

19 private engineering colleges drop out of fee revision

Hyderabad: The landscape of the engineering education in the private colleges is set to undergo a significant shift, which is expected to impact prospective students. The number of private engineering colleges will come down by 19 for the forthcoming academic year. This comes as these colleges did not seek fee revision for the next three-year block period, commencing academic year 2025-26. In response to the notification released by the Telangana Admission and Fee Regulatory Committee (TAFRC), inviting applications from private managements for the fee revision, a total of 157 colleges have applied as against 176 in the block period 2022-25. As per the notification, institutions, which are unresponsive, or do not submit statements of income and expenditure, audited balance sheets among other details will not be permitted to collect any fee. Such colleges will not be allowed to admit students for the forthcoming academic year.

“Colleges may go for progressive closure or seek fee revision in the next year after obtaining necessary approvals from AICTE and affiliating university. Such colleges will only be granted a minimum fee,” sources said. Not only engineering programmes, several private institutions are shying away from offering other professional programmes. This is evident from 62 professional colleges dropping out of the fee revision for the next three-year block period. This time, 1,229 colleges sought fee revision as against 1,291 during the period 2022-2025. As per details, 13 private colleges offering teacher education programmes did not apply and so are eight pharmacy colleges for MPharmacy fee. The fee is revised based on colleges final audited statements of income and expenditure, and balance sheets and developmental needs for the immediately preceding years, particulars of expenditure incurred on salaries and in-



frastructure among others. “Application receiving process has concluded. The Committee will shortly call colleges for personal hearing and later the fee is fixed.”

120-km Godavari stretch, once brimming with water, turns bone dry



The three barrages — Medigadda, Annaram, and Sundilla — were constructed with a gross storage capacity of 16 tmcft, 10.97 tmcft, and 8.83 tmcft, respectively

Hyderabad: The Kaleshwaram Lift Irrigation Scheme (KLIS) was once a symbol of hope, designed to transform the arid landscape and bring prosperity to the region. However, the current state of the project tells a different story. The 120-km stretch of the Godavari River, once brimming with water due to the construction of three barrages — Medigadda, Annaram, and Sundilla — now

lies bone dry. These barrages, which were intended to boost agriculture, pisciculture, and biodiversity, have been left non-functional under the pretext of structural issues.

Larger stretches of the Godavari river above the three barrages have become heavily sediment-laden. The accumulation of sand and organic material has turned the riverbed into soil, providing ample scope for

riverbank encroachment for agriculture. In some areas, Rabi crops are being grown, highlighting the extent of the sediment deposition. The Medigadda Barrage alone has accumulated over 90 lakh tonnes of sand, presenting a revenue potential through sand quarrying. The government has planned desilting operations for the barrage and the surrounding plain, but illegal quarrying has already commenced in certain areas. This inaction could prove costly for the State, as it misses out on potential revenue and faces the challenge of managing the sediment load.

The three barrages — Medigadda, Annaram, and Sundilla — were constructed with a gross storage capacity of 16 tmcft, 10.97 tmcft, and 8.83 tmcft, respectively. These barrages extended irrigation support to over 18 lakh acres while stabilising the existing ayacut to an equal extent. All three barrages were emptied in March 2024 as desired by the National Dam Safety Authority (NDSA) to facilitate an end-to-end inspection of the structural issues. From the second week of June last year, fresh inflows started into Medigadda and subsequently into Annaram and Sundilla. State officials said that Pranahita water could be lifted without impounding any water in Medigadda by putting up gabion structures to divert water to the pump house. Both Sundilla and Annaram would be able to support the lifting operations. However, the Congress government preferred to keep the project idle. With truncated operations allowed, at least one-tenth of the designed capacity of the project

could not be utilised this year. Some key projects, such as SRSP and Mid-Manair, were given water from the Sripada Yellamapalli project. Farmers requested officials to maintain at least one tmc of water in the barrages to stabilise the groundwater table for irrigation. Water in dead storage levels also dried up due to the NDSA officials' request for an end-to-end inspection of the structures. Despite the inspection, no significant progress has been made in rehabilitating the barrages, potentially impacting the second Kharif season. Inflows into Annaram and Sundilla have almost dropped to zero now, while the Medigadda barrage continued to receive some 6,000 cusecs of water from Pranahita. This would have been most useful for the ayacuts, but it is allowed to drain from Medigadda with all its 85 gates left fully open. The surrounding areas, including Ambatipalli, Suraram, Mahadevpur, Bommapur, Elkesavaram, and on the Maharashtra side, Mogapur, Pochampalli, and Wadgam, which had sufficient groundwater till last year, are expected to face a severe water crisis in the coming months. The groundwater table is likely to drop, posing a severe threat to the livelihoods of farmers and the overall agricultural productivity of the region. The people of Telangana, especially the farmers, are bearing the brunt of the government's neglect. It is imperative that the NDSA takes swift and decisive action to restore the functionality of the barrages and maintain river water levels, as urged by water experts.

The rise of India's premier boarding schools: From Empire to Independence and after

Some of India's most prestigious institutions are its residential schools, set amidst the tranquil hills of Mussoorie, Nainital, Ooty, Shimla, and Darjeeling. Admitting only a select few each year, these schools leave a lasting impact on their students. While some view them as bastions of privilege and exclusivity, others acknowledge their role in shaping many of the country's most distinguished individuals. Several of these institutions trace their origins to British India, carrying colonial legacies whose lasting influence remains a topic of debate. Mohit Sinha, an alumnus of The Lawrence School, Lovedale in Ooty, and former housemaster at The Doon School in Dehradun, offers a broader historical perspective: "Long before British rule, India's gurukul system followed a similar model — structured and focused on holistic education. The principles of such an education predate colonialism by nearly 4,000 years, except that the gurukul was caste exclusive."

At the same time, India's modern boarding schools reflect the influence of elite British institutions. "Schools like Eton, Harrow, and Winchester in England have shaped their structure and traditions," Sinha notes. But how have these schools evolved from colonial-era establishments into cornerstones of independent India? A closer look reveals their transformation over time. The concept of 'modern' residential schools had been taking shape in England since the mid-14th century. While the country had a network of grammar schools, it was William of Wykeham, a wealthy businessman and Church official, who laid the foundation for one of the earliest such institutions — Winchester College in 1394, in Winchester, Hampshire, England.

As British historian David Turner notes in *The Old Boys: The Decline and Rise of The Public School*, Winchester was deeply monastic in nature, designed to prepare boys for clerical life. Students followed a strict and secluded routine, spoke exclusively in Latin, the language of the Church, and even adopted the distinctive 'tonsure' haircut, marking them as separate from the lay population. A few years later, in 1440, King Henry VI established the College of Our Lady Mary at Eton, Berkshire, England, directly modeled on Winchester. Given its royal patronage, Eton quickly became highly sought after, attracting ambitious families eager to secure aristocratic connections for their sons. Over time, both Winchester and Eton began admitting increasing numbers of upper-class boarders, reinforcing their elite status. As the British extended their rule over India, they transplanted their educational models along with their governance structures. Historian Sanjay Seth, in *Subject Lessons: The Western Education of Colonial India*, contends that western knowledge, like weapons and wares, was deliberately imposed upon the colonies, serving as a powerful instrument of conquest, representation, and control.

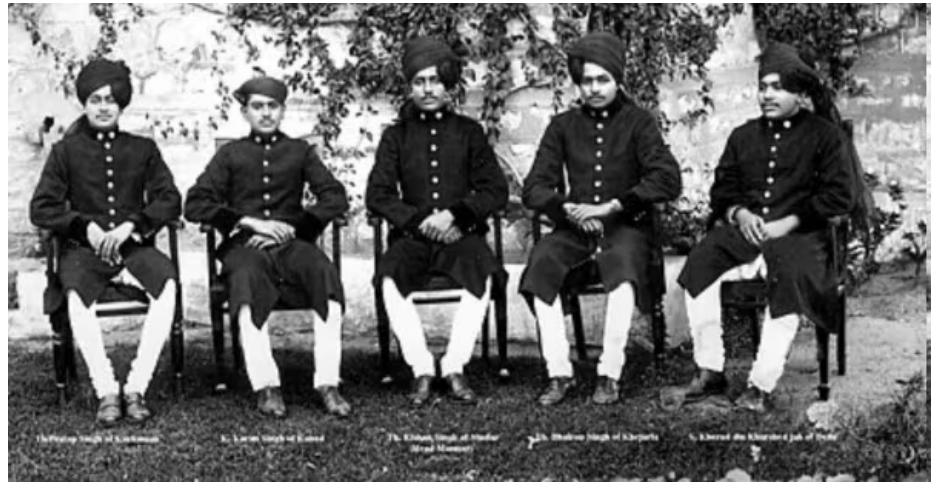
From 1835 onward, colonial authorities led the push for western-style education in India, funneling state funds into modern institutions in Bombay, Madras, and Calcutta. This reshaped the education system, embedding British-style residential schools. The first boarding schools in India

Historian Tim Allender, in his essay *Spatiality, Semiotics, and the Cultural Shaping of Children: The Boarding School Experience in Colonial India, 1790-1955*, distinguishes between the two types of boarding institutions in colonial India: one for orphans and another for the elite. The first category of residential institutions was established by the East India Company around 1790 for destitute or orphaned children, often the offspring of European soldiers and Indian or Eurasian women. Concerned that these Eurasian children might develop expectations of white privilege, which could lead to discontent when unmet, the Company regulated their diets — opting for rice and pepper instead of bread, milk, and tea — and provided them with minimal education. The Madras Military Asylum, established in the late 1780s, serves as an example of these early institutions. After 1813, when the East India Company reluctantly allowed Christian missions into India, the focus of these asylums shifted. Missionaries used the orphans to demonstrate their success in converting and educating Indian children, presenting them as proof of Christian triumph.

British military officers like Sir Henry Lawrence also played a significant role. He established a military asylum in Sanawar (Himachal Pradesh) with his own funds and support from native rulers such as the Maharaja of Kashmir. Lawrence continued funding the school until his death in 1857. The Lawrence Asylum in Ooty, Tamil Nadu (Source: Wikipedia) The Lawrence Asylum in Ooty, Tamil Nadu (Source: Wikipedia)

"A school for orphans, that's how The Lawrence School, Sanawar began. It was never for the elite or privileged. It proved to be a safe harbour for the children of British soldiers who died during the ongoing wars, including the Afghan and Anglo-Sikh conflicts. That sacrosanct duty of care is still the guiding principle at Sanawar," says Himmat Singh Dhillon, Headmaster at The Lawrence School, during an interview with indianexpress.com. Two schools were established during Lawrence's lifetime — at Sanawar in 1847 and Mount Abu (Rajasthan) in 1856. The third followed at Lovedale (Tamil Nadu) in 1858, a year after his death, while the fourth school was later built in his memory at Ghora Gali (current-day Pakistan) in 1860. Additionally, schools in hill stations like Mussoorie, Shimla, and Darjeeling emerged, keeping the British away from the heat, humidity, and mosquitoes of the mainland. Notable institutions included Woodstock School (1854) in Mussoorie, St Andrew's Colonial Homes (also known as Graham's Homes, 1900) in Kalimpong, and Goethals Memorial School (1907) in Kurseong. "These were set up primarily for white missionaries working in India, who needed schools for their own children," says Sinha. Educating the elite

The second category of boarding schools in colonial India, however, was more directly influenced by British models and began to take shape after 1860. These schools, largely localised for the children of colonial elites, blended European education with elements of Indian culture. For boys, this boarding experience mirrored that of elite English public schools, centered on values such as 'manliness', leadership, and competitive struggle. These institutions aimed to



provide credentials for entrance into the Universities of Oxford or Cambridge, eventually leading to prestigious positions in the civil service, the military, the Church, or business. This ethos was reflected in institutions like St Xavier's College in Calcutta (1860) and St Paul's School in Darjeeling (founded in 1864). As Allender notes, "...these institutions allowed a geographically thinly spread population of relatively affluent boys in India to participate, whose parents were culturally attuned to this brand of education."

St Paul's, originally founded in Calcutta in 1829, catered to the sons of East India Company officials and wealthy European merchants. "Calcutta was a hub for the Anglo-Indian community and the Bengali bhadralok (intelligentsia). Notably, figures like Jyotindranath and Satyendranath Tagore, who later joined the Indian Civil Services (ICS), attended St. Paul's," says Pranay Gupta, an author and alumnus of the school. However, with the opening of the Suez Canal in 1869, improved travel options led elite families to send their children to Europe for education. As a result, the school relocated to Darjeeling, where other colonial elite, especially European diplomats and administrators, sought refuge after the 1857 Revolt. "Darjeeling was the summer capital, while Calcutta remained the political centre until 1911. As transport improved, they chose Darjeeling for its more serene environment," notes Gupta. The architecture of these institutions, too, was crafted to attract wealthy families. Allender notes that these grand buildings combined Western-style stone masonry, often using expensive material like basalt from distant sources. By the mid-nineteenth century, interiors, especially dormitories, maintained a European design, with partitioned beds that rarely needed caste divisions, in contrast to the simpler missionary schools of the era.

A special niche in elite schooling was reserved for ruling chiefs and native princes, modeled after prestigious institutions like Winchester and Eton. Notable examples include Rajkumar College in Rajkot (1868), The Daly College in Indore (1870), Mayo College (Boys) in Ajmer (1875), and Aitchison College in Lahore, Pakistan (1886). These schools catered to the aristocracy, offering subjects such as Shakespeare and Shelley, alongside sports like hockey and football — activities traditionally outside the royal family's purview. According to Sinha, their primary aim was to instill a sense of loyalty to and admiration for all things

British. Students at Mayo College, Ajmer in 1932 (Source: Wikipedia) Students at Mayo College, Ajmer in 1932 (Source: Wikipedia) For girls of the same class, the dynamics were distinct, though still predominantly western. Gouri Srivastava highlights in *Women's Higher Education in the 19th Century*, the East India Company, focused on consolidating its territorial gains, was reluctant to address women's education. It also feared provoking social and religious tensions. Consequently, missionaries took the lead in establishing girls' boarding schools, many of which were run by Roman Catholic religious orders. A pioneering institution among them was Loreto House in Calcutta, founded on January 10, 1842. It catered to affluent Europeans, Eurasians and, to a lesser extent, upper-class Indian families. These schools emphasised Western values, such as etiquette, needlework, languages, and poetry, thereby reinforcing the aspirations of the wealthy families. As Allender notes, "This was to make these Indian girls more attractive in the marriage market." By 1850, Srivastava records that over 2,000 girls attended 91 missionary boarding schools, with 41 situated in Tamil Nadu and 28 in Bengal. Residential schools during the freedom struggle Until the early nineteenth century, boarding schools maintained a racial barrier, admitting only those of European lineage. By the early twentieth century, however, as more Indians were granted access, these schools became platforms for political awareness. This shift, argues Allender, marked a change in focus as boarding schools began prioritising Indian-based academic discourse while still retaining aspects of the imperial legacy. This period saw the rise of debating societies, lectures on Indian languages, and studies in Indian literature. By the 1920s, these institutions were shaping future leaders like Jyoti Basu, who was Bengal's chief minister from 1977–2000, and Wing Commander Karun Krishna 'Jumbo' Majumdar, St Paul's graduate and the first Indian to achieve that rank. "The realisation emerged that boarding schools could play a crucial role in training a new generation of social leaders for an independent India," says Sinha. He explains that Satish Ranjan Das, a lawyer educated abroad, recognised the need to cultivate a new class of leaders as India approached self-rule. It was in this backdrop that schools like The Doon School (founded in 1935) came up — away from military and princely traditions, blending successful elements into a more hybrid model. Main Building,

After a health emergency, air pollution foretells an economic one

In his 36 years as a thoracic surgeon, Dr Arvind Kumar has literally heard and opened tens of thousands of chests. According to him, the human lung, a pristine pink at birth, tells the tale of each breath taken over a lifetime. "For years, I could trace the pattern of urban pollution on lung tissue as black deposits — a few spots here, larger stains there. Now it's everywhere," Dr Kumar said from his office in Medanta Medicity Hospital, Gurugram. He has been disturbed by the harrowing effects of air pollution on lungs, and not just in people with lung diseases or the elderly. "The lungs of teenagers now look like the lungs of lifelong smokers. Pollution isn't just in our cities — it's inside us." This transformation of chest health is an invisible epidemic affecting millions across India, now underscored by the findings in the United Nations Environment Programme (UNEP) Emissions Gap and Adaptation Gap reports for 2024. Emissions are increasing worldwide but in few places as much as in India, more than 6% from last year. The data is unequivocal: pollution is now more than an environmental issue. It's a national health emergency. India's poor air quality has been silently affecting communities for decades, with lethal results. "Air pollution is the biggest environmental risk to health, even the leading cause of premature death in India," Dr Pallavi Pant of the Health Effects Institute said.

According to her research, nearly 2 million lives were cut short in India in 2021 alone due to pollution-related diseases. Among the most affected are pregnant women, children, the elderly, and those already facing health challenges. "For these populations, the risk of respiratory infections, impaired lung function, and even cardiovascular conditions due to pollution is devastating and far-reaching," she said. Exposure to air pollution can permanently impair lung development, leading to chronic respiratory issues and asthma in children. "These aren't just minor inconveniences," according to Dr Pant. "This is a fundamental health crisis where children grow up with a lifetime of diminished health and quality of life." To her, the real tragedy is that risks fall heaviest on the most vulnerable. "Those with fewer resources are the hardest hit. They often live closest to pollution sources and lack the means to protect themselves. This is a crisis of inequality as much as [of] health."

Dr Soumya Swaminathan, former chief scientist at the World Health Organisation (WHO) and chairperson of the M.S. Swaminathan Research Foundation, Chennai, said, "The impacts of poor air quality are systemic. High pollution levels are linked to non-communicable diseases such as hypertension, diabetes, and stroke. We're talking about lifelong health impairments that are often invisible but devastating." According to her, early and prolonged exposure to pollutants during critical periods like pregnancy and early childhood can predispose individuals to lifelong illnesses. "Children are growing up with a fundamentally compromised baseline for health," she added.

India launched the National Clean Air Programme (NCAP) in 2019 to reduce particulate matter pollution by 20-30% by 2024, before adjusting the target to a 40% reduc-

tion by 2026. According to experts, the NCAP has significant room for improvement. "The NCAP has become, for many, a symbol of intent without effective action," Dr Kumar said. "We have policies but where we're faltering is in ground-level implementation." Dr Kumar argued health must be a central focus of environmental policies whereas current efforts are "piecemeal and lack teeth". He described the NCAP's measures as "band-aid solutions" and called for stricter enforcement and a shift toward health-centric policies and ground-level action. Dr Pant commended the NCAP's role in raising awareness and enhancing air quality monitoring but also called out its shortcomings in sustained, source-specific emission reductions. She suggested instead that a regionalised approach could allow for more targeted, impactful solutions. "The NCAP needs localised strategies focused on specific emission sources," she said. Dr Swaminathan also urged the NCAP to go beyond monitoring pollutants to focus on reducing emissions and prioritising health outcomes. "The NCAP's goals need to integrate public health directly. Pollution control isn't just about air quality. It's about people's lives," she said. "The program must shift from mere monitoring to actively reducing emissions with health as its primary focus." Vaibhav Chaturvedi, an environmental economist at the Council on Energy, Environment and Water, stressed that the NCAP's targets are unrealistic if it doesn't pivot towards clean energy and reduce India's dependence on fossil fuels. "To make the NCAP effective, we need a structural overhaul, particularly in how we produce and consume energy," he said. Sophie Gummy, a technical officer with the WHO's Air Quality and Health Unit, expressed belief that the NCAP lacks the comprehensive, multi-sectoral approach required to achieve meaningful progress. She also said it needs to be accompanied by policies that protect vulnerable populations disproportionately affected by air pollution. "NCAP is a beginning, but a whole-society approach that spans sectors and prioritises the vulnerable is essential," she said. Economic and social costs "Poor air quality isn't just costing lives; it's costing livelihoods," Gummy added. Dr Swaminathan also called air pollution an economic crisis as well for its ability to raise healthcare costs and lower productivity (through lost work and school days). "Poor air quality leads to increased hospitalisations and higher healthcare costs, adding a financial burden on families and the health system," she said. Vulnerable, low-income communities bear the heaviest burden: "The poorest are most exposed yet least equipped to mitigate these effects," according to Dr Swaminathan — a situation reminiscent of the effects of climate change. "The burden of non-communicable diseases linked to pollution continues to rise" even as climate-related challenges like heat waves exacerbate health and productivity losses. Dr Kumar's 'My Solution to Pollution' campaign, under his foundation and the Doctors for Clean Air initiative, encourages communities to take small but meaningful action. "People can't wait for government solutions alone," he said. "If 140 crore people commit to small actions, like reducing idling cars outside schools or limiting waste-burning, we can



Air pollution is an economic crisis for its ability to raise healthcare costs and lower productivity through lost work and school days, especially in low-income communities

significantly reduce the local pollution load." A pilot program to prevent idling vehicles near school zones showed improved air quality, a potential model for broader change. "If each of us does our part, we can reduce pollution at the ground level."

The clean energy caveat Despite increasing public awareness, India's heavy dependence on fossil fuels remains a significant obstacle to change. While the government promotes electric vehicles, Dr Kumar warned their benefits would be limited if their batteries are charged with coal-fired electricity. He contended that an overhaul of energy infrastructure is required, including a complete transition away from coal. "We're tackling the problem from the wrong end," Chaturvedi, the environmental economist, said. "We're addressing symptoms — dust suppression, controlling stubble burning — but not the root cause, which is our reliance on fossil fuels and inadequate clean energy infrastructure." "True progress in air quality will require a pivot from coal to renewables, coupled with a robust national investment in sustainable infrastructure." Dr Pant also pointed out that people in rural locales bank extensively on biomass and also need access to cleaner energy. "For many rural families, wood and animal dung are the only affordable options for cooking fuel," she said, adding that the health impact of household pollution, particularly for women and children, is as important as urban air quality. Policy reforms, public accountability

Experts said it could be critical for the NCAP to adopt a regional approach rather than presume one size can fit all. Dr Pant suggested localised targets could allow India's diverse regions to address their most pressing pollution sources — industrial emissions, agricultural burning, or urban vehicle congestion — differently. "Air pollution is deeply complex. By prioritising interventions

at the state and local levels, we can tailor strategies to where they're needed most," she said. Second, while experts have mixed reactions to listing pollution as a cause of death on death certificates, Dr Kumar said this explicit acknowledgment could increase public awareness. "When you add pollution to the death certificate, you're making people see the cause-and-effect link in their lives," he says. Dr Swaminathan agrees: "Having an official link on death records could push more serious health and policy actions against pollution."

She also proposed establishing a regulatory body akin to the U.S. Environmental Protection Agency to enforce environmental standards and integrate interdisciplinary policymaking. "India lacks a comprehensive body to regulate air, water, and other pollutants that threaten public health," she said. Dr Pant echoed her, saying "a unified regulatory body could streamline and strengthen India's fragmented environmental policies." But Dr Kumar was wary of bureaucratic hurdles: "We don't need more agencies; we need stronger enforcement." Toward lasting solutions The UNEP reports called for systemic changes in the transportation, energy, and health sectors to curb pollution effectively. Experts agreed a national clean air strategy should prioritise public health, climate mitigation, and community engagement. For Dr Kumar, the urgency can't be overstated. "Pollution is now in our lungs, and it's not going to leave on its own. Each breath we take is a reminder of how much needs to change." "This isn't only about the environment," Dr Pant added: "it's about every person in this country having the right to breathe without fear." India stands at a crossroads and its choices today will determine the health of generations to come. As Gummy said, "Investing in clean air today is investing in India's economic and social future."

The birthplace of Polo, the graveyard of the Japanese army

Any history of Manipur must necessarily begin by stating that the present name by which the state is known is a fairly recent coinage. A few decades prior to the 1789 French Revolution, the state was known to its neighbouring kingdoms and regions both in India and Burma by a diversity of names. Numerous 18th century reports by British officers describe it as Mecklay; the Ahoms called it Makeli, the old Assamese name was Moglan, and for the Cacharis it became Magli. For the neighbours to its east, Manipur was called Kasse by the Shans, and Ka-the by the Burmese. The state is a natural labyrinth between hill ranges, with the exception of the Imphal valley that forms a vast plain which has been the stage of civilisation and conflict for millennia. Located at a crossroad between Indo-China and the Indian mainland, Manipur's ethnic pool owes its diversity to the waves of human migrations that have left their traces. It would then be unwise to claim unquestionable autochthony by either the hill tribes or those in the valley. The Meiteis or Maithai are one of the four old tribes living in the plains, converting to Hindu-Vaishnavism just before the arrival of the British in the 18th century. The hill tribes are the Kukis and Nagas, these are appellations names given by outsiders. British accounts such as those by Major James Rennell and the 1886 Gazetteer by Captain E W Dun do not rise above colonial documentary practice of reliance on elite informers, and racist description of regions, customs and tribes.

Prior to the 8th century, references to Manipur can only be found in epic Mahabharata and Puranic literature, both of which cannot be relied on for reconstructing the state's past accurately. The Poireiton Khunthokpa, recognised as being amongst the most ancient Meitei manuscripts, which scholars have dated to the third century CE "describes the colonisation of the valley by a band of people from the 'land of death' under Poireiton. They first established their colony near Langol Hill.... Before the arrival of this colonizing party, the land was inhabited by some people who were no better than the beasts of the forests, who did not know even the use of fire or of any iron implement. It was this band of colonists from the land of death that brought civilization to this valley", writes Jyotirmoy Roy in his seminal work, *The History of Manipur*. Poireiton is a mythological prince and brother of the God of death in Sanahamism, the indigenous religion of Meiteis.

Numismatic evidence takes the recorded history of Imphal valley back to 3rd CE. Around this time, the sport of Sagol Kangjei or Polo finds mention in the royal chronicle Chaitharol-Kumbaba. Coins were also issued by Maranba (1256 A.D.) Khagemba, Paikhomba (1666 A.D.), and Charairongba (1697 A.D.). "Among the coins collected in Manipur by W. Yumjao Singh (historian), four pieces belong to the second century A.D. The discovery of these coins also indicates that there were trade relations between Manipur and India even in that old period. Accounts of Hiuen Tsang and Kamekshya Tantra refer that Manipur was once a part of the kingdom of Kamarupa," Roy wrote. During these centu-

ries there was constant warfare between the plains-dwelling Meiteis and Burmese rulers. Roy wrote: "According to the Shan chronicles, the brother of a king of Mungman who ascended the throne in 1220 CE gained several notable victories in Upper Assam, where he defeated the Chutiyas, as well as the people in Arakan, Manipur and other countries. A section of the Ahoms occupied the northern and eastern hill tracts of upper Burma and western Yunnan, where they formed a group of states. The most important of them, called Mungman, was known to the Manipuris as Pong. The chronicles of Ava and Shan, local literature and customs indicate the invasion of Manipur by the rulers of Ava and Pong. But history has no record of these invasions till the 18th century." It is believed that in 1250 CE a Chinese invasion of Manipur ended in abject defeat, the prisoners were allowed to settle at Susa Kameng, a village on the road to Dimapur. It was these prisoners who introduced silk-weaving, brickwork, and wooden block printing in Manipur. Today, they are a forgotten and disappearing community. However, there is disagreement over the date of this Chinese invasion. Bijoy Panchali, a Hinduised text on Meitei traditions, gives the date as 1564, while TC Hodson, a British political Agent (asst.) who was posted at Imphal stated that the invasion occurred in 1630 CE. From Pamheiba to Gharib Nawaz to Gopal Singh. The death of Emperor Aurangzeb (1707) is a significant marker in Indian history as it directly and sometimes indirectly precipitated the rise of small states all over the subcontinent. In the case of Manipur, it coincides with the coronation of Pamheiba (1709) a prince whose parentage and upbringing remains shrouded in myths and legends. One narrative claimed that Pamheiba was brought up by a Naga chief, and that at his coronation he adorned a Naga robe. According to the 18th century text, Bijoy Panchali, Pamheiba's popular title, Gharib Nawaz derives from "Karigumba Nawa", which means the enthronement of a prince who was once lost. Under the influence of his father's religious guru, Shantidas Adhikari, a Vaishnava missionary of fortune, Pamheiba adopted Hindu religion as the state religion leading to conversion of all Meiteis from their indigenous religion Sanahamism to vegetarian Vaishnavism. He also took the Sanskrit name of Gopal Singh, and rechristened the ancient name of the kingdom from Kangleipaak to Manipur. His fifteen successors followed this practice diligently till 1955 when the last Meitei king Bodhchandra Singh passed away. Under Pamheiba, the newly rechristened Manipur state achieved major successes against Burma and also expanded territory. The history of the Kuki-Zo people is harder to reconstruct. The paucity of written records, their fierce independent spirit, and the remoteness of their villages has all meant that besides folk history, what we are left with are a few mentions in Meitei literature, and the very recent British Gazettees. The problem is also exacerbated by the rich diversity of clans and tribes. "The whole of the wild tribes who dwell in the mountain district between Bengal and Burma, Cachar and Manipur and Arrakan, have received this designation. In other cases where a large number of tribes have been



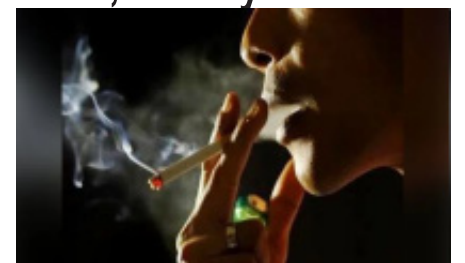
classed together (Abors, Singphos, Nagas), the differences between tribes separated socially and geographically from one another have, since the imposition of the name, been discovered to be so great as to suggest doubts as to the advisability of attempting any such wide generic classification; but in the case of the Kukis, all the tribes (with indeed the exception of the Pois) have so many common grounds of affinity, that the classification seems to have been, however accidental, correct", notes the 1886 Gazetteer, by Captain E W Dun. According to the 1881 Census, there were roughly 30,000 Kukis in Manipur. With increasing Vaishnavisation of the kingdom and gradually increasing contestation over the rich resources of the valley and hills, as well British attempts to subjugate them, the Kukis organised a major

rebellion between 1917 and 1919. The rebellion ended with the death of more than a hundred on the Kuki side and the destruction of more than 120 Kuki villages and their subjugation. But this also laid the foundation of a modern Kuki nationalism as it brought together various clans against a common enemy. P S Haokip's book on Kuki nationalism, 'Zale'n-Gam, The Kuki Nation', records a war song from that time: "Phai chungnung kol kimvel'e (From all around the valley of Manipur) Kolmang tolkon (From beyond the horizon of Burma) Ikal lhangphai thin eisem gom me, Phai thin sem gome (The valley storm brought us together) Lheppon bang kitho tin (Let us stack together (stand together) like the folded clothes) Nam cham khat in vibang pao tadite (Like the birds, let us speak (fight) as one free nation.)"

Smoking alters throat microbiota and worsens flu risk, study finds

New Delhi: Smoking cigarettes can cause changes in throat microbiota and worsen influenza A virus infection, finds a study. Smoking has long been known as unhealthy. It is known to lead to chronic pulmonary disease and has also been associated with increased risk for influenza-related illness, among a host of other conditions.

More recently, scientists demonstrated a link between cigarette smoke and a disordering of the oropharyngeal microbiota composition. However, this association has not been clear. The soft palate, side and back walls of the throat, tonsils, and the back of the tongue make up the oropharynx. To decode, researchers from the University of Bern, Bern, Switzerland led a mice study. They showed that gut and oropharyngeal microbiota are altered by chronic cigarette exposure in mice. Markus Hilty, Associate Professor at the Institute for Infectious Diseases, at the varsity said that smoking alone does not impact respiratory disease. "The smoker's microbiota may also impact respiratory disease and/or infection. In our case, it impacts viral infection," said



Hilty. In the study, the team exposed mice to cigarette smoke, and then cohoused them with air-exposed mice (control) and germ-free mice. The experiment allowed the transfer of the microbiota from donor mice to germ-free mice. The results, published in *mSystems*, a journal of the American Society for Microbiology, showed that the original germ-free mice were colonised either with bacteria from a smoke-exposed or air-exposed mouse. Further, the team infected the recipient mice with influenza A virus and monitored the disease course. They found that the original germ-free mice who received bacteria from smoke-exposed mice had a more severe disease course, which was measured by increased weight loss.

The Constitution still thrives, let it show India the way

This month marks the 75th anniversary of the adoption by the Constituent Assembly of the draft Constitution of India, on November 26, 1949. The Union government has announced that it intends to commemorate this momentous occasion with a special joint sitting of Parliament. There are bound to be several self-congratulatory speeches, from all sides of our fractious political divide. But the speech that should haunt us all is that of the principal draftsman of the Constitution, B.R. Ambedkar, on the eve of the Constitution's adoption. On November 25, 1949, in his magisterial summation of the work of the Drafting Committee he chaired, and before commending its work to the Assembly, he pointedly observed: "however good a Constitution may be, it is sure to turn out bad because those who are called to work it, happen to be a bad lot. However bad a Constitution may be, it may turn out to be good if those who are called to work it, happen to be a good lot." The working of the Constitution, Dr. Ambedkar pointed out, depended on how the people and the political parties applied it. The drafters had made provision for relatively easy amendment, so as to permit the document to keep up with the needs of the times. But the rest depended on the way successive generations of its custodians chose to implement it. The lacunae that B.R. Ambedkar identified

Dr. Ambedkar highlighted the fact that "there is complete absence of two things in Indian society" — equality and fraternity. "On the 26th of January 1950," he declared, "we are going to enter into a life of contradictions. In politics we will have equality and in social and economic life we will have inequality. In politics we will be recognizing the principle of one man one vote and one vote one value. In our social and economic life, we shall, by reason of our social and economic structure, continue to deny the principle of one man one value. How long shall we continue to live this life of contradictions? How long shall we continue to deny equality in our social and economic life?" In calling for a social and not merely political democracy to emerge from the Constitution, Dr. Ambedkar stressed the absence of fraternity as the second major ingredient that was missing in India. "Fraternity means a sense of common brotherhood of all Indians — of Indians being one people. It is the principle which gives unity and solidarity to social life." But thanks to the caste system — the entire structure of caste, he averred, was 'anti-national' — religious divisions and the absence of a common sense of nationhood among some Indians, fraternity had not yet been achieved. But it was indispensable, since liberty, equality and fraternity were all intertwined and could not flourish independently of one another. "Without equality," he pointed out, "liberty would produce the supremacy of the few over the many. Equality without liberty would kill individual initiative. Without fraternity, liberty would produce the supremacy of the few over the many. Without fraternity, liberty and equality could not become a natural course of things. It would require a constable to enforce them."

Today, 75 years later, it is well worth asking what progress we have made to

achieve the aims of the Constitution's drafters, and in particular to fill the lacunae that Dr. Ambedkar identified. Equality has advanced, no doubt, with the abolition of untouchability being accompanied by the world's oldest and farthest-reaching affirmative action programme, in the form of reservations, initially for Scheduled Castes and then for the Other Backward Classes (OBC). These reservations, which were initially intended to be temporary, have now been entrenched in our system and may be said to be politically unchallengeable. But the task of promoting social and economic equality, which Dr. Ambedkar pointed to, is far from complete. The clamour for further opportunities for those who believe that Indian society continues to deny them the equality of outcomes that the numbers warrant, continues to roil our politics. The escalating demand for a caste census is bound to have further implications for the evolution of India's constitutional practice. As for fraternity, the mobilisation of votes in our contentious democracy in the name of caste, creed, region and language have ensured that the social and psychological sense of oneness that Dr. Ambedkar spoke about, is still, at best, a work in progress. But there is no doubt that the sense of nationhood that he felt had not yet come into existence has now become embedded across the country. One only needs to look at the crowds at a cricket match involving the Indian team, or the national outrage and mourning after an international conflict such as the Kargil war (1999) or the Galwan incident (2020), to be aware that there is a strong sense of nationhood despite the persistence of local or sectarian identities. Yet, by reifying caste reservations, India has promoted equality but arguably undermined fraternity. Fraternity had a special place in Dr. Ambedkar's vision; the word was, in many ways, his distinctive contribution to India's constitutional discourse. It also had an economic dimension, with the implicit idea that the assets of the better-off would be used to uplift the untouchables and other unfortunates. Fraternity would both result from and lead to the erosion of social and caste hierarchies. But, as the sociologist Dipankar Gupta has argued, the extension of reservations to the OBCs saw caste as 'an important political resource to be plumbed in perpetuity'. Professor Gupta avers that this 'is not in the spirit of enlarging fraternity, as the Ambedkar proposals are'; while Dr. Ambedkar's ultimate aim was the annihilation of caste from Indian society, for Mandal, caste was not to be "removed", but to be "re-presented". It entrenched caste rather than eliminating it from public life. Highs and worrings lows

This debate may well go on. Still, we can be grateful that the ascent to power of the very elements of Indian politics who had initially rejected the Constitution has not resulted in its abandonment. There is a certain irony to a Bharatiya Janata Party government celebrating a document that its forebears in the Rashtriya Swayamsevak Sangh and the Jana Sangh had found "un-Indian" and devoid of soul. That soul has evolved over 75 years and 106 amendments, and the Constitution still thrives. But the hollowing out of



many of the institutions created by the Constitution, the diminishing of Parliament, pressures on the judiciary and the undermining of the democratic spirit — leading to the V-Dem Institute labelling India as an "electoral autocracy", policed by the "constable" Dr. Ambedkar warned against — mean that much still remains to be done by its custodians. "Independence," Dr. Ambedkar said in concluding his memorable speech, "is no doubt a matter of joy. But let us not forget that this independence has thrown on us great responsibilities. By independence, we have lost the excuse of blaming the Brit-

ish for anything going wrong. If hereafter things go wrong, we will have nobody to blame except ourselves." Seventy-five years later, let us vow to reduce the number of things we need to blame ourselves for — and let the Constitution show us the way. Shashi Tharoor is a fourth-term Indian National Congress Member of the Lok Sabha for Thiruvananthapuram, and the award-winning author of 26 books, including 'The Battle of Belonging: On Nationalism, Patriotism and What it Means to be Indian' (2021). He is a member of the Congress Working Committee.

Scientists uncover game-changing link between obesity and type 2 diabetes

New Delhi: The US scientists have decoded why obesity increases the risk of type 2 diabetes by targeting the fat cells. The study, published in Cell Reports, may advance new treatments for type 2 diabetes and other chronic diseases that work by helping fat stem cells differentiate and make new, smaller fat cells. In a first, the team from the University of California-Los Angeles (UCLA) showed that obesity can make it difficult for the body to produce key cellular building blocks called ribosomal factors. Without sufficient ribosomal factors, fat stem cells cannot produce functioning fat cells. Their energy gets trapped and they become enlarged and play a crucial role in diabetes development.

While fat tissue has been blamed for long, it's "actually essential for maintaining normal glucose metabolism," said Dr. Claudio Villanueva, Associate Professor of integrative biology and physiology at the University of California-Los Angeles. Villanueva explained that people with obesity carry "too much fat tissue which is also not functioning optimally".

Fat tissue stores energy from food. However, when not functioning properly, the excess energy gets rerouted to be stored elsewhere in the body like in the liver — leading to fatty liver disease; or in the heart — leading to atherosclerosis or stroke. The study included obese and diabetic mice. The



The study, published in Cell Reports, may advance new treatments for type 2 diabetes and other chronic diseases that work by helping fat stem cells differentiate and make new, smaller fat cells.

fat cells of these mice were four to five times larger than those found in lean mice. The team administered them with rosiglitazone. The results showed that their ribosomal factors increased to normal levels, which triggered their fat stem cells to differentiate to produce new, smaller fat cells. Further, this enabled the mice's fat tissue to function properly in storing energy. These also generate key hormones that regulate metabolism. However, the scientists found that although the mice remained obese after taking the drug, their "type 2 diabetes essentially disappeared."

The curious case of a 14,000 crore stake hidden in plain sight

Its journey may seem unassuming at first: over the past five years, it has delivered a respectable 29% annual return (CAGR), and today, it is valued at about 15,000 crore. But beneath this modest market cap lies a surprising twist. EID Parry holds a 56% stake in Coromandel International, a leading name in the agri-chemicals sector, with a total market cap of ~56,000 crore. In simple terms, in EID's books, this stake in Coromandel alone is worth roughly ₹31,000 crore — more than double EID Parry's entire market value. This striking contrast raises an important question: Is the market fully recognising the true potential of EID Parry? While its headline numbers might suggest a steady performer, the hidden treasure in its portfolio hints at a much larger story, one where significant upside could be waiting to be unlocked. EID Parry has built its legacy on solid, traditional businesses that have weathered market cycles with steady performance. Over the past five years, its core operations — primarily in sugar production and nutraceuticals — have provided the stability and cash flow that form the backbone of the company. With six modern mills across South India and a combined cane crushing capacity of around 40,800 tonnes per day, the sugar business remains a steadfast, if not flashy, contributor. In FY24, the sugar segment generated roughly 1,865 crore in revenue. However, this business isn't without its challenges. Regulatory interventions, such as export restrictions, mandated cane pricing, and government-imposed blending targets, often squeeze margins into sub 6% range. The co-generation business takes what might otherwise be a waste product — bagasse, the fibrous residue from sugarcane — and transforms it into a valuable asset. EID Parry's integrated sugar mills are equipped with cogeneration units that together produce around 140 MW of power. This segment not only meets the internal energy needs of the mills but also generates surplus electricity, which is sold to the grid or private players. Though the revenue figures for co-generation are smaller compared to sugar (contributing a steady, supportive income stream), the business has evolved as a critical piece of the sustainability puzzle.

3. Distillery: Fueling growth with ethanol. The distillery business is where EID Parry leverages its core commodity to tap into the high-growth green energy sector. Operating through five distilleries with a current capacity of 582 KLPD, the distillery segment is responsible for producing around 60 million litres of ethanol annually. In FY24, this segment generated approximately ₹799 crore in revenue. Ethanol production offers margins — typically in the sub 7% range — similar to the sugar business. The strategic shift to prioritise ethanol, driven by government initiatives to blend ethanol with petrol, has allowed the distillery business to not only offset some of the inherent cyclical nature of sugar but also to act as a growth engine. Products such as spirulina tablets and other organic supplements exemplify the company's commitment to quality and innovation in health and wellness. While growth here has been variable, the strategic importance of nutraceuticals lies in diversifying revenue streams. Traditionally known as a bulk sugar manufacturer, the

company is now positioning itself to capture the premium retail space. This involves transitioning from selling commoditised sugar into offering a range of branded products, such as value-added sweeteners, supergrains, and other processed food items. Though still in its nascent stage, the consumer products segment is rapidly progressing. Recent initiatives include the launch of branded sweeteners and packaged supergrains that aim to tap into the fast-growing Indian FMCG market.

By expanding its distribution — from a few thousand outlets to over 1 lakh retail touchpoints — the company is working to secure a more profitable and resilient revenue base. This shift is designed to unlock premium pricing and reduce the dependency on fluctuating commodity prices, signaling a new chapter in EID Parry's long history. EID Parry's Segmental Rev/Profit Trend. (Source: Investor Presentation Nov 2024) EID Parry's Segmental Rev/Profit Trend. (Source: Investor Presentation/Nov 2024) To understand the disparity between market perception and fundamental value, we first need to examine the individual components of EID Parry's business. The sugar division, historically the company's mainstay, continues to generate consistent revenues, reporting 1,865 crore in FY24. However, sugar is an inherently volatile industry, subject to government pricing policies, export restrictions, and unpredictable weather conditions. Despite these challenges, the business remains a crucial part of India's agricultural landscape. Globally, sugar companies trade at price-to-earnings (P/E) multiples of around 9x, and even with subdued profitability, EID Parry's sugar business could be conservatively valued at 300-400 crore. Beyond sugar, EID Parry has been steadily leveraging its by-products. The co-generation business, which converts bagasse into renewable energy, contributes to operational efficiencies. However, this segment reported a PBIT loss of 75 crore in FY24, reflecting operational inefficiencies or non-cash adjustments. While the revenue from this segment stood at 114 crore, its valuation remains subdued, estimated at 100-200 crore, primarily based on future energy sales potential rather than current earnings. The real game-changer within EID Parry's core operations is its distillery business, which focuses on ethanol production. With the Indian government aggressively pushing for ethanol blending in fuel (targeting 20% by 2026), companies in this space have witnessed improved pricing power and margins. EID Parry's distillery segment recorded ₹799 crore in revenue in FY24, supported by reasonable margins, making it the most profitable standalone segment. Globally, ethanol businesses trade at higher multiples, around 12x earnings, suggesting a valuation range of 750-900 crore. Then comes the nutraceuticals division, which, despite its relatively small contribution to overall revenue, holds significance due to its higher-margin profile. However, FY24 saw a sharp decline in segment profitability, with a PBIT loss of 10 crore. This decline may be temporary, but it highlights the challenge of scaling operations in India's fragmented wellness market. Even with fluctuating performance, nutraceuticals tend to attract pre-



mium valuations due to long-term demand trends, leading to a valuation range of ₹200-300 crore.

Lastly, EID Parry's consumer products segment represents an effort to move beyond bulk sugar sales into the branded retail space. This shift, if executed well, could allow the company to command higher pricing power and improve earnings stability. Though early-stage, a valuation estimate of 300-500 crore can be assigned, assuming moderate traction in premium sugar and wellness-based consumer products. When aggregated, these core business segments contribute to a conservative standalone valuation of around 3,000 crore, which, while modest in isolation, underscores the strength of EID Parry's diversified operations. The Coromandel connection: A 31,000 crore undervalued asset? What makes EID Parry unique isn't just its core business — it's the fact that it owns a 56% stake in Coromandel International, a dominant player in India's fertiliser and agro-chemicals industry. Over the past five years, Coromandel has grown at a 24% CAGR, and today, the company boasts a market capitalisation of ₹56,000 crore. This means that EID Parry's stake alone is worth nearly ₹31,000 crore, more than double its own market capitalisation of ₹15,000 crore. This massive discrepancy is hard to ignore. If an investor were to buy EID Parry today, they would effectively be getting its entire sugar, ethanol, co-generation, nutraceuticals, and consumer business for free, while still paying less than the full value of its Coromandel stake. Even after applying a holding company discount of 50-60%, EID Parry's fair value should be at least ₹18,000-22,000 crore, still higher than where it currently trades.

Why the deep discount?

The persistent undervaluation of EID Parry can be attributed to several key factors: Holding companies in India typically trade at a 50-60% discount due to concerns over capital allocation, lack of direct control over subsidiary cash flows, and the reluctance of management to unlock value. Investors often prefer to buy Coromandel shares directly, rather than purchasing EID Parry and indirectly owning Coromandel.

While EID Parry has been expanding into ethanol, nutraceuticals, and branded consumer products, the sugar segment remains volatile. The industry is highly regulated, with government-imposed cane pricing, ethanol blending mandates, and export restrictions impacting profitability. Trading liquidity concerns While Coromandel trades with a daily volume of 250 crore, EID Parry's daily trading volumes are only 30-40 crore, making it less attractive for large institutional investors. Murugappa Group's conservative approach The Murugappa family, which owns EID Parry, is known for long-term stability over aggressive financial engineering. Historically, they have not pursued spin-offs or stake sales, which frustrates investors looking for near-term catalysts. The investment opportunity: Is there money to be made?

At its current market capitalisation of 15,000 crore, EID Parry is being valued as if its standalone businesses (sugar, ethanol, co-generation, nutraceuticals, and consumer products) are barely worth anything. Assuming the standalone businesses are conservatively valued at 3,000 crore, that leaves the implied valuation of its 56% Coromandel stake at just 12,000 crore — a 60% holding company discount from its fair market value of 31,000 crore. While a 50-60% discount is high, it is not unusual in the Indian market for holding companies, especially those with diversified businesses and a history of conservative capital allocation. However, for investors to see meaningful upside, the following triggers would need to materialise: Narrowing of the holding company discount A partial or full spin-off of Coromandel International would force the market to assign a fairer value to EID Parry's stake. Murugappa Group monetises a portion of its Coromandel stake, either through stake sale or dividend distribution, it could reduce the discount significantly. Ethanol expansion and higher profitability in standalone business The government's 20% ethanol blending mandate by 2026 presents a major growth opportunity for the distillery segment. If EID Parry's ethanol revenue and margins improve, it would lift standalone profitability, making the business more attractive.

How a scheme at IIT-Madras helped academically gifted athletes to secure a seat

On his way to Tirupati in July 2024 to pray for his success in the Joint Entrance Examination (JEE) Advanced, Vangala Vedavachan Reddy, 17, received a “life-changing” call from Professor V Kamakoti, director, Indian Institute of Technology (IIT) Madras. He informed Vangala that he was admitted to the institute’s BTech in artificial intelligence (AI) and data sciences programme under its Sports Excellence Admission (SEA) scheme. For Vangala, the call meant that he no longer had to choose between his academic dreams and his love for lawn tennis. “That was the best day of my life. If it wasn’t for SEA, I would be pursuing computer science at (IIT) Patna,” says Vangala, who won a national championship in 2018. Like him, four other athletes were admitted to IIT-Madras last year under SEA. Launched in 2024, the scheme is a game changer for academically gifted athletes since it offers them supernumerary seats and a chance to continue their athletic careers. Of the 22 IITs in India, only IIT-Madras offers this scheme at present. Mahesh Panchagnula, head, Center of Excellence in Sports Science and Analytics (CESSA), IIT-Madras, says, “We admitted our first batch under the programme in July 2024.”

IIT-Madras started the sports complex in July-August 2024 and invested around Rs 25 crore in the infrastructure required by SEA athletes. The genesis of SEA lies in five campus suicides between September 2022 and April 2023. Looking for a solution to the crisis, the administration, among other steps, conducted blood tests. Prof Kamakoti had told The Indian Express recently, “Some of our students did not have Vitamin D at all. They never saw the sun because they were always studying... So last year, we launched SEA. We have 34 seats — 17 gender-neutral and 17 for women. My message is, ‘Go and play, and you will still have a chance to get into IIT-Madras.’” To qualify for admission under SEA, candidates should have won at least one medal at a national or international event in a sport recognised by federations under the union sport ministry in the last four years, scored at least 75% in their Class 12 board exams and cleared the JEE (Advanced) test. Instead of applying through the Joint Seat Allocation Authority portal, they register on a website operated by IIT-Madras.

The qualified applicants are then ranked as per the Sports Rank List (SRL) and the “prestige” of a competition. SRL is a point system, under which an international gold medal means 100 extra points and 35 points for a national gold medal. A competition’s prestige means that an international event should include participation by at least six nations and by 50% of states in a national event. In case of a tie, the candidate with higher international points is given preference. The Indian Express spoke to four of five students who got admission to IIT-Madras last year under SEA. A part of their institute’s teams, they say they practise in the evening since their classes start at 8 am. Though lawn tennis is not a popular sport in Andhra Pradesh’s Kurnool, Vangala’s father, a fan of the game, made his then 7-year-old son take it up to limit his screen time. Teased by friends who found lawn tennis “expensive and difficult”, Vangala’s introduction to lawn tennis was “not easy”. Then



there was his first match when he was in Class 4. “I lost the first round and cried bitterly. After that, I practised hard. In Class 6, I played my second professional match and won,” says Vangala. He adds, “I wish all IITs had this initiative. Sports are great for one’s mental health. Besides, sportsmanship teaches resilience.” Delhi’s Prabhav Gupta, 18, a national-level table tennis player, is pursuing the same course as Vangala at IIT-Madras.

“I have been playing table tennis since I was six. I played for fun at first. Soon, it turned into a passion. I even competed at the state level. After I became the number two player in Delhi, I started competing professionally,” he says. During the pandemic, Prabhav says he could not play table tennis for three months. “I spent all my time studying and developed an interest in science. But balancing sports and studies was tough, especially in Class 12.” And now, Prabhav is now pursuing two of his dreams: studying AI, particularly in applications related to sports, at IIT and playing table tennis. “My favourite spot on campus is the table tennis hall in the sports complex. I practise there daily,” he says. SEA came as a lifeline for Aryaman Mandal, 19, a water polo player from West Bengal’s Midnapore. Diagnosed with a breathing problem at the age of three, he says his doctor recommended swimming as a remedy. But it wasn’t until Aryaman joined water polo that he discovered his true potential. In 2022, he was on the state team that bagged a gold medal at a national tournament. Pursuing BTech in computer science and engineering at IIT-Madras now, Aryaman says, “Since I could not stop swimming completely, I prepared for JEE during the last few months. It was the best day of my life when I learnt that I was going to join IIT-Madras. Water polo is an underrated

sport in India but I hope to represent the country in the sport at the Olympics.” Delhi’s Nandini Jain, 18, a national-level squash player, is pursuing the same course as Aryaman at IIT-Madras.

Nandini says she decided to try out the sport on a suggestion by her father, a squash

player. “I realised I had potential in squash the moment I stepped onto the court. The sound of the ball hitting the wall sparked something in me,” she says. Calling squash “a symbol of resilience”, Nandini adds, “Continuing my training without the constant pressure of choosing between squash and academics was a godsend.”

ChatGPT faces global outage; users flood social media with complaints

New Delhi: ChatGPT, one of OpenAI’s most popular Artificial Intelligence (AI) tools on Thursday faced a global outage as millions of users were unable to access the service.

Many frustrated users took to social media platforms like X on Thursday to report that ChatGPT was not working for them. The complaints indicate that the issue is widespread, with reports coming in from different countries. According to Downtdetector, a platform that tracks online outages, thousands of users have been affected by the outage. The website’s data showed a sudden spike in ChatGPT outage reports early this morning, and the numbers continue to rise as more people face issues. Some users are struggling to log in, while others say the AI is not responding to commands at all.

The heat map (a technique that uses colour to represent data values) on Downtdetector confirms that the outage is based on user-submitted complaints. So far, nearly 90 per cent of users have reported problems with the ChatGPT app, while others are facing issues on the website as well.

OpenAI has not yet shared any official statement on the cause or extent of the outage. Meanwhile, frustrated users are flooding X with posts and memes about the situation. One user humorously wrote, “Today, I lost access to ChatGPT for 20 minutes, and it felt like it was 2015 and Google Search had gone offline for a couple of hours.” Another user added “Everyone coming to X to confirm chatgpt down” with a meme. “ChatGPT down again ??? surprised not surprised !!!,” a user said. Another X user also chimed in, “Chatgpt is always down in the middle of doing my assignment.”

Watching everyone freak out when Chatgpt is down and they have to use their brains we truly r doomed,” another user added. Meanwhile, today’s outage is not the first time ChatGPT has faced technical issues. Recently, on January 23, the AI chatbot experienced a similar global disruption, preventing users from accessing it on both the web and the app. During that outage, Downtdetector recorded over a thousand user complaints, with many frustrated users taking to X to share their concerns about the malfunction.

'Forever chemicals': The new-age Pandora's Box

We are living in an era where invisible plastic particles swirl in our oceans, float through the air we breathe, and even nestle deep within our organs. Microplastics—tiny shards from broken-down plastic goods—have infiltrated the entire planet. Alongside these microscopic invaders, “forever chemicals” like Per- and Polyfluoroalkyl Substances (PFAS) quietly wreak havoc on our bodies and the environment. As India stands on the brink of unprecedented industrial growth, it must also confront the tidal wave of ultra-processed foods laden with hidden toxicants, wrapped in plastics, and ripe for greenwashing.

Microplastics, which are plastic particles of sizes five millimetres or less, enter the environment from a variety of sources. Primary microplastics are manufactured at microscopic sizes for use in products such as cosmetics, personal care items, or for industrial applications. Secondary microplastics, however, break down from larger plastic items like shopping bags, plastic bottles, and fishing nets, eventually disintegrating into tiny fragments that persist for decades. Between 10 and 40 million tonnes of microplastics enter global ecosystems each year. Without significant intervention, this figure could double by 2040. Over 1,300 species of flora and fauna interact with microplastics in some capacity—by ingestion or entanglement—causing disruptions throughout the food web. Worse, microplastics have also been detected in human organs and tissues. They accumulate in the lungs, pass through the blood-brain barrier, and have even been found in the placenta of unborn babies.

The consequences are not yet fully understood, but emerging data links microplastic exposure to oxidative stress, inflammation, ageing, metabolic disorders, DNA damage, and even cancers. Scientists warn that once microplastics are in the environment, they are virtually impossible to remove, which underscores the need for immediate preventive measures—banning certain plastic products, improving waste management, and regulating industries that produce microplastics as by-products. India, a fast-developing economy with a massive population, faces an escalating burden of plastic pollution. A recent report by EA Earth Action projects that India could be the second-largest contributor of microplastics to waterbodies in 2024, releasing nearly 391,879 tonnes—second only to China's 787,069 tonnes. The chemical additives within these plastic particles—heavy metals, bisphenol A (BPA), and PFAS—pose a threat to both aquatic life and human health.

Microplastics do not just remain in rivers or oceans; they make their way into human diets in multiple ways. Alarming studies from Toxics Link, an environmental research and advocacy organisation, have shown that all tested salt and sugar products in India—across brands and packaging types—contained microplastics. Iodised salt exhibited the highest microplastic concentration, while other forms, including rock salt and sea salt, were also contaminated. The Food Safety and Standards Authority of India (FSSAI) has initiated a project to develop standard protocols to detect and monitor



microplastics and nanoplastics in food. Researchers from multiple institutions, including the Indian Institute of Toxicology Research in Lucknow, are working to establish guidelines on microplastic exposure. The eventual aim is to recommend strategies that can limit contamination in food items, ultimately ensuring public health safety. These measures are urgently needed, as microplastics have also been documented in everyday products—from water bottles to personal care items and even certain medications.

If microplastics are an invisible menace in water and food, PFAS pose a similarly stubborn threat. PFAS are used in a range of consumer goods, from non-stick cookware to water-repellent clothing and food packaging. Their chemical structure makes them highly resistant to breaking down, causing them to remain in the environment and human bodies for long periods. Human exposure to PFAS has been associated with a range of health issues, including immune system dysfunction, hormone disruption, and certain types of cancer. Like microplastics, PFAS can enter the human body via water sources, food, and air. Studies highlight PFAS as a subset of an even broader category of modern pollutants—“contaminants of emerging concern”—which also includes pharmaceuticals, nanoparticles, and other industrial chemicals that current regulations do not adequately address.

Amid growing awareness of plastic pollution, many corporations have pivoted toward so-called “eco-friendly” packaging or sustainability claims—a practice often referred to as “greenwashing.” While some initiatives are genuinely commendable, others are superficial or misleading, diverting attention from the fundamental issue of reducing plastic production and improving waste management infrastructure. Some companies,

for instance, market products as biodegradable or compostable without clarifying that these materials often require industrial composting facilities that are not widely available. Consequently, these “green” plastics end up in regular landfills or incinerators, contributing to the microplastic crisis and perpetuating the illusion that the product is environmentally harmless. In India, calls for transparency and accountability should grow. Advocacy groups and environmentally conscious consumers should urge stricter regulations to distinguish genuine sustainability efforts from superficial greenwashing. This can include product labelling standards that accurately reflect the product's environmental impact and life cycle.

India has taken several steps to address microplastic pollution, reflecting growing concern among policymakers and health authorities. The FSSAI is on the verge of finalising recommendations aimed at monitoring and limiting microplastic exposure in everyday food items, including bottled water, salt, and sugar. At the same time, the government is exploring Extended Producer Responsibility (EPR) mechanisms, which would mandate manufacturers and importers to manage the end-of-life disposal of the plastics they produce—although debates persist on whether these obligations should extend to international supply chains. Some regions have gone further, banning the use of microplastics in cosmetics, while proposals also call for mandatory microfibre filters in washing machines to curb the release of synthetic fibres into water bodies. Additionally, the Indian Council of Medical Research (ICMR) has begun investigating potential links between microplastics, antimicrobial resistance (AMR), and public health, signifying the broader implications of unchecked plastic pollution. On the international stage, negotiations continue for a comprehensive plastic pollution treaty, with the primary ob-

jectives of reducing plastic production, improving global waste management systems, and imposing stricter controls on both microplastics and hazardous chemical additives such as PFAS. Convened by the United Nations Environment Programme (UNEP), these intergovernmental discussions aim to forge legally binding commitments that can effectively address a global crisis affecting waterways, ecosystems, and human health across borders.

Individuals can limit exposure by reducing single-use plastics, choosing glass or stainless steel over plastic containers, vacuuming regularly to reduce indoor microplastic dust, and staying informed about new regulations and product safety labels. Governments also need to set clear, enforceable standards for what counts as “green” or “biodegradable,” ensuring companies cannot mislead consumers under the guise of sustainability. Efficient waste management systems, including enhanced recycling, composting, and waste segregation, are crucial. India, in particular, needs to bolster its waste management infrastructure, given the volume of plastic produced and consumed. Microplastics, forever chemicals like PFAS, represent a multi-faceted challenge to both environmental integrity and public health. As research increasingly reveals the global prevalence of microplastics—and their detection in essential commodities like salt and sugar—India stands at a critical juncture. Policy measures are slowly emerging, but the scale of the crisis demands swift, concerted action by government agencies, industry stakeholders, and consumers alike. In parallel, the world must guard against greenwashing, ensuring that sustainability claims are backed by real environmental benefits. Addressing the interconnected threats of plastic pollution, toxic chemical exposure, and unhealthy dietary shifts can pave the way for a healthier future.