the company and produce cutting-edge goods. Pratik will start at Eureka Forbes on August 16.
- The CEO of **Jubilant Foodworks Ltd.** was Pratik. The JFL expanded into new areas under his direction, including Turkey and Bangladesh.
- Over the course of his more than **30-year career,** Pratik has held executive positions with PepsiCo, Airtel, and Hindustan Unilever Ltd. before JFL.

Important Takeaway for All Competitive Exams:

- **Managing Director of Advent:** Sahil Dalal

Economy News

7. India's Retail inflation at 7.01% in June

- Retail inflation, based on the **consumer price index (CPI),** eased to **7.01 per cent in June** this year compared to **7.04 per cent** in the preceding month.
- Ministry of Statistics and Programme Implementation said inflation eased marginally mainly due to easing prices in the "Food & Beverages" section.

Month-wise list of consumer price index:

2022	CPI
January	6.01%
February	6.04%
March	6.95%
April	7.79%
May	7.04%
June	7.01%

8. On October 1st, this year, Paper Import Monitoring System to go in Action

- The **Paper Import Monitoring System (PIMS)** was established by the **Directorate General of Foreign Trade (DGFT)** by changing the import policy for major paper products from "free" to "free subject to mandatory registration under **PIMS**."
- According to the Ministry of Commerce and Industry, the new rule will take effect on October 1, 2022. However, the ministry announced in a statement that the online registration option will be available as of July 15, 2022.

Science and Technology News

9. 1st Webb Telescope image reveals earliest galaxies formed after Big Bang

- US President **Joe Biden** has released one of the **James Webb Space Telescope's** first images in a preview event at the White House in Washington.
- This first image from **NASA's James Webb Space Telescope** is the deepest and sharpest infrared image of the distant universe to date.
- Known as Webb's First Deep Field, this image of galaxy cluster **SMACS 0723** is overflowing with detail. Thousands of galaxies including the faintest objects ever observed in the infrared have appeared in Webb's view for the first time.

Sports News

10. Jonny Bairstow & Marizanne Kapp named ICC Players of the Month for June

- **International Cricket Council (ICC)** has announced the ICC Player of the Month awards for June 2022.
- England's in-form batter **Jonny Bairstow** bagged the Men's Player of the Month title while South Africa's power-hitting batter **Marizanne Kapp** was awarded with Women's Player of the Month.

Important takeaways for all competitive exams:

- ICC Founded: 15 June 1909;
- ICC Chairman: Greg Barclay;
- ICC CEO: Geoff Allardice;
- ICC Headquarters: Dubai, United Arab Emirates.

11. Indian women's cricket team for upcoming Commonwealth Games announced

- The Indian women's cricket team has been announced by the **BCCI (Board of Control for Cricket in India)** for the upcoming Commonwealth Games, which will take place in **Birmingham** from July 28 through August 8.
- The 15-person team will be led by **Harmanpreet Kaur**. The team included **Sneh Rana, Harleen Deol,** and **Taniya Bhatiya** as the wicketkeeper. **Yastika Bhatia** will be the team's top pick for a wicket keeper.

Awards News

12. Japan's 'Order of the Rising Sun' award conferred to Narayanan Kumar

- **The government of Japan** has conferred the **'Order of the Rising Sun, Gold and Silver Star'** award on Sanmar Group Vice Chairman **Narayanan Kumar** in recognition of his contribution toward strengthening economic relations between Japan and India. Kumar was honoured by the Consul General of Japan in Chennai, Taga Masayuki.
- Masayuki lauded Kumar's dedicated efforts in promoting friendship, goodwill and mutual understanding between Japan and India.
- Kumar also heads the Indo-Japan Chamber of Commerce and Industry. He had served the Confederation of Indian Industry (CII) as its president and was among the 'Spring 2022 Imperial Decorations recipients'.

Important Days

13. World Paper Bag Day 2022 observed on 12th July

- Every year, **World Paper Bag Day** is observed on **July 12** to raise awareness of the importance of using paper bags instead of plastic bags.
- This day is dedicated to spreading awareness of the ill effects of plastic and how detrimental they are to our environment.
- Paper bags can easily be used to replace one-time-use plastic bags which are non-biodegradable or, in other words, take hundreds of years to decompose in landfills.
- The theme for Paper Bag Day this year is, **"If You're 'fantastic', Do Something 'dramatic' To Cut The 'Plastic', Use 'Paper Bags'."**

Obituaries News

14. British composer Monty Norman, known for James Bond theme, passes away

- **Monty Norman,** a British composer who wrote the theme tune for the **James Bond films,** has died at the age of 94. He was hired by producer Albert "Cubby" Broccoli to compose a theme for the first James Bond film, **"Dr. No,"** released in 1962.
- Born Monty Noserovitch to Jewish parents in the East End of London in 1928, Norman got his first guitar when he was 16.

15. Former New Zealand cricket captain Barry Sinclair passes away

- Former New Zealand cricket captain and batter **Barry Sinclair** died at the age of 85. The former skipper was the third Kiwi batter after **Bert Sutcliffe and John R Reid** to score 1,000 runs in Test cricket.
- Sinclair played 21 Tests for New Zealand between 1963 and 1968, scoring 1148 runs at 29.43, including three centuries – against South Africa, Pakistan and England.

Miscellaneous News

16. Delhi Lt Gov launches scheme to reward RWAs for property tax compliance

- Lieutenant Governor (L-G) **VK Saxena** has announced significant changes in the property tax policy of the Municipal Corporation of Delhi (MCD) after its unification.
- The L-G also launched a **SAH-BHAGITA scheme** to increase the involvement of the **Residential Welfare Association (RWAs)** in optimal tax collection and waste management systems.
- The RWAs will be incentivised for their efforts to improve efficiency and compliance in tax collection.
- The RWAs, on achieving 90% tax collection from the total number of properties in their societies, can recommend development work to the tune of 10% of the tax collection subject to a ceiling of Rs 1 lakh in their areas.

17. AAI Leh Airport is being built as nation first carbon-neutral airport

- The Airports Authority of India, **Leh airport** is being built as a **carbon-neutral airport,** a first in India. A **"Geothermal system"** in hybridization with Solar PV Plant will be provided in the New airport Terminal Building for heating and cooling purposes.
- This system works by exchanging heat between the air and the ground as its heat pumps are used for space heating and cooling, as well as water heating.
- The main feature of this process is that naturally existing heat is concentrated and used. It is estimated that 900 tons of carbon emissions per year will be reduced after adopting the Geothermal system at the Leh Airport Terminal Building project.

Important takeaways for all competitive exams:

- Airports Authority of India Headquarters: New Delhi;
- Airports Authority of India Founded: 1 April 1995;
- Airports Authority of India Chairman: Sanjeev Kumar.

THE EDITORIAL COLUMN

Test Tube Evolution

(Written By – N.H Priya Garnaik, Editor, Iya News)

The recent Nobel Prize in Chemistry has been awarded to Frances H. Arnold, George P. Smith and Gregory P. Winter for their work in developing laboratory methods for controlling evolution and harnessing its power to engineer enzymes and binding proteins for the benefit of mankind.

SINCE life emerged about 3.7 billion years ago, biological evolution has ensured that the genes that make enzymes, which catalyse chemical reactions, and binding proteins, which assist in binding two or more molecules together, are optimised for specialised bodily functions and the sustenance of human life against hostile environments. Similarly, the genes of other organisms, too, have evolved to improve their fitness and survival. This is the Darwinian principle of evolution. Through evolution, nature has found solutions to life's many complex chemical problems, and the diversity of life on earth is testimony to the power of natural evolution.

For thousands of years, humans have been breeding animals and plants with desirable traits using genetic selection, which actually is, in a sense, speeding up the process of Darwinian selection through human intervention, albeit by trial and error. Success is achieved over a few years or decades instead of the thousands of years the natural process takes.

This year's Nobel Prize in Chemistry has been awarded to three scientists who developed laboratory methods of controlling evolution and harnessing its power to engineer enzymes and binding proteins—using the same tools as nature, of genetic mutation and selection—for the benefit of mankind. This is called "directed evolution", a man-made procedure that compresses the evolution timescale by orders of magnitude down to a few years—much less than breeding timescales—to produce new enzymes and proteins in the laboratory that are useful for human survival. The notion of "survival of the fittest" in nature's scheme of things is mimicked in the laboratory through directed evolution to create new useful entities.

One half of the nine million Swedish krona (about $1 million) goes to the 62-year-old Frances H. Arnold, a professor of chemical engineering, bioengineering and biochemistry at the California Institute of Technology, "for the directed evolution of enzymes". She is only the fifth woman to get the Chemistry Nobel Prize.

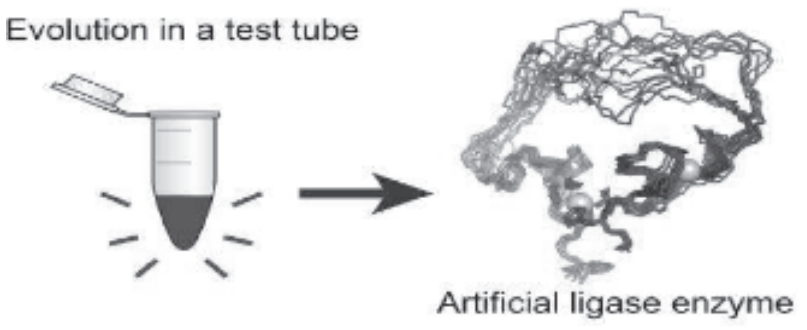
The other half of the award is shared equally by the 77-year-old George P. Smith, professor emeritus at the University of Missouri, Columbia, United States, and the 67-year-old Sir Gregory P. Winter of the MRC Laboratory of Molecular Biology, Cambridge, United Kingdom, "for the phage display of peptides and antibodies". By developing innovative methods to engineer new enzymes and new proteins through directed evolution, the laureates have revolutionised both chemistry and the development of new pharmaceuticals.

Back in 1979, as a graduate in mechanical and aerospace engineering, Frances Arnold had a clear vision that her efforts to develop new technology must be for the benefit of humanity. According to the background document put out by the Nobel Committee, as an engineer she initially started out to work on solar power. But, with the future of the industry moving radically towards the new DNA technology at that time, she shifted to biology. "It was clear that a whole new way of making materials and chemicals that we needed in our daily lives would be enabled by the ability to rewrite the code of life," she has been quoted as saying in the Nobel Committee document. She turned her focus to using the tools of chemistry to engineer key enzymes of life. She thought if, learning from nature, she could design new enzymes with new properties, she could fundamentally change chemistry.

As she told the interviewer from nobelprize.org soon after the announcement, coming into biology from a different field, she was able to see things differently. "I was able to look at the problem with a totally fresh set of eyes," she said. "A problem that had challenged people since the techniques of site-directed mutagenesis, for example—which won the Nobel Prize—were available. And I realised that the way that most people were going about protein engineering was doomed to failure."

In the 1980s, Frances Arnold tried to redesign subtilisin, a bacterial enzyme, so that it could dissolve in organic solvents such as dimethylformamide (DMF) instead of only in water-based solutions, for the enzyme's wider applicability and flexibility of use. Initially, however, she approached the problem in a rational, logical manner like all other researchers did. The basic building blocks of enzymes are the 20 amino acids that appear on the genetic code, which can be combined in all possible combinations, and a single enzyme can be made of thousands of amino acids linked in long chains forming complex special 3D structures. It is, therefore, not very surprising that she did not succeed in these early attempts.

Despite what was already known about life's chemistry and the huge computing power that was available, Frances Arnold soon realised that remodelling nature's elaborate architecture by logic to engineer



an enzyme with new properties was a hopeless task, and as she has said, it was "a somewhat arrogant approach" in the face of nature's superiority. So, she decided to follow nature's own method, namely evolution. That is, to let evolution play out in a test tube as it were.

"Frances' insight was to recognise that the most amazing molecules in the world weren't created by chemists but rather by the biological world," Jesse Bloom, a computational biologist and a former student of Frances Arnold's, was quoted as saying by Quanta Magazine. "Most scientists were accustomed to thinking of evolution in terms of fossils of long-dead creatures, while chemical engineering was something that involved synthetic chemicals in the lab. The idea of applying evolutionary biology to problems in chemistry and biotechnology was a real leap," Bloom said.

She created several mutated genes with random mutations in the enzyme's genetic code. She engineered them into bacteria for them to produce thousands of variants of subtilisin. Her idea was to find out which of these worked best in DMF. First, on the basis of the knowledge that subtilisin breaks down the milk protein casein, she selected the variant that was most effective in breaking down casein in a solution with 35 per cent DMF. She then carried out one more round of mutations in this selected variant of subtilisin. This time she found a variant that worked even better in DMF. By the end of the third round, she had found a variant that worked 256 times better in DMF than the original enzyme. This third-generation subtilisin had a combination of 10 different mutations, and their effect on the enzyme could in no way have been predicted (Figure 1).

Thus, the power of allowing chance and directed selection, which is how nature works, in developing new enzymes, rather than depending solely on human logic and rationality, had been demonstrated. The work was published in Proceedings of the National Academy of Sciences in 1993. Not very long afterwards, the chemical revolution based on this ingenious idea followed.

Stemmer's 'DNA shuffling'

Willem P.C. Stemmer, a Dutch scientist and entrepreneur, would have probably shared the Nobel award with Frances Arnold if he had been alive. He died in 2013 when he was 56. "DNA shuffling" was one of the several biotechnology techniques he invented. An important element he had conceived and introduced in Frances Arnold's directed evolution of enzymes was mating in a test tube. In natural evolution, a robust organism results when good genes from different individuals of the species get combined through mating or pollination and get selected, and less functional genes slowly disappear after a few generations. Stemmer's DNA shuffling was essentially the laboratory equivalent of mating.

In 1994, Stemmer showed that if one took different variants of a gene, cut them into small pieces and shuffled them, with the tools of biotechnology one could piece together a complete gene, a new variant that would have a mosaic of the original versions. At the end of several cycles of DNA shuffling, Stemmer produced a variant of an enzyme that was much more efficient than the original improved enzyme.

With the enormous development that has occurred in DNA technology and the ever-increasing sophistication in the resulting tools, the technique of directed evolution is today considerably more advanced and more refined than the original, and Frances Arnold herself has been leading many of the developments in the field. Enzymes being produced in her laboratory can catalyse processes that do not exist in nature, which produce altogether new materials.

The pharmaceutical industry has benefitted from her specially tailored enzymes. Some of her enzymes have resulted in processes that obviate the use of heavy metals, which otherwise were used in the traditional chemical route to various substances, particularly pharmaceuticals, causing harm to the environment.

Frances Arnold has now returned to her original interest, working on renewable energy but with tools that have resulted from her Nobel Prize-winning work. Her group has developed enzymes that convert simple sugars into isobutanol, which can be used to produce biofuels and environment-friendly plastics. One of her long-term goals is to use the enzymes she has developed to produce sustainable fuels, which can be used in cars and aeroplanes, to create a greener transport sector.

Phage display technique The method of directed evolution in the hands of the other two laureates has resulted in the development of pharmaceuticals that can neutralise toxins, arrest the progression of autoimmune disorders and, in some cases, even cure metastatic cancer. The organism that the scientists used to implement directed evolution is a tiny virus that infects bacteria and replicates within bacteria, called bacteriophage or simply phage, and the method they developed is known as "phage display".

Bacteriophages consist of a small loop of genetic material encapsulated in a protective coating of proteins. Their genomes can contain as few as four genes or as many as up to 100 genes. They replicate by injecting their genome into bacteria and integrating with the host DNA, thus hijacking their host's metabolism. The bacteria then produce new copies of the phage's genetic material and the proteins on the protective coat, which will then form new phages. In the 1980s, when Smith started using bacteriophages in his research, it was mainly with the idea of using them as hosts to clone genes. The idea was to insert a gene into bacteria, which would then mass produce the protein to be studied. Deciphering the human genome was still about 20 years away, and scientists had no straightforward way of identifying the specific gene for a given protein: it was like looking for the proverbial needle in the haystack.

Smith had this brilliant idea that researchers should be able to find the gene for a known protein by exploiting the simple structure of a phage. Molecular libraries containing large numbers of fragments of various unknown genes were available to scientists at that time. Smith's idea was that these unknown gene fragments could be assembled together with the gene for one of the proteins in the phage capsule. When new phages were produced, the proteins from the unknown genes would also end up on the surfaces of the phages as part of the capsule protein (Figure 2). That is, one would have a medley of phages carrying a multitude of proteins on their surfaces.

Smith further argued that it should be possible to use antibodies as bait to fish out the correct phages carrying known proteins from this random mixture. Antibodies have the ability to home in on a single protein from among thousands of others with great precision and bind to it. Smith reasoned that if one identified a phage by the antibody to a known protein attached on its surface, the unknown gene for the known protein could now be deduced. In 1985, Smith demonstrated that his idea actually works with the following experiment.

He engineered a phage that carried a part of a protein, a peptide, on its surface. Using an antibody to the protein, he could identify the phage that he had constructed out of the soup of phages. This laid the foundation for what is known today as phage display. The idea is brilliant; the method, where the phage functions as the link between the protein and the gene, at once simple and elegant. When asked during the telephonic interview after the prize announcement whether the idea had come to him suddenly or whether it was a long process, Smith told the interviewer from nobelprize.org: "Oh no… certainly not suddenly, no. It was an idea from… many sources because I had all these streams that were very much in my background at the time. So it was definitely not something that just popped into my head…. It is very much [a case of] the right person and the right time. I mean I was trained in immunology, but I also knew a lot about this phage, and classical, you know, molecular biology, that's what my basic training was in college."

However, it was not in the identification of genes that the technique had its major impact. This happened when others started using phage display for biomolecules in the 1990s. Winter was one of the people who adopted this technique for his research.

Therapeutic antibodies

Antibodies are large Y-shaped proteins produced by the human lymphatic system and come in hundreds of thousands of different types. They are designed such that the far ends of the two arms can attach on to specific proteins the way a key fits into a lock. The evolution of the human immune system has ensured that they do not attach themselves to the body's own biomolecules but selectively to those of an external pathogen, such as virus or bacteria, which is a signal to the immune system to mount a response and destroy the foreign body. (Autoimmune disorders occur when the immune system misfires and begins to attack the body's healthy tissues and organs by mistake. Scientists do not yet understand what causes the immune system to (mis)behave thus.) Antibody therapeutics is an idea that goes back to the 1980s. In the hope of generating antibodies to specific targets, mice were injected with antigenic proteins, such as from cancer cells, so that the resultant antibodies could be harvested and turned into drugs. But the idea did not work for various reasons, chief among them being the extreme selectivity of antibodies. Patients' immune systems recognised these mice-generated antibodies as foreign and destroyed them.

It was this hurdle that led Winter to apply Smith's phage display technique to his research. His aim now was to develop drugs based on human antibodies so that the patient's immune system would tolerate the drugs without any side effects. He inserted the genetic information for the end part of the antibody to the gene of a phage's capsule protein and demonstrated in 1990 that the antibody-binding site was expressed on its coat. The antibody site he used was designed to latch on to a known molecule called phOx. With this molecule as the bait, Winter succeeded in pulling out the phage carrying the genetic information he had inserted into the original phage's genome out of four million phages.

After this success, Winter realised that he could apply directed evolution to antibodies using the phage display technique and produce antibodies to combat diseases. He then built up a huge library of phages that express billions of varieties of antibodies on their surfaces.

This became the repository from which he pulled out antibodies specific to different, especially pathogenic, target proteins. Using this first generation library, he then built up a second generation by randomly mutating the antibody genes in which he found antibodies with even greater specificity (Figure 3). In 1994, for example, he used his directed evolution-generated antibodies that attached to cancer cells with a high degree of specificity.

When asked whether he was surprised by the swiftness with which his idea was picked up and whether he ever thought it would lead to therapeutic antibodies that came out of Winter's work, Smith told nobelprize.org: "As I say, all those precedents that were in the air, so no, I wasn't that surprised actually… I'm sharing… our half [of the award] with Greg Winter… he came out of this Cambridge group that had been, as they were calling… cloning the immune system at the time. So that was very similar, very allied, line of reasoning, line of research. And I was very aware of that too. So I actually wasn't surprised that people would catch onto it because it was something that was a way of thinking very much in the air at the time.

"I don't think that, certainly in [19]85, that I thought in those terms [of therapeutic antibodies], although I was very much interested in antibodies and very much aware of the work in the Cambridge group. But the first publication of single-chain antibodies…single-chain antibodies are sort of paired down antibodies that have the central feature of binding specifically to an antigen that are missing a whole bunch of other things and are single polypeptide chains. At that point it became quite obvious that, well I won't say quite obvious, but it seemed very plausible that not just small peptides but larger folded domains like single-chain antibodies could be displayed on phage just like small peptides. And, of course, the Cambridge group realised that at the same time, and independently."

Realising the impact of the success of his research work, Winter and his colleagues soon formed a company that would develop drugs using the phage display of antibodies. Its first drug, called adalimumab, was an antibody-therapeutic entity that neutralises a protein, TNF-alpha, that drives inflammation in many autoimmune disorders. This drug was approved in 2002 for the treatment of rheumatoid arthritis and is used for different types of psoriasis and inflammatory bowel disease.

Asked during his post-announcement interview by nobelprize.org, whether he thought his work to engineer antibodies by the phage display technique would actually translate into therapeutics, Winter's response captures in a nutshell the whole thing about research in basic sciences—how much of it is driven by curiosity to understand nature, how it builds on the work of many others, how some of it translates into applications, that eventually lead to immense benefits to mankind: "I wasn't actually thinking about doing translational work at the time I started the work… it was much more an interest in how one might create new molecules in general…. In my earlier work with protein engineering, I'd just been more interested in understanding how enzymes and things work, and then I started moving to antibodies again to try to understand how antibodies worked.

"And then I realised the power of evolutionary technologies to create large repertoires of them and to select them, and of course, I think there are two components to the work that were really very important. The first was the generation of repertoires, and making sure those repertoires were efficient, fully folded proteins. And then, secondly, the way of displaying them on the use of the phage which George Smith had provided pointers to… so it wasn't as if I'd thought at the very beginning 'right, I need to create pharmaceutical antibodies'.

"You kind of start working along a different route and then you find yourself gradually being, you know, seizing opportunities as they come up, and those opportunities were opportunities to actually overcome a really difficult problem which was how to make human antibodies against human self-antigens. And so I realised that we could create this by using evolutionary technology. In some sense, it's a bit like how the immune system works… I mean, you could think in terms of early evolution, but if you think about the way in which the immune system works, that is an evolutionary system. So… effectively… what we did is… to rationalise it in terms of how we can mimic the immune system… to make human antibodies, but without all the checks and controls the immune system would have that prevent you from making anti-self antibodies."

Thus, the methods developed by the Nobel Prize-winning trio of Frances Arnold, Smith and Winter have laid the foundations for the beginning of a new world in chemistry that can be tailored to benefit humanity.

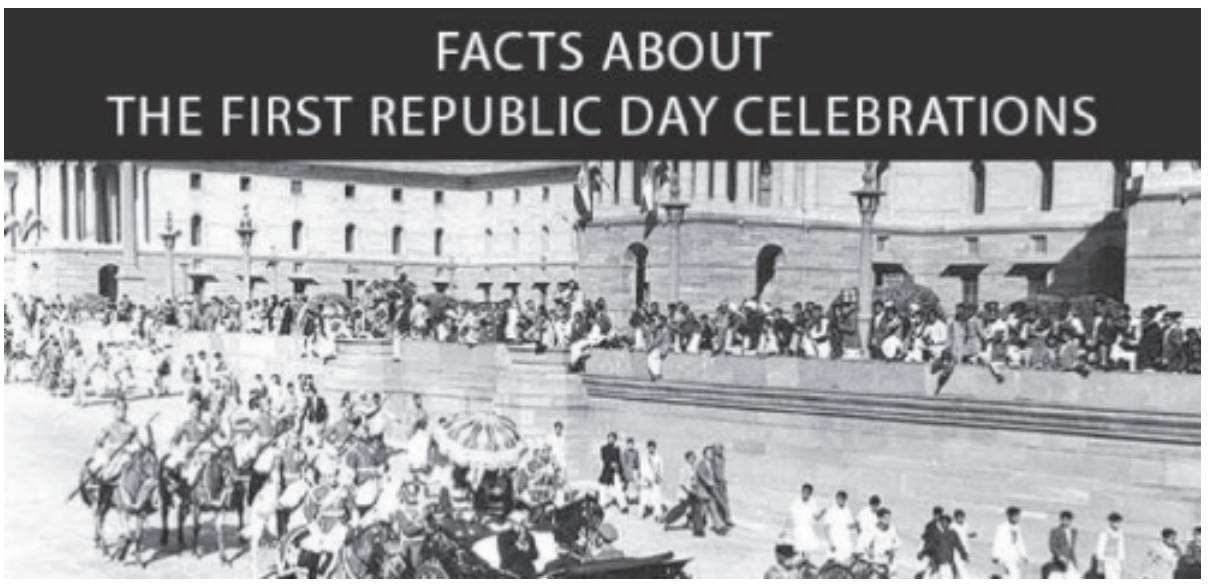
NEWS & VIEWS EXPRESS

Interesting Facts About The First Republic Day Celebrations

(Written By - Our Correspondent)

The Constitution of India came into effect across the country on January 26, 1950.

Republic Day is one of the three National Festivals in India. It is celebrated to commemorate the day on which our constitution came into force. On this day, we gear up to watch the grandeur of Indian Armed Forces and military capabilities. Each year this festival is celebrated with great fervour and enthusiasm. There is a sense of excitement and pride within Indians and they look forward to the upcoming Republic Day.



In today's time, we only look for major details like who will be the chief guest, what kind of parade will take place, which school will be chosen to perform, who will be the recipient of the National Bravery Awards in the parade this year? But, in the midst of all this, it seems that we have forgotten the real essence of this festival. We have forgotten the original glory of the first Republic Day – 26 January, 1950. If you want to know some interesting facts of first Republic Day and also the history associated with it read below:

The History – January 26, 1950

"Today India Becomes A Republic" read the headline in a popular British newspaper. The date was January 26, 1950, almost two and half years after India had gain independence. Why did India wait this period to become a republic?

British trade with India commenced in the 1600s but by the mid-1700s, the British East India Company had seized large areas of land and this was the start of the Company rule. With the passing of the Government of India Act in 1858, the British Crown assumed direct control of the administration in the Indian subcontinent and thus came about the British Raj. Indian resistance for many decades remained sporadic and disconnected. By the early 1900s, though, India's independence struggle started to gain much momentum. The rise of MK Gandhi and other national leaders and the growing strength of the Indian National Congress it became clear that India would be soon granted self-rule. The rise of radical leaders who were unwilling to settle for dominion status and the united struggle for independence translated into the demand for Purna Swaraj.

Some Interesting Facts

1. On January 26, 1950 India became a Republic at 10:18 am.
2. A few minutes later, at 10:24 am Dr. Rajendra Prasad was sworn in as the first President of India
3. The first Constitution of India was handwritten in Hindi and in English. It was signed by the members of the Constituent Assembly on January 24, 1950. These copies are still preserved in the Parliament's library and are one of the significant relics of independent India.
4. Between 1950 and 1954, India did not have a fixed venue for the Republic Day celebration. Initially it was held in Red Fort, then National Stadium, then in Kingsway Camp, and then in Ramlila ground. Finally in 1955, Rajpath was chosen as the permanent venue. This was the first Republic Day parade.
5. The members of the Constituent Assembly also adopted the National Anthem – Jana Gana Mana – on January 24, 1950. It was written by Rabindranath Tagore in Bengali and later translated into Hindi.

Body Temperatures Today are Lower Than They Were Two Centuries Ago

(Written By – Our Correspondent)

Here's some cool news, Humans appear to be chilling out.

Researchers comparing average body temperatures over the last 160 or so years have discovered that our internal engines are running almost a degree cooler than in the mid-19th century.

Cool It

Every American schoolkid learns the magic number of 98.6 degrees Fahrenheit (37 degrees Celsius in the rest of the world) as the average body temperature.

That "average" distinction often gets lost, and most people think of 98.6 as "normal" body temp. The truth is, normal body temperatures for an individual may range about a degree (in Fahrenheit) north or south of that number. Factors such as age, environment, body size, sex and even time of day a temp is taken all play a role in what the thermometer shows.

But medical professionals have long suspected that 98.6 isn't even the average human body temperature. That gold standard is based on the work of German physician Carl Reinhold August Wunderlich who, in 1851, collected temperature measurements from 25,000 patients and averaged them out.

Modern studies suggested Wunderlich's stat was just too hot.

Researchers at Stanford University's School of Medicine looked at data old and new to figure out whether our apparent cool-off could be explained by differences in the equipment and methods used then and now. For example, Wunderlich's measurements were of axillary (armpit) temps, while most modern readings are of oral temps.

A Temp Situation

The team compared temperature measurements from a range of sources dating from 1862 to 2017. In total, the researchers analyzed more than 677,000 temps.

Based on the readings, they found that men's average temperature has fallen by more than a degree, to about 97.5 F. The average temp for women has also decreased, though not as significantly, to about 98 degrees.

The team was able to document that temperature readings have fallen steadily, based on decade of birth, since the mid-19th century.

They also confirmed some of Wunderlich's early findings, including that younger people tend to have higher resting temps than their seniors, that women run a little warmer than men, and that most of us heat up a little later in the day.

After taking into account the method of measurement, as well as what was known about the quality of the instrument used, the researchers concluded that it's unlikely either factor accounts for the change in average temp: We really are cooling off.

Determining why we're chilling was beyond the scope of the study, but the authors did offer a few possible explanations.

When Wunderlich arrived at 98.6 F, average life expectancy was a mere 38 years, and chronic infections, from tuberculosis to syphilis, were rampant. Because average body temps tend to decrease with age, and increase in the presence of infection, it may be that a younger population, riddled with chronic, low-level infections, just ran hotter.

Because inflammation can bump up body temp, modern use of anti-inflammatories, such as aspirin, may also be a factor in our cooldown. And, unlike the average 19th-century citizen, most of us also spend the majority of our lives in climate-controlled environments, which can affect how hot or cold we run.

Body temperature also provides a rough proxy for an individual's metabolic rate: We generate heat as a by-product of all the metabolic processes our bodies perform. Even though Americans have gotten larger over the past 150 years — more body mass typically boosts body temp — we've also gotten a lot less active, metabolically speaking.

Physical activity is only one factor affecting an individual's resting metabolic rate (RMR), however. Many other elements, including age and presence of infection, influence the rate, and just how chill we get.

All You Need To Know About Analyzing Anger And Its Management

What is anger?

Anger is a state of mind, just like happiness or excitement or grief. But unlike other states of mind, it is much more intense and causes a variety of psychological, physiological and social reactions. Anger like most emotions is born out of a survival instinct. As children, we learn that shouting, shoving things, etc. can get our demands fulfilled by our parents. Probably that infantile instinct remains somehow trapped in us until it is once again expressed in a fit of anger.

Controlling the demon

Almost all societies, since the dawn of civilization, have denounced anger. For example, the Bhagavad Gita considers anger to have its roots in unfulfilled desires. It praises the 'Stitha-Pragya', the extremely

(Written By - Our Correspondent)

level-headed man who can remain calm amid adversity. It is not hard to find similar ideas in various philosophical or religious writings. The reasons for this is obvious. Anger is undesirable due to social and psychological reasons and people who are prone to get angry often seek solutions for it.

The theory of the garbage bin

I remember reading a short but brilliantly written prose a few years ago. The writer had said that all of us are carrying our frustrations in a proverbial garbage bin. This 'garbage bin' consists of all our pent up frustrations and resentments. We have to take care that we don't drop our garbage on anyone else. At the same time, if someone else drops their garbage on us, we shouldn't return the favor. This is extremely important. We shouldn't allow anyone else's anger to become our anger. If an angry man shouts at us we should try to bear it with a smile (up to reasonable levels) as these are the rantings of an unthinking man.

THE GOVERNMENT COLUMN

The Tales of Naveen Patnaik

(Written By : Our Correspondent)

Naveen Patnaik (born 16 October 1946) is an Indian politician serving as the current and 14th Chief Minister of Odisha. He is also the president of the Biju Janata Dal, a writer and has authored three books. He is the longest-serving chief minister of Odisha and as of 2022, one of the longest-serving chief ministers of any Indian state, holding the post for over two decades, and only the third Indian chief Minister after Pawan Chamling and Jyoti Basu to win five consecutive terms as Chief Minister of an Indian state.

Patnaik was born on 16 October 1946 in Cuttack to Biju Patnaik, former Chief Minister of Odisha, and his wife, Gyan Devi . He was educated at the Welham Boys' School in Dehradun, and later The Doon School. At Doon, he was a classmate of Sanjay Gandhi and three years junior to Rajiv Gandhi, who later became prime minister. After school, he went to Delhi University, and obtained a Bachelor of Arts degree.

Patnaik is a writer and had for the most part of his youth been away from both politics and Odisha, but after his father Biju Patnaik's demise, he entered politics in 1997 and a year later founded the Biju Janata Dal, named after Biju Patnaik, which won the state election with the BJP as its alliance and formed the government in which Patnaik became Chief Minister. His mild mannerism, "Stand against corruption" and "Pro-poor policies" have resulted in the development of a huge support base in Odisha, which has voted him to power in the last five consecutive terms. Like his father, he has managed to control the bureaucracy and transformed it into a machine for the development of the state. His spartan personal lifestyle and detachment from material possessions has been liked by the people of the state. He is also one of the founding members of Indian National Trust for Art and Cultural Heritage. His elder sister is the writer Gita Mehta.

Year	Office	Constituency	Party	Votes for Naveen	%	Opponent	Party	Votes	%
2000	Member of the Legislative Assembly	Hinjili	Biju Janata Dal	56,243	65.35	Udayanath Nayak	Indian National Congress	29,826	34.65
2004				62,968	72.71	Udayanath Nayak		20,326	23.47
2009				72,942	76.04	Raghabo Parida		11,669	12.17
2014				89,267	73.14	Sibaram Patra		12,681	10.39
2019				94,065	66.32	Pitambar Acharya	Bharatiya Janata Party	33,905	23.91
2019		Bijepur		1,10,604	59.78	Sanat Kumar Gartia		53,482	28.91

After the death of his father Biju Patnaik, leader of the Janata Dal, he was elected as a member to the 11th Lok Sabha in the by-election from Aska Parliamentary Constituency in Odisha, India. He was a member of the Consultative Committee of Ministry of Steel & Mines, Member of Standing Committee on Commerce, and Member Library Committee of Parliament. In 1997, the Janata Dal split and Naveen Patnaik founded the Biju Janata Dal which in alliance with the BJP-led National Democratic Alliance performed well and Naveen Patnaik was selected the Union Minister for Mines in the cabinet of A. B. Vajpayee.

Elections 2000

In the 2000 Assembly election, BJD won the majority of seats in alliance with the BJP in the Odisha Assembly elections, Patnaik resigned from the Union cabinet and was sworn in as the Chief Minister of Odisha.

Elections 2004

BJP led NDA lost the general elections in 2004, however, the coalition led by Naveen Patnaik emerged victorious in the state legislative elections and he continued as the Chief Minister.

Elections 2009

In the run-up to the polls for the Lok Sabha and Legislative Assembly of Odisha elections in 2009, BJD walked out of the NDA after severing ties with the BJP and joined the nascent Third Front constituted mainly by the Left Front and few regional parties. He did it after severely criticizing BJP's involvement in Kandhamal anti-Christian riots during 2007. The BJD won a resounding victory in both the Vidhan Sabha (State Assembly) as well as the Lok Sabha elections in 2009, winning 14 out of 21 Lok Sabha seats and 103 of the 147 assembly seats and was sworn in as the Chief Minister of Odisha on 21 May 2009 for the third consecutive term.

Elections 2014

Patnaik won a huge victory in both the 2014 Indian general elections and the Legislative Assembly of Odisha elections in 2014. Patnaik's Biju Janata Dal secured 20 out of the 21 Lok Sabha seats of Odisha and 117 of the 147 Odisha Vidhan Sabha seats.

Elections 2019

With a strong BJP wave across the country, the Biju Janata Dal, under the leadership of Naveen Patnaik won as many as 112 seats out of 146 (polls for 1 was deferred) in the Legislative Assembly of Odisha and 12 out of 21 Lok Sabha seats in 2019 Indian general elections.

Language

Patnaik spent most of his early days away from Odisha, so he has problems with writing and speaking fluently in Odia language. He is the only chief minister of India who does not speak fluently the regional language of his state and because of this, he has been facing severe criticism from his opponents. Presently, Patnaik has an adequate working knowledge of Odia and he possesses great mastery over Hindi, French, Punjabi, and English. At rallies, he delivers Odia speeches written in Roman alphabet.

Accolades & Recognitions

- The United Nations in 2013, felicitated Naveen by presenting a citation for his government's handling of Cyclone Phailin which hit Odisha in October 2013. The body also announced that the state's efforts would be highlighted as a model for disaster management programs globally. Naveen was also invited by the international body to attend the 2015 Third UN World Conference on Disaster Risk Reduction (WCDRR), which was held in Sendai, Japan from 14 to 18 March 2015.
- The United Nations in 2019, complimented Naveen for his government's proposal of reserving 33% of seats for women in the National Parliament as well as in the state's Legislative Assembly.

Award	Year	Organisation	Event/Location
Hero to Animals Award	2020	People for the Ethical Treatment of Animals	Odisha, India
CSI E-Ratna Award	2020	Computer Society of India	53rd CSI Annual Convention
FIH President's Award	2018	International Hockey Federation	46th FIH Congress
Ideal Chief Minister	2018	Pratibha Patil	8th Indian Students' Parliament
Best Administrator in India	2017	Pranab Mukherjee	Outlook India Speak Out Awards 2017
United Nations Award	2013	United Nations	Odisha State Secretariat

Writings

- A Second Paradise: Indian Courtly Life 1590–1947 – Published in India, England and US
- A Desert Kingdom: The People of Bikaner – Published in India, England and US
- The Garden of Life: An Introduction to the Healing Plants of India – Published in India, England and US.

Love is a sacred reserve of energy; it is like the blood of spiritual evolution.

THE EMPLOYMENT EXPRESS

Why Are Employability Skills Important

(Written By : Our Correspondent)

Today, the job market is more competitive in an altogether different sense. Along with subject matter expertise, employers are now looking for employability skills as essential traits in their potential employees.

While it was easier for IT professionals to land jobs — thanks to the mushrooming start-ups — many of them are now finding it difficult to keep their employment or thrive in their roles.

One reason for this is the ever-changing nature of technology. Technology is evolving every day, and if you are unable to upskill to stay relevant in your industry, you will inevitably fall behind your peers. Another reason that many are experiencing difficulty successfully launching their careers is that employers are now stressing the importance of "employability skills" — skills that go beyond qualifications and experience.

In this article, we will cover the following topics in detail:

- What are employability skills?
- Why are employability skills important?
- Top 10 employability skills and ways to improve them

What are Employability Skills?

If you're asking yourself, "what are employability skills?" STEMNET (Science, Technology, Engineering, and Mathematics Network) defines this term as "transferable skills needed by an individual to make them employable." Employability relates to your knowledge, skills, and attitudes, how you use those assets, and how you present them to employers in today's context.

Today, your education and experience may only be enough to qualify for a job, but to be successful in most roles in the field of emerging technologies, you will need soft skills like communication, teamwork, and problem-solving. These soft skills that will equip you to carry out your role in the company to the best of your ability are also referred to as employability skills.

The building blocks of any career, these skills are what make you employable across various roles, sectors, and industries. Employers usually want to see that you already have these soft skills before hiring, because they are much harder to teach.

Why are Employability Skills Important?

These sets of job-readiness skills are, in essence, behaviors that are necessary for every job and are essential attitudes that enable you to grow in your career and also efficiently help you:

- connect with co-workers
- solve problems
- be a part of and understand your role within the team
- make responsible choices for your job and your career
- be independent and take charge of your career

Personal characteristics, habits, and attitudes influence how you interact with others. Employers value employability skills because they regard these as indications of how you get along with other team members and customers, and how efficiently you are likely to handle your job performance and career success.

Employers value these unique attributes in their potential employees because they have always been necessary for a productive and smoothly functioning workforce. Enterprises spend a substantial amount of time and money developing these foundational and work-readiness skills. But in today's world, where jobs are limited, employers enjoy more options and would like to hire a technical expert who also displays well-rounded employability skills.

Simplilearn, as one of the world's leading eLearning platforms, puts immense emphasis on developing these employability skills or soft skills

in learners. Realizing that skill gaps are fast expanding, Simplilearn has made employability skills training an essential part of their training programs.

Top 10 Employability Skills and How to Improve Employability Skills

STEMNET has compiled a collection of what top recruiters like Accenture, Siemens, and Nokia, refer to as the top 10 ten employability skills employers look for. These are the strengths and qualities that a company would expect you to have when you appear for the job interview. It is equally important for you to draft an effective resume listing the right skills you have for the job. In fact, you should learn how to let your employers know that you possess these skills in your resume or during the interview.

Here are the top 10 employability skills that employers are looking for in the current job market, and different ways to improve employability skills.

1. Communication and Interpersonal Skills

The ability to express your ideas and opinions clearly and to explain what you want to achieve without ambiguity. This includes listening and understanding and acting upon what others are saying or instructing. Improvement Tip: Write reports and assignments regularly as part of your studies.

2. Problem-Solving Skills

The ability to think logically and find solutions to setbacks Improvement Tip: Enroll in a course that focuses on problem-solving.

3. Self-Motivation

The ability to come up with new ideas and solutions and display enterprising capabilities to do things on your own without being instructed Improvement Tip: Approach organizations for work placements or internships.

4. Working under Pressure

The ability to deliver the best performance within deadlines without buckling under work stress Improvement Tip: Balance time around work, study, and family commitments.

5. Organizational skills

A systematic approach to work that emphasizes planning every move to meet deadlines Improvement Tip: Help to organize an office/community event.

6. Team Spirit

The ability to work well with other people from different backgrounds, disciplines, and expertise to accomplish a task or goal Improvement Tip: Join a team or do group assignments.

7. Learning Skills

Your desire to learn and understand new things is an essential skill-set in the tech world today where skill gaps are appearing quickly, and upskilling is inevitable. Improvement Tip: Take up a new hobby or learn new skills.

8. Number and Data Skills

The ability to use data to demonstrate a point Improvement Tip: Use graphs and tables to prove your point.

9. Value Diversity

People in modern workplaces come from different backgrounds. Learning to work with people of different ages, religions, and political opinion is essential for your career progress. Improvement Tip: Volunteer to work in another department.

10. Negotiation Skills

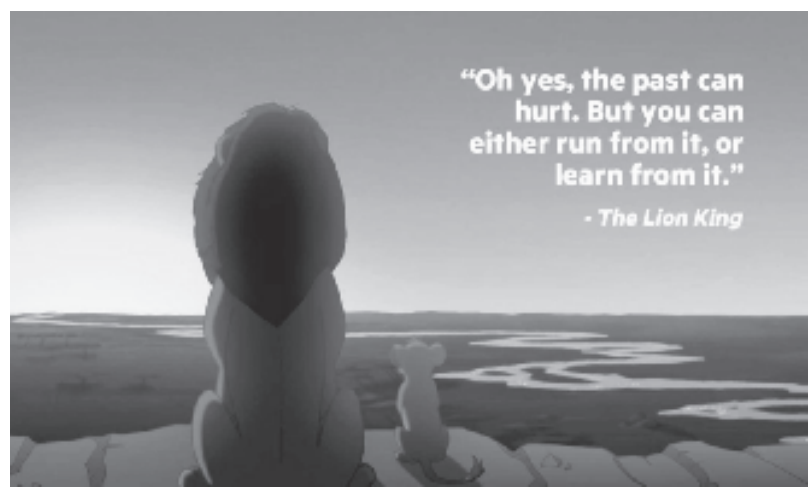
The ability to work towards a win-win outcome where you can make objective decisions after listening to the opinions of all stakeholders Improvement Tip: Practice negotiation in daily life.

How to Find Your Employability Skills?

All of us already have some employability skills that we have to identify. Here are some ways to identify your employability skills -

1. List down the activities that you do every day like study, work, read, extracurricular activities, etc. This will give you an idea of what you are good at, for example, if you enjoy studying and reading, then you will naturally be good at research work hence, it becomes an employable skill that you already have. Moreover, if you are also good at sports, then you already have problem solving and leadership skills in you.
2. Each activity you do in a day is related to some responsibility that redirects you to some employability skills. For each activity you listed down, mention the responsibilities against it.
3. Compile the list of employability skills and add them to your portfolio.

While you should keep up your focus on earning industry-recognized certificates or upskilling to learning new technologies to stay employable, also consider developing and improving your soft skills, including the 10 employability skills.



A dog is the only thing on earth that loves you more than you love yourself.

THE REVOLUTION EXPRESS

Golden Revolution & National Horticulture Mission

(Written By : Our Correspondent)

In this article you will know about the Golden Revolution, meaning and importance of Golden Revolution in India, the products to which the golden revolution is related to and the National Horticulture Mission.

Candidates preparing for various competitive exams must be well versed with the Golden Revolution as it is an important topic from exams point of view.

Candidates preparing for the UPSC exam, bank exams, SSC, RRB, Insurance exam or other Government exams must keep abreast with Golden revolution as a minimum of 1-2 questions related to this topic are asked in the general awareness section of the exams.

Aspirants of UPSC exam should prepare Green Revolution and National Horticulture Mission topic for Static GK section and Geography GS I Paper.

What is Golden Revolution?

The period between 1991 to 2003 is known as the period of Golden Revolution in India. The Golden revolution is related to the production of honey and horticulture. It is a part of the important agricultural revolutions of India. Nirpakh Tutej is considered to be the Father of The Golden Revolution in India.

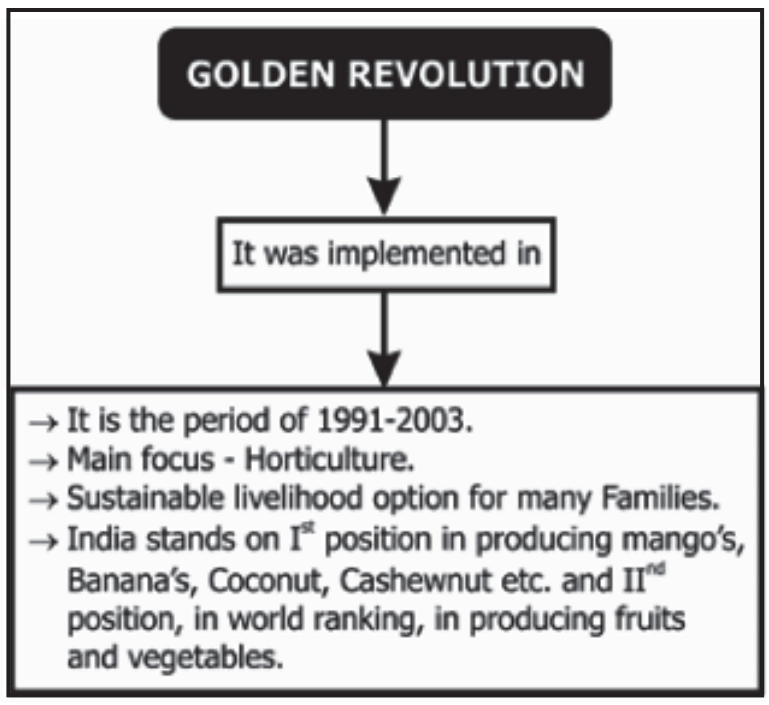
Golden Revolution In India

The period between 1991 – 2003 was regarded as the Golden revolution period because, during this period, the investment planned in the horticulture segment became highly productive.

India became the world leader in the production of a variety of fruits like coconut, mangoes, cashew nuts and more. The sector emerged as a sustainable livelihood option and became the second-largest producer of vegetables and fruits.

Economic conditions of many farmers who were engaged in horticulture improved thus improving the livelihood for many underprivileged classes.

Factors Affecting the Growth of Horticulture Sector during Golden Revolution



Horticultural development had not been a priority in India until the early 1990's. The performance of the horticultural sector in India surged drastically from 1991 to 2003. In the period 1948 to 1980, the main focus of India was on the production of cereals hence, researchers described it as a 'golden revolution', supposedly to distinguish it from the 'green revolution'.

The factors that affected the growth of horticulture sector during Golden Revolution in India are as mentioned below:

- The shift in cropping pattern in favour of crops with higher returns
- Increase in the are of harvesting
- Improvement in the techniques of cultivation.

Horticulture Exports during Golden Revolution in India

The horticulture sector of the country faced several hurdles such as lack of cold storage facilities, low productivity, etc. but the shifting food pattern as a consequence of increasing income and the health awareness of the population has transformed the horticulture of India as a vibrant commercial venture.

The Horticulture exports of India marked an increase from ? 6308.53 crores in 2004- 2005 to ? 28,62861 crores in 2014-2015. This significant growth in the sector is undoubtedly attributed to the organized and planned policies of the horticulture sector under Golden Revolution.

National Horticulture Mission

The Government of India launched the National Horticulture Mission in the year 2005-2006 with a mandate to increase the production in the horticulture sector.

The government decided to provide all necessary funds to the National Horticulture Mission to usher in the golden revolution in horticulture sector in the country. The States had to take advantage of the National Horticulture Mission and come up with good and relevant schemes for the betterment of their horticulture sector.

The total area under vegetables and fruits was 11.72 million hectares and the total production stood at 150.73 million tons in the year 2005. As a result of huge spurt in the sector due to the National Horticulture Mission, the production of horticulture tremendously increased to 281 million tonnes from an area of 23.2 million hectares in 2015-2016.

This remarkable increase in the horticulture productivity made India the second-largest producer of vegetables and fruits in the world, after China.

From Page 16 (Major Dhyan Chand.....)

In December 1934, the IHF decided to send a team to New Zealand in the new year. Chand and his brother were immediately selected. When Moinuddin Khanji, the Nawab of Manavadar declined to play, Chand was appointed captain. In the subsequent tour, the team played a total of 48 matches on this tour, with 28 in New Zealand and the remainder in India, Ceylon, and Australia. India won every match, scoring 584 goals and conceding only 40. Of these 48 matches, Chand played 23 and scored a total of 201 goals.

Upon returning to India, Chand resumed his duties in the barracks. In December 1935, the IHF decided to stage the Inter-Provincial tournament to select the Olympic team. Chand was again denied permission to leave his platoon, though once again he was selected without formalities. The final team assembled in Delhi on 16 June and played against the Delhi Hockey XI. Incredibly, they lost 4–1. After this inauspicious start, the team went on a successful tour of the subcontinent, finally departing for Marseilles on 27 June. They arrived on 10 July, and after an uncomfortable journey in third-class compartments, reached Berlin on 13 July. On 17 July, the Indian team played a practice match against Germany and lost 4–1. As such, manager Pankaj Gupta informed the IHF that Ali Dara had to be sent immediately to replace the out of form Mirza Masood.

On 5 August, India won its first match against Hungary 4–0. India won the rest of the group matches against the USA (7–0, with Chand scoring 2 goals) and Japan (9–0, with Chand scoring 4). On 10 August, Ali Dara arrived. Their fourth match was the semi-final against France, whom they defeated 10–0, with Chand scoring 4 goals. Meanwhile, Germany had beaten Denmark 6–0, beaten Afghanistan 4–1, and in the play-offs, had defeated the Netherlands 3–0. Thus, India and Germany were to clash in the 1936 Berlin Olympics field hockey final on 19 August.

After returning from Berlin, Chand joined his regiment. Between 1936 and the commencement of the War in 1939, he largely confined himself to army hockey, with one visit to Kolkata to take part in the Beighton Cup tournament in 1937. Before the Beighton Cup, Chand spent four months in a military camp in Pachmarhi to attend military classes. On 16 March 1938, he was made a Viceroy's Commissioned Officer (VCO; the equivalent of the present-day junior commissioned officer) with the rank of jemadar (now termed naib subedar). With the increasing need for qualified officers during wartime, he was promoted to acting subedar by July 1942 and to the war-substantive rank by early 1943. On 9 April 1943, Chand received an emergency commission as a second lieutenant in the 14th Punjab Regiment, with the war-substantive rank of lieutenant from the same date.

Towards the closing phases of the war, Chand led an army hockey team which toured around the battlefields in Manipur, Burma, the Far East and Ceylon. When the war ended in 1945, Chand decided that the Indian hockey team needed new young players. In 1947, the IHF was requested by the Asian Sports Association (ASA) of East Africa to send a team to play a series of matches. The ASA made a condition that Chand should be included in the team. Once again, Chand was chosen as captain.

The team assembled in Bombay on 23 November 1947, and reached Mombasa on 15 December and played 9 matches in British East Africa winning all. Chand, though now in his forties, still managed to score 61 goals in 22 matches.

After returning from the East African tour in early 1948, Chand decided to gradually phase out his involvement in 'serious hockey'. He played exhibition matches, leading a Rest of India side against state teams and the 1948 Olympic team which defeated Chand's side 2–1, even though an aging Chand scored his side's lone goal. Chand's last match was leading the Rest of India team against the Bengal side. The match ended in a draw after which the Bengal Hockey Association organized a public function to honor Chand's services to Indian hockey.

Final Years

Chand continued to hold his emergency commission in the Indian Army post-Independence, with the service number IEC 3526, but was apparently not granted a regular commission. In 1951 he was honored at India's National Stadium with the inaugural Dhyan Chand Tournament, which he attended to the admiration of the spectators.

After 34 years of service, Chand retired from the Indian Army on 29 August 1956 as a lieutenant (acting captain). The Government of India honoured him the same year by conferring him the Padma Bhushan, India's third highest civilian honour.

After retirement, he taught at coaching camps at Mount Abu, Rajasthan. Later, he accepted the position of Chief Hockey Coach at the National Institute of Sports, Patiala, a post he held for several years. Chand spent his last days in his hometown of Jhansi, Uttar Pradesh, India.

Chand died on 3 December 1979 from liver cancer at the All India Institute of Medical Sciences, Delhi. He was cremated at the Jhansi Heroes ground in his hometown, after some initial problems in getting clearance. His regiment, the Punjab Regiment, accorded him full military honours.

Legacy

Dhyan Chand remains a legendary figure in Indian and world hockey. His skills have been glorified in various apocryphal stories and anecdotes. A number of these revolve around the fact that Singh had extraordinary control over dribbling the ball. Chand's birthday, 29 August, is celebrated as National Sports Day in India. The President gives away sports-related awards such as the Major Dhyanchand Khel Ratna, Arjuna Award and Dronacharya Award on this day at the Rashtrapati Bhavan, India.

The 20th National Award, 2012, the Gem of India, awarded by the Union Minister of India, was given to Dhyan Chand. The award was received by Dhyan Chand's son, Ashok Dhyan Chand (a hockey Olympian in his own right), on behalf of his deceased father. The award was given by Journalist Association of India under the flagship of Journalists Federation of India, Sirifort Auditorium, New Delhi, India, on 22 September 2012.

India's highest award for lifetime achievement in sports is the Dhyan Chand Award which has been awarded annually since 2002 to sporting figures who not only contribute through their performance but also contribute to the sport after their retirement. The National Stadium, Delhi was renamed Dhyan Chand National Stadium in 2002 in his honour.[41]

A hostel at Aligarh Muslim University, of which he was an alumnus, has been named after him.

He scored over 1000 goals in his entire domestic and international career, from 1926 to 1948, making him the highest goal scorer in Hockey history. BBC called him the "hockey's equivalent of Muhammad Ali".

An Astroturf hockey pitch, at the Indian Gymkhana Club in London, has been named after Indian hockey legend Dhyan Chand.

Government of India has issued a commemorative postage stamp and a First Day Cover in honour of Dhyan Chand. He remains the only Indian hockey player to have a stamp in his honour.

Chand was among the nominees considered for India's highest civilian award, Bharat Ratna, for 2014 and there was support for it. The award was then given to Sachin Tendulkar and C. N. R. Rao. The family members of Dhyan Chand were disappointed with the government's decision. An RTI was filed which suggested that the Prime Minister's Office had ignored the recommendation from sports ministry on giving the award to Sachin Tendulkar.

Honors

- Major Dhyan Chand Khel Ratna Award is named after him to honour his contribution to Indian sports by Government Of India (GOI). Sports ministry every year give this award annual to India's best performer on International level championships.
- Dhyan Chand award, A lifetime achievement award named after Dhyanchand.

THE RURAL DEVELOPMENT COLUMN

Rural Development in India : Importance of Rural Development

(Written By : Our Correspondent)

As the topic suggests, rural development in India is the overall progress in the economic and social conditions of Indians residing in rural areas. It is not an objective but a constant process in itself. As a result, this process actively contributes to the economic growth of a rural region and the country as a whole. Conversely, the economic development in an area leads to rural development.

Therefore, the objectives of rural development include providing opportunities for earning a respectable livelihood. Consequently, the rural population will be able to relieve themselves of poverty and economic backwardness. The policy-makers in India attempt to introduce modern education, health standards, and land reforms to offer the rural inhabitants a standard of living.

What is Rural Development in India?

With the passage of several decades since independence, the Indian government has stressed the need for rural development in India.

To begin with, rural development stands for the increase in income opportunities for people living in rural areas. According to the Population Census of 2011, the percentage of people residing in rural areas is close to 69% of the Indian population.

It roughly translates to about 83.3 crore Indians who are settled in rural areas. Thus, rural development also includes the measures implemented by government bodies to curb the poverty rate in such areas.

As per another report by the Government of India, the percentage of the Indian population that was situated Below the Poverty Line (BPL) in 2011-2012 amounted to 21.9%. Needless to say, people affected by rural poverty contribute to a large chunk of the percentage. Therefore, the development of rural areas in terms of economy and viability of professional options is much needed. Through this progress, a sizable portion of the Indian population will find themselves out of the BPL group.

What is Required?

As a result, the rural population requires long-lasting reforms and consistent projects on rural development in India in sectors such as agriculture, education, and health. With necessary steps and measures, it is thus possible to introduce development in rural landmasses that will stand the test of time.

However, before all this, it becomes important to determine which areas fall under rural India. With this focused study, it becomes easier to point out the areas which need development in every aspect of economic and non-economic activities.

What are Rural Areas?

Besides the obvious definition, there is a lot more to know about exactly which areas stand for rural India. By knowing the rural area's meaning, students will be able to distinguish between economic activities occurring in distinct geographical areas.

As per the Planning Commission of India (PCI), rural meaning refers to the geographical area where the maximum population of Indians is 15,000. In addition, it can also be an area where the population density remains 400 people per square kilometer. Therefore, these areas are usually placed within the spectrum of Tier 3 to Tier 6 cities.

As far as governing bodies are concerned, rural areas are equipped with panchayats that act as local decision-making entities. Therefore, a rural area lacks a municipal board. Simply speaking, rural areas include the countryside and villages that we commonly encounter.

Moreover, the importance of rural development lies in the fact that the government aims to increase rural expenditure. Therefore, the objectives of rural progress involve boosting the contribution of rural expenditure to the total national monthly expenditure from the current 55%.

What are the Objectives of Rural Development in India?

With the concept of rural development explained, let's move on to what rural development aims to achieve. First of all, decision-making entities ensure positive durable changes to boost the economy of a rural area. As a result, dedicated areas will witness a long-lasting growth pattern that is likely to reduce poverty rates.

However, the primary objectives of rural development include the following –

To promote economic growth among the rural population through adequate access to food, shelter, clothing, education, and employment. With proper opportunities proportional to the same in urban areas, individuals residing in rural areas will be able to get a level ground for income options.

- To introduce modern techniques for agriculture in rural areas to contribute to an increased productivity rate. As a result, the role of rural development is to establish sustainable and affordable technology to increase production in a national market.
- To ensure consistent rural infrastructure development in India. In addition, this process should involve all local rural populations. Consequently, they will gain the agency to make large-scale economic decisions that lead to area-based financial development.
- To bridge the gap between local governing bodies and the Central administration for better economic communication. On top of that, rural development aims to provide executive powers to panchayats for carrying on the policies framed by experts.
- Finally, the objective of rural development is to use natural resources within a territory to ensure maximum economic benefit for inhabitants. This also includes important land reform measures to boost the agricultural output and productivity of every individual involved.

Now that we know what the concept of rural development in India aims to achieve, let's progress to the elements that impact rural growth.

What are the Factors that Affect Rural Development in India?

Multiple factors contribute to the urban development of India. However, in-depth knowledge of knowledge and knowledge development will certainly help students understand the ingredients of rural progress. As a result, they will be able to pinpoint the nature of factors that have a direct impact on rural development.

Therefore, factors affecting the rural development in India are duly stated below –

Infrastructure – The infrastructural condition of a rural area has a direct link with its scale of development. Primarily, infrastructure consists of pucca roads, a consistent supply of electricity, and availability of transport.

With these factors, governing bodies have been able to reduce connectivity issues related to these areas. As a result, there has been an increase in the efficiency of the supply of agricultural output to mainland markets all over India. Therefore the opportunity of income increases among the rural residents.

Education – It is quite obvious that the level of education plays an integral role in the overall progress of rural areas. First of all, education introduces one to new and innovative ideas to improve his/her social condition. Educating the rural population at an early age ensures that there is no discrimination between the urban and rural populations. Therefore, they are open to countless employment opportunities from multiple sectors and industries.

Healthcare – Needless to say, healthcare is an important part of rural development in India. The rural population is often susceptible to diseases that can be avoided with proper healthcare measures. Besides, this contributes directly to their productivity.

As a result, they will be able to participate in healthy competitions in the market. Proper healthcare systems also reduce the mortality rate, thus ensuring a healthy and meaningful life.

Technology – The role of technology in rural development is indisputable. First of all, modern production techniques in various sectors can actively increase their rate of production, which allows for a remarkable rise in the scale of economic activities in rural areas. On the other hand, the technology significantly reduces irrigation and quality issues. Therefore, the presence of appropriate technological means such as pumps, tractors is the make-or-break factor of rural development.

In addition, access to clean drinkable water and sanitation is a must for the development of rural areas. In this way, rural residents will be able to benefit from equal income opportunities and sustainable healthcare services.

How to Ensure the Rural Development of India?

The Government of India has launched multiple projects on rural development in India over the decades. The keys to sustainable rural development in terms of economic situation include the following –

- Proper presence of advanced facilities for irrigation to all land types in India. As a result, farmers can boost their agricultural output and create economic opportunities for themselves.
- Credit facilities on access to the necessary ingredients of farming such as fertilizers, pesticides, and seeds. Subsidies on electricity used for farming purposes ensure that the rural population saves more than it spends.
- Combat with social inequalities and discrimination in rural areas to create a sense of unity. This sense of social unity will lead to the formation of an economic class whose aim is to boost production and ensure rural development.
- Make sure that there are adequate training sessions for farmers to equip them with modern agricultural measures. Besides, farmers should also be aware of agricultural policies, land reforms, and market prices for the best use of their resources.

In addition, any improvement in current agricultural markets also makes sure that they can accommodate the economic contribution of the rural population. In these ways, one can ensure a sustainable growth curve and desirable rural development of India.

For an in-depth insight into the factors that determine rural progress in India, go through the study materials available on our website. You can also install the Vedantu app to help you with your classes.

Scope of Rural Development

Since times immemorial India has been continuing to be and will remain in the future land of village communities. That is why Mahatma Gandhi rightly stated that" India lives in villages"If the village Perishes India will too Perish. Most of the people in India live in rural areas and any strategy of social-economic development in India that neglects rural people and rural areas cannot be successful. It is a sine -qua -non of the development of India.

Rural development is a result of interchanges between various physical, technical, economic, social, cultural, and institutional factors. Rural development is continuously designed to improve the economic and social well-being of rural people.

THE SPORTS AFFAIRS COLUMN

Major Dhyan Chand : The Wizard of Hockey

(Written By : Our Correspondent)

Major Dhyan Chand (29 August 1905 – 3 December 1979) was an Indian field hockey player, widely regarded as one of the greatest field hockey players in history. He was known for his extraordinary ball control and goal-scoring feats, in addition to earning three Olympic gold medals, in 1928, 1932 and 1936, during an era where India dominated field hockey. His

influence extended beyond these victories, as India won the field hockey event in seven out of eight Olympics from 1928 to 1964.

Known as The Wizard or The Magician of hockey for his superb ball control, Chand played internationally from 1926 to 1949, where he scored 570 goals in 185 matches according to his autobiography, Goal, and over 1000 goals in his entire domestic and international career. BBC called him the "hockey's equivalent of Muhammad Ali". The Government of India awarded Chand India's third highest civilian honour, the Padma Bhushan in 1956. His birthday, 29 August, is celebrated as National Sports Day in India every year. India's highest sporting honour, Major Dhyan Chand Khel Ratna Award is named after him.

Early Life

Chand was born in Allahabad on 29 August 1905 in a Rajput family. He was the elder brother of another hockey player Roop Singh, and the son of Sharadha Singh and Sameshwar Singh. Dhyan Chand's father was enlisted in the British Indian Army, and he played hockey for the army. Dhyan Chand had two brothers – Mool Singh and Roop Singh. Because of his father's numerous army transfers, the family had to move to different cities, and as such Chand had to terminate his education after only six years of schooling. The family finally settled in Jhansi, Uttar Pradesh, India.

Chand studied at the Aligarh Muslim University, Aligarh and finally graduated from Victoria College, Gwalior in 1932. Being in the military, his father got a small piece of land for a house.

Young Chand had no serious inclination towards sports though he loved wrestling. He stated that he did not remember whether he played any hockey worth mentioning before he joined the Army, though he said that he occasionally indulged in casual games in Jhansi with his friends.

Early Career

On 29 August 1922 – his 17th birthday – Chand enlisted in the 1st Brahmans of the British Indian Army as a sepoy (private). A reorganisation of the army that year resulted in the 1st Brahmans becoming the 1/1st Punjab Regiment. Between 1922 and 1926, Chand exclusively played army hockey tournaments and regimental games. Chand was ultimately selected for the Indian Army team which was to tour New Zealand. The team won 18 matches, drew 2 and lost only 1, receiving praise from all spectators. Following this, in the two Test matches against the New Zealand squad, the team won the first and narrowly lost the second. Returning to India, Chand was promoted to Lance Naik in 1927.

After successfully lobbying for reintroducing field hockey in the Olympics, the newly formed Indian Hockey Federation (IHF) made preparations to send its best possible team for the 1928 Amsterdam Olympics. In 1925, an Inter-Provincial Tournament was held to select the team members. Five teams participated in the inaugural nationals – United Provinces (UP), Punjab, Bengal, Rajputana and Central Provinces. Chand got permission from the Army to play for the United Provinces team.

In its first game in the tournament, Dhyan Chand as the centre-

forward, and Marthins, their inside-right, performed very well together. Chand attracted much attention with his clever stick-work. His penetrating runs and judicious passes seemed to assure him a position in the team that is to take part in the Olympic Games. Early in the game, it became evident that Chand was at his best. In combination with Marthins he took the ball away to the right and Marthins did well to give him a good pass. Quick as lightning, Dhyan Chand shot a goal. The ball struck one of the defenders' sticks and went into the net, giving goalkeeper Collie no chance. A goal within 3 minutes of the start was more than what the most optimistic of the UP supporters could expect. At the interval, UP led by three goals to nil.

On their part, Rajputana put every ounce of their efforts to score. The UP goal had more than one narrow escape but were the winners of a

fine exhibition match (3–1).

Buoyed by the success of the Tournament, it was decided that it would be held every two years. After two more trial matches between various hopefuls, the Olympic team (including Chand as center-forward) was announced and assembled in Bombay. Center-half Broome Eric Pinniger was selected as the captain. The IHF was initially low on funds since the provinces of Bombay, Madras, and Burma had turned a deaf ear to their financial appeal, but they managed to scrape enough money. The Olympic team then played a match against the Bombay XI, and amazingly lost 3–2, even though Singh scored both his team's goals. With a quiet send-off, the team left for England on 10 March, to play 11 matches against local sides as well in the London Folkestone Festival in 1927, winning all. It was also said that Great Britain did not send a team in 1928 to the Amsterdam Olympics after their national team was defeated by the Indian team at Folkestone. This is best cited in Kapur's book Romance of Hockey where a despatch of H. Sutherland Stark, London representative of "Sports", a magazine of Lahore, tells the story better than any other comment: "For reasons it is difficult to understand the English Hockey Association have taken up a very stiff attitude towards Indian Hockey in recent years and have repeatedly been twitted about it by even their own supporters. The Editor of a leading sports newspaper described them to me as an intensely conservative body, but there seems to be something more than conservative behind their unwillingness apparently ever to meet India in a full international encounter". Finally, on 24 April, the team arrived in Amsterdam to embark on a tour of the Low Countries. In all the pre-Olympic matches against local Dutch, German and Belgian teams, the Indian team won by large margins.

In the 1928 Amsterdam Summer Olympics, the Indian team was put in the division A table, with Austria, Belgium, Denmark and Switzerland. On 17 May the Indian national hockey team made its Olympic debut against Austria, winning 6–0, with Chand scoring 3 goals. The next day India defeated Belgium 9–0; however, Chand only scored once. On 20 May, Denmark lost to India 5–0, with Chand netting 3. Two days later, he scored 4 goals when India defeated Switzerland 6–0.

The final match took place on 26 May, with India facing the home team of the Netherlands. The Indian team's better players Feroze Khan, Ali Shaukat and Kher Singh were on the sick list and Chand himself was ill. However, even with a skeletal side, India managed to defeat the hosts 3–0 (with Singh scoring 2), and the Indian team won its country's first Olympic gold medal. Chand was the top scorer of the tournament, with 14 goals in 5 matches.

Later, the authorities in the Netherlands in fact broke Chand's hockey stick to check if there was any magnet inside owing to his superb ball control ability. An elderly woman asked him to play with her walking cane and he continued to score goals with it.[26]

On returning to India, the team was received by thousands of people at the Bombay harbour, compared to the three people who had seen them off.

Posted in Waziristan in the North-West Frontier Province (now in Pakistan) with his new 2/14 Punjab Regiment, Chand, by now a naik (corporal) was cut off from the IHF, which was by now controlled by civilians. The Inter-Provincial Tournament was being held to select the new Olympic team; the IHF wrote to the Army Sports Control Board to grant Singh leaves to participate in the nationals. His platoon refused. Chand received news that he had been selected by the IHF for the Olympic team without any formalities. The rest of his teammates, however, had to prove their skills in the Inter-Provincial Tournament, which was won by Punjab. As such, seven players from Punjab were selected for the Olympic team. Apart from Chand, Broome Eric Pinnigar, Leslie Hammond and Richard Allen were the other 1928 Olympians retained in the team. Chand's brother Roop Singh was also included in the squad as a left-in. Lal Shah Bokhari was selected as captain.

The Olympic team then played practice matches in India before heading for Colombo. In two matches in Ceylon, the Olympic team beat the All Ceylon XI 20–0 and 10–0. Wrote one newspaper on the first match, "Perfection is perilous, for it tempts the gods. For once, this was proved wrong for even the god of weather paid tribute to the genius of the Indian players. Rain clouds, which had threatened to ruin the game, vanished into the blue, and thousands of spectators spent a happy hour marveling at the incomparable artistry of the Indian team."

The India team set sail for San Francisco on 30 May and arrived on 6 July. They reached Los Angeles three weeks before the opening ceremony of the Olympics, which took place on 30 July. On 4 August 1932, India played its first match against Japan and won 11–1. Chand, Roop Singh, Gurmit Singh each scored thrice, and Dickie Carr once. In the final on 11 August, India played against hosts USA. India won 24–1, a world record at that time (until it was broken in 2003), and once again clinched the gold medal. Chand scored 8 times, Roop Singh 10, Gurmit Singh 5, and Pinniger once. In fact, Chand along with his brother Roop scored 25 out of the 35 goals scored by India. This led to them being dubbed the 'hockey twins'.

One Los Angeles newspaper wrote, "The All-India field hockey team which G. D. Sondhi brought to Los Angeles to defend their 1928 Olympic title, was like a typhoon out of the east. They trampled under their feet and all but shoved out of the Olympic stadium the eleven players representing the United States."

The team then embarked on a tour of the United States. They played a match on 20 August against a United States XI, almost the same team that they had faced in Los Angeles. Even after loaning its second keeper Arthur Hind, for a half, the team won 24–1.

After setting sail from New York, the team arrived in England. They then embarked on a hectic tour, playing nine matches in various countries in a fortnight, commencing on 2 September. They played four internationals against the Netherlands, Germany, Czechoslovakia, and Hungary.

The team then reached Sri Lanka and India, playing a number of matches to pay for their expenses. At the end of the tour, India had played 37 matches, winning 34, drawing 2, with one abandoned. Chand scored 133 of the 338 Indian goals.

In India, he is often referred to as Hockey ka Jaadugar which translates to "Magician of the game of Hockey".

Continued Page 14

THE STUDENT AFFAIRS COLUMN

7 Quick Ways To Improve Academic Performance

(Written By : Our Correspondent)

Are you thinking of ways to improve academic performance? In that case, you have landed on the right page.

If you are struggling with improving your grades, you do not need a life coach to motivate you. Let us give you a few tips that can help. In this post, we go over some strategies you can implement to improve your academic performance quickly.

Whether you are a teacher wondering how to improve students' academic performance, or a student trying to get ahead in schoolwork, these tips are sure to make a difference.

1. Identify The Best Way You Retain Knowledge

Everyone is a genius in their own way. Individual strengths vary drastically from one individual to another. Comparing your grades with your classmates who do not put in much effort but still do well is a bad idea. It is a sure set way to get conquered by negative emotions. A bit of competition cannot hurt. However, improving weak subjects can significantly vary depending on your strategy to retain knowledge.

For instance, a few lucky ones are out there with a photographic memory, which lets them get straight A's without much effort. Then some of us have to go over our notes twice for the knowledge to retain in our memory. Others remember better when they take notes. Some prefer to record their lessons and listen to them again to comprehend what was taught.

Arm yourself with effective memory aids to help you remember information. Once you find out the best way you retain knowledge, you can construct an action plan to improve academic performance.

2. Work Out The Areas You Struggle the Most

Before you can make a plan of action, you need to find out which subjects or areas you need to target. The next step is to discover the areas you are underperforming and the cause.

Are your grades generally lower than you'd prefer in all of your subjects? Or is there one specific area where you're having trouble affecting your overall performance in a subject?

Try to identify a pattern. Write down your grades on paper, or draw a graph if you have to see which areas you underperform the most. Next, try to understand why you aren't performing to your full academic potential in the areas you've pinpointed.

Are they external factors such as your family or other personal issues, or are you struggling with an academic skill to comprehend the subject? Once you isolate what is causing the issue, you can apply problem-solving strategies to overcome the areas you struggle with the most. If the problems are external, you might want to consider discussing them with a counsellor. If it's academics, you can try out our suggestion #3.

3. Consult Your Teachers

It's always a brilliant idea to consult your teachers or teaching assistantswhen devising a strategy for improving your grades. Most teachers are highly empathising and would be keen to help you do better.

Ask questions about the areas that you find challenging to comprehend. Get advice on strategies you can develop to do better in those areas. Teachers like to help out students who are making an effort.

4. Develop Essential Learning Skills

It could be that your lagging on your note-taking skill set, or you are terrible at essay writing. If your notes aren't making sense, attempting assignments would be a challenge. Therefore, you must take a good set of notes. If you struggle to take accurate notes, another way to try is to get your teacher's permission to record the lecture. That would help you to take notes at your own pace.

Researching skills is a critical aspect of modern learning. You must learn to quickly access the highly relevant information you require for a specific subject or topic. This will be a life skill that can win the day.

Most assignments require you to write essays. Therefore if you struggle in this area, it is best to work on your essay techniques. Developing these learning skills can quickly boost your academic performance.

5. Set Goals and Prioritise

Make sure you prioritise your time wisely and set achievable goals for yourself. We cannot emphasise enough the "achievable goals" because setting unattainable targets can be exhausting and could also be a reason you struggle.

When you choose to become a student, you have to learn to say no to many other things. Taking time to plan and focus on learning is a straightforward way to enhance academic performance.

Take time to list your priorities in order of personal, professional, and academic activities. Your list must reflect your academics and time for self-care, family, and sports. Achieving your academic goals is highly dependent on how your manage your time.

Make a daily schedule for yourself, break your day into time slots, and leave plenty of time for studying. Allocate more time to courses or topics that you've recognized as being challenging.

6. Organize Your Space and Notes

When you're studying, do so at your desk, and make sure you maintain a tidy space. Organize all of your textbooks and study materials, and remove any needless distractions like your phone, tablet, or laptop. If you must use your computer, use software such as Self Control, which will prevent you from accessing distracting social media websites.

Clutter of any type hinders our capacity to focus effectively, so getting organized is another approach to improve your academic performance.

7. Incorporate Physical Activity and Good Nutrition

There is a lot of research out there that points out thatphysical activity improves academic performance. Physical activity has a direct effect on learning and behaviour.

Research has shown that physical activity can increase the oxygen flow to the brain. It also increases the number of neurotransmitters which helps with memory, concentration, and stress management. Physical activity can also improve classroom attitudes and behaviours, which are essential in enhancing academic performance.

Nutrition plays a significant role in getting better grades. It's not rocket science. To learn well, you need to eat well. Healthy food gives the energy that our bodies and minds require to grow, feel positive, be active, stay fit, and learn. Therefore if you are focused on enhancing your academic performance incorporate healthy nutritional habits and exercise into your lifestyle.

From Page 18 (How to Empower Yourself.....)

7. Empower Others And Give Back.

Empowered women empower and support other women, like we just touched on. It's important, especially with what's happening now with women's rights, for us women to stand together and empower each other. Even just finding our voice and telling our stories can be enough to empower others, you never know when someone shares your experiences and if hearing your story can inspire hope and strength in someone.

By sharing your story, maybe you even just encourage someone with a similar background to accomplish or strive for their dreams. We are only as strong as our weakest link, so it's important for us to ensure that we are all empowered as women. That we all have the confidence, self-love, and self-respect to stand up for ourselves so that inequality and abuse of women becomes a thing of the past.

And no matter where you are, there is always a struggling girl or woman. One awesome way to give back and empower others is to mentor young girls and women in your city, to be that positive support system for someone to lean on from time to time. Giving back is also incredibly rewarding and only empowers you more by giving you an increased sense of value and power, knowing you can make such a huge and positive difference in someone else's life.

When you help others, you help yourself. And it doesn't even have to be as time consuming as mentoring, even just being nice to those you encounter throughout your day, saying good morning with a smile, spreading good vibes and positivity is giving back, too!

Little minds are tamed and subdued by misfortune; but great minds rise above them.

THE WOMEN EMPOWERMENT COLUMN

How To Empower Yourself As A Woman

(Written By - Our Correspondent)

It's a very important time to be a woman right now. Between the #metoo movement, #timesup, and women's marches around the world, we're in a pivotal time for women's rights and equality. Although it's not very empowering to consider ourselves victims of history, it's undeniable that because of current and historical gender norms, we have all been made to feel at one time or another, either treated unequally, told we can't do something or have something because we are women, or made to feel physically, emotionally, or mentally helpless at the hands of a man.

Physical, emotional and sexual abuse, unequal pay and career opportunities, and even just being called a bitch for being a powerful or assertive woman—these are all by-products of a male dominated world culture. But ladies, things are finally changing, and we're lucky enough to witness and be part of the change. It's exciting times for us women, and there's no better time to learn how to empower yourself as a woman.

What Does An Empowered Woman Look Like?

We are exposed to powerful women all the time and all around us, and most of us have a female idol, or mentor that inspires us and exudes confidence and power. The question is, how do we empower ourselves to be like our idols and mentors?

Cosmic Goddesses Rise Up!

After centuries of being made to feel inferior to and by men, it's time for us to be heard, respected, and treated equally. There is no better time to feel proud and optimistic about being a woman. Together, with our roaring voices and unwavering strength, we have already changed so much, but the battle isn't over yet.

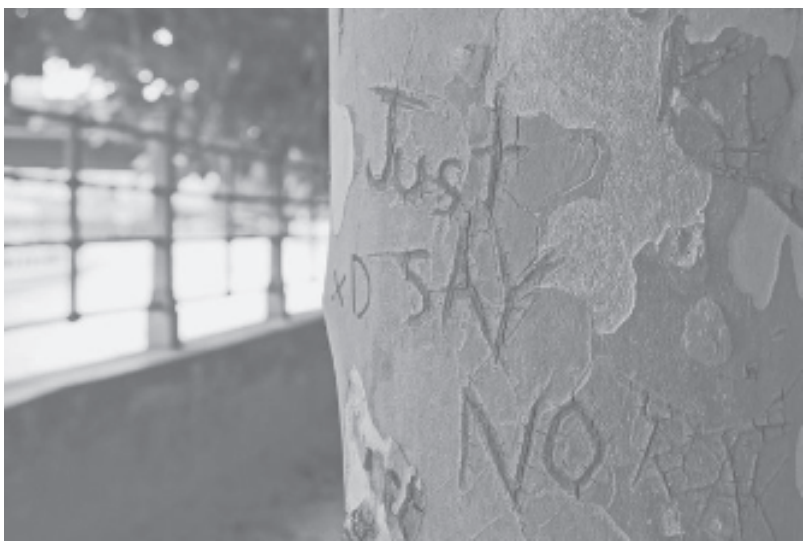
The culture and standards are changing, but it's still up to us to ensure the enforcement of our equality and respect. It's important for women to stand up for ourselves and each other, in order to really take our message of equality home and to stick it to the man, no pun intended.

We will no longer be victims, and we no longer need to stay silent and boxed into traditional gender roles and stereotypes. It's our time to speak our truths, take back our power, and unite to change the world once and for all. But every drop in the pond counts, so by empowering yourself, you help to empower women as a whole. Here are some helpful tips on how to empower yourself as a woman!

7 Tips On How To Empower Yourself As A Woman:

1. Stand Up For Yourself.

This one has always been tricky for women in particular, because we've always been told to keep our opinions to ourselves, never express negative feelings, and to be "ladylike," polite, agreeable, a people-pleaser. Any deviation from these qualities gets us labeled crazy, unstable, or bitches, and I admit standing up for yourself doesn't tend to go hand in hand with these stereotypes of a "lady," but that's ok.



It may feel uncomfortable at first to find your voice and stand up for yourself, trust me I know. But that discomfort is better than years of pent up resentment and anger brewing inside you from all the times you've been too shy or afraid to stand up for yourself. And what's the worst that can happen, someone calls you a bitch? Just brush it off, after all they're just upset that you put them in their place, and couldn't think of anything more intelligent to say. And in the end, at least they'll know that you're no doormat!

2. Say NO To People.

Hand in hand with standing up for yourself, saying no to people can also feel uncomfortable or unnatural if you've been raised with the typical stereotypes of people-pleasing, Stepford-wife-type ideals of a "lady." Saying "no" is the first step to standing up for yourself, and a great place to start.

Have you ever found yourself making plans that you are already dreading, to be polite? Say no! Be assertive! Why should you be made to do something you don't want to for mere appearances? Ever find yourself stretching yourself thin and committing to help out a million people just because you're afraid of what people might think if you didn't? I'm here to tell you that that's nonsense.

It's not only perfectly ok, but better for your own mental well-being to say no when you can't or don't want to help out. Take control of your life. Remember, you need personal time for yourself and to do the things that are important to you. You are your first priority and it's ok to believe that. Putting yourself first is a form of self-love and self-respect, which are both vital to empowering yourself.

That's not to say you need to be a self-centered selfish person who only does things for themselves, it's just to say you come first. Helping others is second. If helping others is causing too much stress in your life and hurting you, then it's not worth it and that's ok. Feel confident saying no to things that interfere with your goals, happiness, and well-being.

3. Think Positive, Empowering Thoughts.

To be empowered, you have to think empowered. Mind over matter, ladies! This tip is all about recognizing and catching negative thoughts when they happen, and making a conscious effort to replace them with positive ones. Your mind is a powerful tool, and believing you are powerful is being powerful.

It's all about choosing to shift your thought patterns and beliefs to positive ones. This is easier said than done and can take practice, but it all begins with having awareness of your thoughts and switching out negative ones that don't serve you with positive ones. You are your number one supporter, so it's important to stay optimistic and believe in yourself.

Your opinion of yourself is the most important one, the only one that matters really. To maintain support for yourself you have to maintain your positive attitude and empowered thoughts! Remember that even just forcing a smile causes a chemical reaction in your brain that releases dopamine and serotonin, so you can trick your body into a better mood by just smiling! Now, if it's mind over matter, imagine how powerful it is to trick your mind into being happy with positive thoughts!

4. Choose To Be A Warrior, Not A Victim.

Another key mentality shift is that from victim to warrior. An empowered woman is nobody's victim. This shift is all about taking your power back and shifting your thoughts and mind frame from that of prey to predator. A victim is someone helpless that something is done to, a warrior is strong and is the do-er.

Being empowered is all about being in control of your life and even when you do feel victimized by someone or something, taking that situation, learning from it and turning it into something productive and constructive—that's a warrior. It's all about realizing no matter how down or helpless or hopeless you feel, you always have a choice.

Just knowing that you always have the choice and ability to change your situation, is one of the most empowering things of all. Even when you feel you don't have a choice in a given situation, you at least always have a choice in the perspective you have on it and how you respond to it. Your perspective is something nobody can ever take from you.

5. Take Care Of Yourself.

Like we mentioned in Tip 2, making yourself your number 1 priority is very important when you want to feel empowered. That entails taking care of yourself physically, mentally, emotionally and even financially. You have to make time for the things that are important to you in all these aspects of your life.

Probably the easiest way to start taking care of yourself is exercising that power of choice you have and choosing healthy lifestyle habits, like sleeping enough, eating healthy, exercising, and passing on toxic things like drugs and smoking. Healthy women tend to be confident women, women who love, and respect themselves enough to value their mind and body and take care of them.

When you're physically healthy, your mind tends to be clearer and your emotions better balanced. And if you're mentally, emotionally, and physically stable, you have more energy and positivity, helping you to work longer and more efficiently towards your financial goals.

Working out in and of itself has so many great benefits that go hand in hand with empowering yourself. I don't know anyone who doesn't feel accomplished after a good workout, and exercise does wonders for stress relief and a positive mood. But remember that relaxing and recharging is just as important for your well-being, both physically and mentally.

6. Only Surround Yourself With People That Empower You And Treat You As An Equal.

We've all had to deal with people who treat us like they're superior to us, or who don't respect us the way they should. That is unacceptable, no excuses. You should either cut those people out of your life and/or demand they treat you equally and with respect. You don't ever have to take crap from anyone, and you are inferior to nobody.

Choosing to surround yourself only with supportive and respectful people who treat you as an equal is something you always have control over, and ensures that you have an environment that's conducive to feeling empowered. It's important to always be around positive people that pick you up because negative people can drain your energy and nobody needs to waste their time being drained!

There's also nothing more empowering than having a great support system to turn to when you feel down, cuz let's face it, even the most powerful women have bad days, and we need positive people to lean on sometimes! Powerful women support each other, and confidence is contagious!

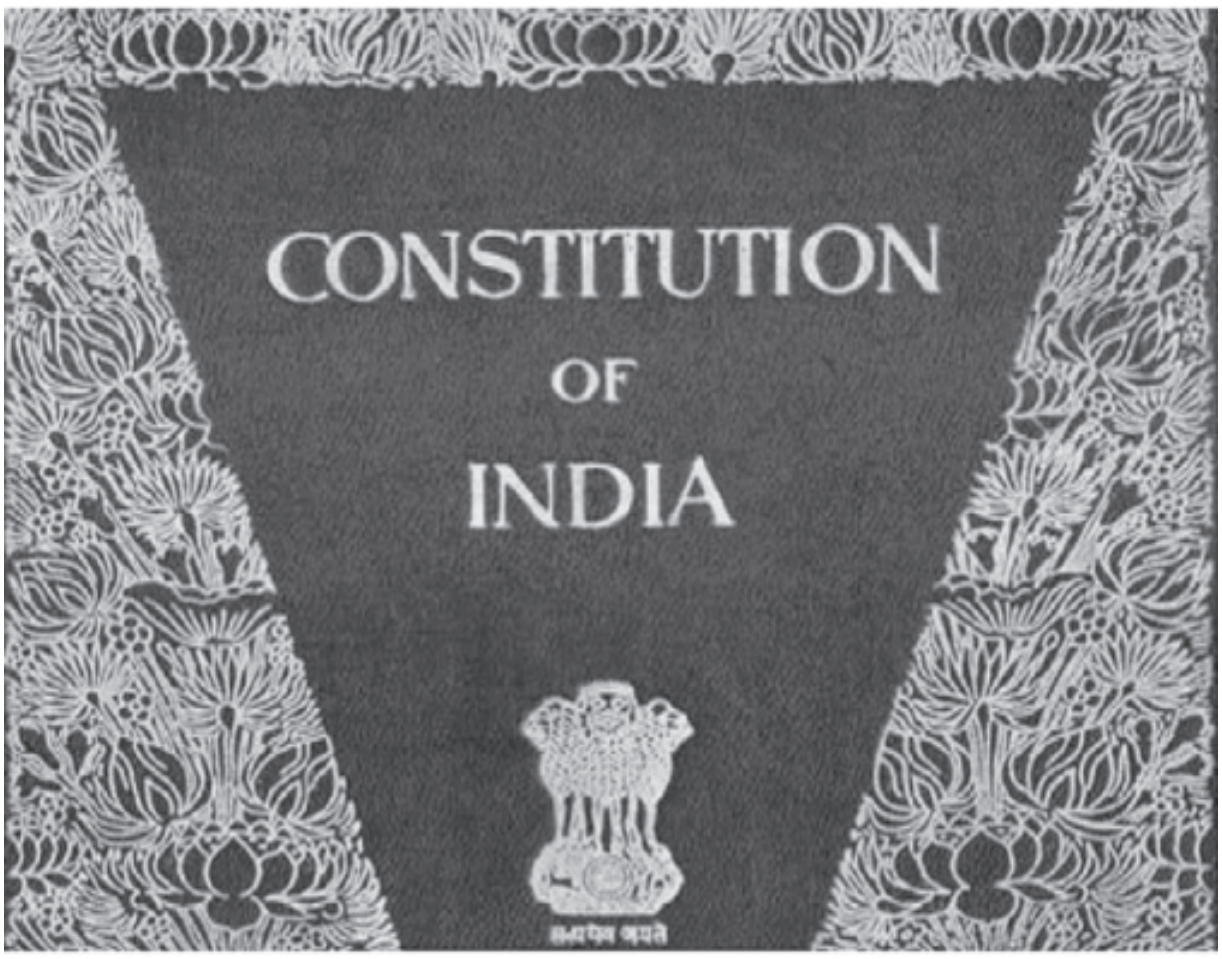
Continued Page 17

NEWS & VIEWS EXPRESS

Preamble To The Indian Constitution

(Written By - Our Correspondent)

The preamble of the Indian Constitution serves as a brief introductory statement of the Constitution that sets out the guiding purpose, principles and philosophy of the Indian Constitution.[1]By 42nd Constitutional Amendment, 1976, it was amended which determined to constitute India into a Sovereign, Socialist, Secular and Democratic Republic. It secures justice, liberty, equality to all citizens of India and promotes fraternity amongst the people.



The idea of the following things can be given by the Preamble which are :

- Source of the Constitution
- Nature of Indian State
- A statement of its objectives
- Date of its adoption

The Preamble of Indian Constitution

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC and to secure to all its citizens :

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity;

and to promote among them all

FRATERNITY assuring the dignity of the individual and the unity and integrity of the Nation;

In Our Constituent Assembly this twenty-sixth day of November, 1949, do Hereby Adopt, Enact And Give To Ourselves This Constitution.

Components of Preamble :

1. It is indicated by the Preamble that the source of authority of the Constitution lies with the people of India.
2. Preamble declares India to be a sovereign, socialist, secular and democratic republic.
3. The objectives stated by the Preamble are to secure justice, liberty, equality to all citizens and promote fraternity to maintain unity and integrity of the nation.
4. The date is mentioned in the preamble when it was adopted i.e. November 26, 1949.

Key Words In The Preamble

1. Sovereign

The term 'Sovereign' which is proclaimed by the Preamble means that India has its own independent authority and it is not a dominion of any other external power. In the country, the legislature has the power to make laws which is subjected to certain limitations.

2. Socialist

The term 'Socialist' was added in the Preamble by 42nd Amendment, 1976 which means the achievement of socialist ends through democratic means. It is basically a 'Democratic Socialism' that holds faith in a mixed economy where both private and public sectors co-exist side by side.

3. Secular

The term 'Secular' was incorporated in the Preamble by 42nd Constitutional Amendment, 1976 which means that all the religions in India get equal respect, protection and support from the state.

4. Democratic

The term 'Democratic' implies that the Constitution of India has an established form of Constitution which gets its authority from the will of the people expressed in an election.

5. Republic

The term 'Republic' indicates that the head of the state is elected by the people directly or indirectly. In India, the President is the head of the state and he is elected indirectly by the people.

Interpretation By The Supreme Court :

- Berubari Union case

In this case, it was held by the Supreme Court that the Preamble is the part of the Constitution.However, it recognised that the Preamble could be used as a guiding principle if a term in any article of the Constitution is ambiguous or has more than one meaning.

- Keshvananda Bharti v. State of Kerala

In this case, The Supreme Court overturned its earlier decision and held that the Preamble is a part of the Constitution and can be amended under Article 368 of the Constitution. Again, in LIC of India case, the Supreme Court held that the Preamble is a part of the Constitution.

Right to Information - The Current Legal Status

(Written By – Our Correspondent)

A Democracy is popularly defined as a Government of the people, by the people and for the people. This was the definition given by Abraham Lincoln, former President of the United States of America, in one of his speeches. This definition points to a form of Government where people select who will represent them and these representatives must work for the welfare of the people. When people themselves have such a big role to play in the functioning of the Government, it should be well known that they have a right to know about the affairs of the Government, and secrets should not be kept from the people, unless required.

Right To Information Under Constitutional Law

The Hon'ble Supreme Court of India through various judgments has interpreted the right to freedom of speech and expression as given under Article 19(1)(a) of the Constitution of India to include the right to form and express opinions as well. Further, in the case of Essar Oil Ltd v. Halar Utkarsh Samiti, a PIL filed in order to obtain information about the basis of permission granted for a pipeline being constructed through a wildlife sanctuary, it was held that the Right to Information was also implicit in the Right to Life and Personal Liberty as guaranteed under Article 21 of the Constitution of India. This is because, a secret government decision could greatly affect the lives and livelihood of the people. Thus, it is clear that the Courts advocate the right to information, and continued to do so for a very long time, even without a legislation describing the terms of such a right.

The Right To Information Act, 2005

The preamble of the Act states that the very purpose of the Act is to promote transparency and accountability in the functioning of the democratic Government, by providing the citizens the right to secure access to information about the functioning of public authorities, and establishment of Central and State Information Commissions for the same. Section 4 of the Act provides that it is the duty of public authorities to maintain records of its functioning and make it easily accessible to the people. Section 6 and 7 give out the procedure to obtain such information. Section 8 of the Act gives out the information exempt from the provisions of the Act. This is where interpretation of the statute plays a big role. These exemptions are subject to the public interest test. In CBSE v. Aditya Bandopadhyay, the main issue before the court related to right to evaluate answer books after giving a public examination. CBSE contended that this was not required in fiduciary relationship as under Section 8(1)(e) of

the Act. It was held that corrected answer sheets must be provided under RTI.

In the case of RK Jain v. Union of India , the information requested was inspection of adverse confidential remarks against 'integrity' of a member of tribunal and follow-up actions taken on issue of integrity. The exemption was claimed on the basis of Section 8(1)(j).The Court interpreted Section 11 of the Act as an exemption to give information when it is considered confidential by a third party, while it only gives the procedure to inform the third party before giving out such information. This may be possible even if the third party denies it, if the information pertains to larger public interest. Thus, various loopholes have been found in RTI Act, 2005 that may be exploited and misused. Interpretation of the Statute plays a very big role here, as this legislation directly related to a fundamental right guaranteed by the Constitution of India.

Indian Perspective On The Right To Privacy

Article By : Sri Kali Prasanna Mishra, Sr. Advocate, Orissa High Court & President, Orissa High Court Bar Association

The concept of privacy can be traced out in the ancient text of Hindus. If one look at the Hitopadesh it says that certain matter (worship, sex and family matters) should be protected from disclosure.

Right to Privacy is not explicit in the Constitution of India, so it is a subject of judicial interpretation. The judicial interpretations of fundamental right bring it within the purview of fundamental right. The journey of this project would start from the search of answer of issue that whether the right to privacy is a fundamental right, through analysis of cases and some pioneering work of scholars.

International Instruments :

Article 17 of the International Covenant on Civil and Political Rights states about the right to privacy, it says "No one shall be subjected to arbitrary or unlawful interference with his privacy, family, or correspondence, nor to unlawful attacks on his honour and reputation". Whereas Article 12 of the Universal Declaration of Human Rights 1948, states "No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks". Both instruments provide the right to privacy to the citizen, and the states, who are signatory to it, are expected to fulfil these rights.

Since India is a signatory to the International Covenant on Civil and Political Rights and Universal Declaration of Human Rights, 1948, India has the obligation to enforce these rights. In the lack of enabling legislation, the ICCPR can have the legal force as the other laws in India. And the UDHR is a mere

declaration, and it does not have the legal force. But the courts has used provisions of ICCPR and UDHR to make its argument stronger ; and also in order to make realized the government about his obligation towards its citizen and towards international instruments.

Evolution of Right To Privacy:

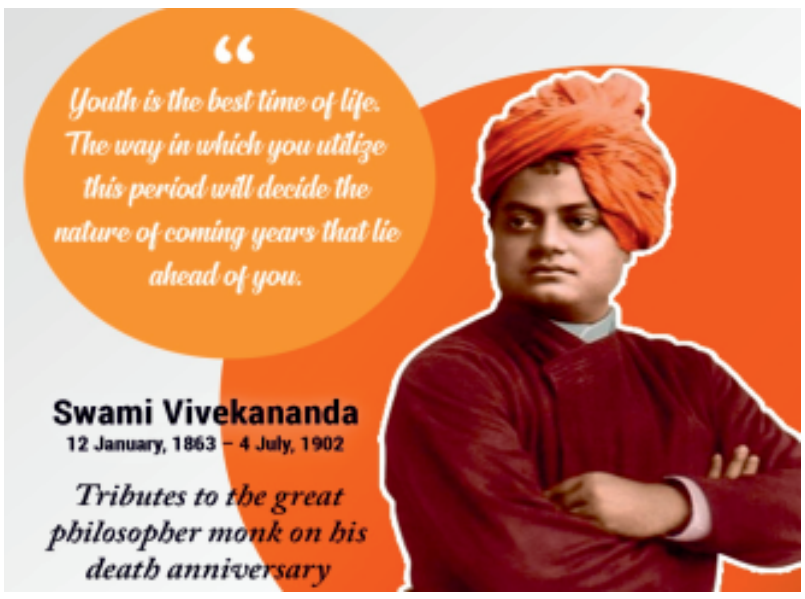
In M.P. Sharma vs Satish Chandra (here in after M.P. Sharma Case), the Supreme Court on the issue of 'power of search and seizure' held that they cannot bring privacy as the fundament right because it is something alien to Indian Constitution and constitution maker does not bother about the right to privacy.

After M.P. Sharma Case, in Kharak Singh Case, the Supreme Court on the issue of whether surveillance, defined under Regulation 236 of the U.P. Police Regulations is amount to infringement of fundamental right and whether right privacy comes under the purview of fundamental right ; they denied the right to privacy as fundamental right and they concluded that "the right of privacy is not a guaranteed right under our Constitution and therefore the attempt to ascertain the movements of an individual which is merely a manner in which privacy is invaded is not an infringement of a fundamental right guaranteed by Part III"

The next case was the Govind vs State of MP, where the right to privacy was discussed in detail. The issue was quite similar to the Kharak Singh vs State of UP, but this time the approach of judgment was rather different. They upheld the validity of Madhya Pradesh Police Regulations, 855 and 856, made under Section 46(2) (c) of Police Act, 1961, under the reasonable restriction. Judges were unable of deciding that whether the Right to Privacy is a fundamental right or not and they pass on the burden to the next cases through saying that the "The right to privacy in any event will necessarily have to go through a process of a case-by-case development". It is right, one good concept of law, cannot be developed through one case, because it is very hard to see the exceptions and consequences of that concept of law through one case.

In Maneka Gandhi vs Union of India, Supreme Court interpreted the Article 21 in broad sense. They said that both the rights of personal security and personal liberty recognized by what Blackstone termed 'natural law' are embodied in Article 21. Maneka Gandhi Case started the wide interpretation of Right to Life, which actually helped the Right to Privacy to fall into to the scope of Right to Life.

Justice K. S. Puttaswamy (Retd.) and Anr. vs Union of India And Ors is a landmark judgement of the Supreme Court of India, which holds that the right to privacy is protected as a fundamental constitutional right under Articles 14, 19 and 21 of the Constitution of India. The judgement of the 9-judge bench contains six concurring opinions affirming the right to privacy of Indian citizens. It explicitly overrules previous judgements of the Supreme Court in Kharak Singh vs. State of UP and M.P Sharma v Union of India, which had held that there is no fundamental right to privacy under the Indian Constitution.



Sexual Harassment At Workplace - An Overview

Article By : Sri Alok Prasad Nanda, Advocate, Orissa High Court & Secretary, Orissa High Court Bar Association

It has been laid down by the Supreme Court that it is the duty of the employer or other responsible persons in work places or other institutions to prevent or deter the Commission of acts of sexual harassment and to provide the procedure for the resolution, settlement or prosecution of acts of sexual harassment by taking all steps required.

What amounts to sexual harassment :

Sexual harassment includes such unwelcome sexually determined behaviour (whether directly or by implication) as :

(a) physical contact and advances
(b) a demand or request for sexual favours
(c) sexually coloured remarks
(d) showing pornography
(e) any other unwelcome physical, verbal or non-verbal conduct of sexual nature.

Steps to be taken by the employers :

All Employers or persons in charge of work place whether in public or private sector should take appropriate steps to prevent sexual harassment. Without prejudice to the generality of this obligation they should take the following steps :

(a) Express prohibition of sexual harassment as defined, above at the work place should be notified, published and circulated in appropriate ways.
(b) The Rules / Regulations of Government and Public Sector bodies relating to conduct and discipline should include rules / regulations prohibiting sexual harassment and provide for appropriate penalties in such rules against the offender.
(c) As regards private employers steps should be taken to include the aforesaid prohibitions in the standing orders under the Industrial Employment (Standing Orders) Act, 1940.
(d) Appropriate work conditions should be provided in respect of work, leisure, health and hygiene to further ensure that there is no hostile environment towards women at work places and no employee woman should have reasonable grounds to believe that she is disadvantaged in connection with her employment.

Laws under which a case can be filed :

Section 209, IPC deals with obscene acts and songs and lays down :
Whoever, to the annoyance of others :
a) does any obscene act in any public place or
b) sings, recites or utters any obscene song, ballad or words in or near any public place, shall be punished with imprisonment of either description for a term, which may extend to 3 months or with fine or both. (Cognizable, bailable and triable offences).

Section 354, IPC deals with assault or criminal force to a woman with the intent to outrage her modesty and lays down that:
Whoever assaults or uses criminal force to any woman, intending to outrage or knowing it to be likely that he will thereby outrage her modesty, shall be punished with imprisonment of either description for a term which may extend to two years, or with fine or both.

Section 509, IPC deals with word, gesture or act intended to insult the modesty of a woman and lays down that:
Whoever intending to insult the modesty of any woman utters any word, makes any sound or gesture, or exhibits any object intending that such word or sound shall be heard, or that such gesture or object shall be seen by such woman, or intrudes upon the privacy of such woman, shall be punished with simple imprisonment for a term which may extend to one year, or with fine, or both. (Cognizable and bailable offences).

- Civil suit can be filed for damages under tort laws. That is, the basis for filing the case would be mental anguish, physical harassment, loss of income and employment caused by the sexual harassment.
- Under the Indecent Representation of Women (Prohibition) Act (1987) if an individual harasses another with books, photographs, paintings, films, pamphlets, packages, etc. containing "indecent representation of women"; they are liable for a minimum sentence of 2 years. Further section 7 (Offenses by Companies) holds companies where there has been "indecent representation of women" (such as the display of pornography) on the premises guilty of offenses under this act, with a minimum sentence of 2 years.

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