

DAILY PT POINTERS

31st May, 2024



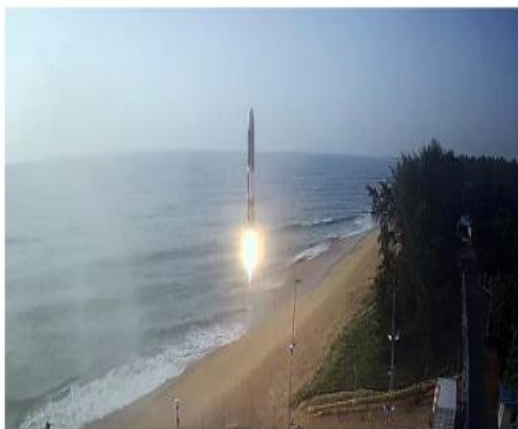
The Hindu-S&T (GSIII)Page 1

Start-up Agnikul launches world's first rocket with fully 3D-printed engine

Sangeetha Kandavel
CHENNAI

The Chennai-headquartered space start-up Agnikul Cosmos Private Ltd. launched the world's first rocket – Agnibaan Sub Orbital Technology Demonstrator (SOrTeD) – with a single-piece 3D-printed engine from Sriharikota at 7.15 a.m. on Thursday.

Agnibaan SOrTeD is India's first launch from a private launchpad, called 'Dhanush', established by Agnikul. It is also India's first semi-cryogenic engine-powered rocket launch and the world's first single-piece 3D-printed en-



Agnibaan, powered by the the world's first single-piece 3D-printed rocket engine, launched from Sriharikota on Thursday. ANI

gine designed and built indigenously.

According to the start-up, the key purpose of this mission is to serve as a test flight, to demonstrate in-house and home-

grown technologies, gather crucial flight data and ensure optimal functioning of systems for Agnikul's orbital launch vehicle, the 'Agnibaan'.

"Congratulations @Ag-

nikulCosmos for the successful launch of the Agnibaan SoRTed-01 mission from their launch pad. A major milestone, as the first-ever controlled flight of a semi-cryogenic liquid engine realised through additive manufacturing," the Indian Space Research Organisation (ISRO) posted on X, following the launch.

The IIT-Madras incubated start-up had originally planned the launch for April 7 but had to postpone it 129 seconds before the lift-off due to some technical glitches.

CONTINUED ON
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The Hindu-Health(GSII)-Page 10

The tobacco epidemic in India

Tobacco causes a wide range of diseases and affects those consuming it as well as those cultivating it. There is a need for up-to-date data to understand trends in tobacco use to tackle the tobacco industry

EXPLAINER

Varun Raj Passi
Parth Sharma

Tobacco is the most widely recognised preventable cause of disease and death in the world. It causes a wide range of diseases and affects those consuming it as well as those cultivating it. After China, India has the world's highest number of tobacco consumers – nearly 26 crore, according to an estimate in 2016-2017. Additionally, the health of more than 60 lakh people employed in the tobacco industry is also placed at risk because of the absorption of tobacco through the skin, which can cause various diseases.

Tobacco's deleterious influence extends beyond human health. It is a highly erosive crop that rapidly depletes soil nutrients. This requires more fertilizers to be used which further worsens soil quality. The plant is also a major contributor to deforestation. Up to 3.4 kg of wood is required to process 1 kg of tobacco. The production and consumption of tobacco generates nearly 17 lakh tonnes of waste every year in India. Therefore, tobacco production and use impose a heavy economic burden on India. A 2021 study estimated that the country incurred a loss exceeding 21.7 lakh crore as a result of tobacco's effects on the health of its consumers in the fiscal year 2017-2018. To compare, the Union Budget allocated for health in the same year was 748,000 crore. In addition, learning on tobacco usage has been

To go up in smoke

Nearly 26 crore Indians are tobacco consumers, according to an estimate in 2016-2017. While usage and consumption has been going down, effective tobacco control is still a pipe dream

Chart 1: Comparison of monthly consumption of bidi and cigarette sticks in NCTP districts and non-NCTP districts

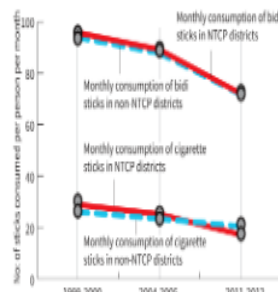


Chart 2: Trends in tobacco usage in different population groups

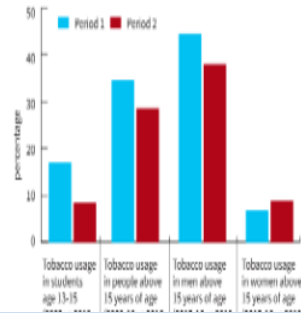
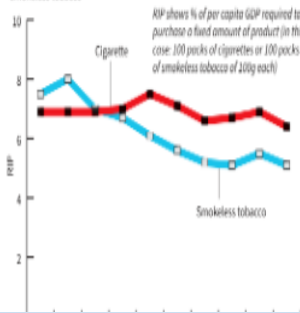


Chart 3: Trends in Relative Income Price (RIP) for cigarettes and smokeless tobacco



THE GIST

After China, India has the world's highest number of tobacco consumers, with nearly 26 crore per an estimate in 2016-2017.

India is one of the 168 signatories of the WHO's Framework Convention on Tobacco Control (FCTC), launched in 2005. It aims to reduce tobacco usage worldwide by helping countries develop demand and supply reduction strategies.

With government support, it is possible to help tobacco farmers switch to farming alternate crops, avoiding loss of livelihood, as shown by multiple studies conducted by the Central Tobacco Research Institute. In fact, for large-scale tobacco farmers, the net return per rupee of investment in jowar cultivation (1.94) is higher than tobacco (1.48).

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The Hindu-GS3(S&T)Page 20

The rising incidence of paediatric inflammatory bowel disease in India

IBD is a chronic autoimmune condition where the white blood cells mistakenly identify cells in the human gut as their enemy and decide to attack it, causing ulcers in the mucosa. As a result a child with IBD may develop fever, loose stools and bloody diarrhoea. These children may lose weight, muscle mass, and may have vitamin deficiencies

Science S.

When 10-year-old Durga recently came with her parents from their village in Andhra for a consultation, the family was worried that she was not doing so well as her classmates and friends of the same age. She was pale, and had recurrent fever over the previous few months. She had also developed recurrent bouts of loose stools, sometimes bloody. Durga had lost a lot of weight and no longer remembered the child in a photograph taken during Diwali. She underwent a number of tests which revealed that she was anaemic and had raised inflammatory markers. An absence of the characteristic IgA antibodies in the blood based on which autoimmune coeliacity (blood tests) She underwent a diagnosis, upper gastrointestinal endoscopy and colonoscopy, which revealed multiple ulcers in her intestines. Biopsy from various segments of her small intestine confirmed the diagnosis of Crohn's disease (IBD).



THE GIST

▼ Susceptible children often have a mix of dysregulated immune system which responds inappropriately to environmental triggers such as a virus or bacteria. There may also be genetic factors which predispose these children to IBD as it sometimes affects members of the same family.

▼ IBD is often chronic and needs several years of therapy. A small number of children may have remission in very good control for several years but may need to do this with some other ongoing medicines. The larger majority of children seem to need medications. A small percentage of children need surgery.

▼ Many people struggle with the very sight of a hospital. There are also those who do not qualify for any medical diagnosis, mostly because they are not given clinical consideration. Patients and doctors often get frustrated, especially if it is not obvious for a long time.

located children with this condition even all over India. But that was just a background. There is no one answer to the question, 'Why does IBD affect my child?' Medical research is still ongoing to pinpoint the exact cause. What is known is that children who are susceptible to this disease have a weak or dysregulated immune system which responds inappropriately to environmental triggers such as a virus or bacteria. There may also be genetic factors which predispose these children to this or some other autoimmune disorder of the same family. The human gastrointestinal tract harbours millions of microorganisms, often referred to as gut microbes and this plays an important role in it. The perturbations of such bacteria can impact and influence health and disease. The nature and composition of gut microbes can be altered by frequent antibiotics. Similarly, westernisation of food habits and lifestyle is also strongly linked to changes in the gut microbes and a predisposition to develop IBD.



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The disease under consideration for several years using anti-inflammatory and steroid drugs and special diet or disease-modifying drugs (IBD). Crohn's disease is also treated similarly, though other group of drugs called 'biologics' are used to treat and slow down of Crohn's colitis. Inadequate breast-feeding has not been found to be useful in treating Crohn's colitis. In children, IBD can affect the small and large intestine and need several years of medical therapy. A small minority of children also have remission in very good control condition for several years but may need to do this with some other ongoing medicines. The larger majority of children seem to need medications to keep the disease in remission. Further a small proportion of children who have uncontrolled inflammation develop complications involving surgery. But the good part is that remission is highly achievable and new medications are being developed to treat IBD, besides the fact that research has been conducted today that better making it may be developments in research in one part of the world may be another.

Therapy followed up all of this except antibiotics and asked me if she had alternative options or Crohn's disease. I replied - Crohn's disease, she then asked

me if it was mild or severe to which I replied that she had severe Crohn's. She understood that simple diet therapy would not work and the best option for her was to start on steroids and special diet or disease-modifying drugs (IBD). Crohn's disease is also treated similarly, though other group of drugs called 'biologics' are used to treat and slow down of Crohn's colitis. Inadequate breast-feeding has not been found to be useful in treating Crohn's colitis. In children, IBD can affect the small and large intestine and need several years of medical therapy. A small minority of children also have remission in very good control condition for several years but may need to do this with some other ongoing medicines. The larger majority of children seem to need medications to keep the disease in remission. Further a small proportion of children who have uncontrolled inflammation develop complications involving surgery. But the good part is that remission is highly achievable and new medications are being developed to treat IBD, besides the fact that research has been conducted today that better making it may be developments in research in one part of the world may be another.

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"Why did this happen to my child?" This calls for a longer answer. There are 20 years ago when I started to paediatric gastroenterology at Sirga (Gandhi Postgraduate Institute, Lucknow), this could not be considered very rare in Indian children. Our adult gastroenterology clinic also saw IBD patients more frequently than we did (paediatric gastroenterology). It was only when I moved to the Royal Children's Hospital, Melbourne a few years later that I found that IBD in Australia was very common in children too. Then, I did research about what was to be the cause of learning so much about a condition that is very common in the Western world but so rare in India. Next, I started to hear reports of IBD rising in incidence in children in India single parents who emigrated to the West. Gradually it became clear that IBD can affect children of all ethnicities and socioeconomic status. 15 years later, I am now reading more than a

Inflammatory Bowel Disease (IBD).

- IBD is a chronic autoimmune condition where the white blood cells or the body's soldiers mistakenly identify cells in the human gut as their enemy and decide to attack it, causing ulcers in the mucosa.
- As a result children may develop fever, abdominal pain, loose stools and at times bloody diarrhoea. These children may not absorb macro and micronutrients and hence lose weight, muscle mass, become anaemic and may have vitamin deficiencies.
- IBD - Crohn's disease can be treated with very effective medications that control the inflammation and suppress the dysregulated and overactive immune system. These medications include steroids and a new class of drugs called biologics

Indian Express :Page 16_GS 3-Economy

RBI ANNUAL REPORT FOR 2023-24

‘Economic outlook remains bright on govt capex push and fiscal consolidation’

ENS ECONOMIC BUREAU
MUMBAI, MAY 30

THE OUTLOOK on growth of the Indian economy remains robust, given the government’s sustained focus on capital expenditure while maintaining fiscal consolidation, the Reserve Bank of India said in its annual report for 2023-24 (FY24). Strong corporate balance sheets, rising capacity utilisation, double digit credit growth, healthy financial sector, and the ongoing disinflation are likely to be other growth levers for the domestic economy, it said.

“The outlook for the Indian economy remains bright, underpinned by a sustained strengthening of macroeconomic fundamentals, robust financial and corporate sectors and a resilient external sector,” the annual report said. The government’s continued thrust on capex while pursuing fiscal consolidation, and consumer and business optimism augur well for investment and consumption demand.

Indian economy expanded at a robust pace in FY24, with real



RBI to allow opening of rupee accounts outside India

Mumbai: In a step towards internationalisation of rupee, the Reserve Bank of India (RBI) will allow the opening of rupee account outside the country by persons resident outside India (PROIs) from the current fiscal.

The RBI will also permit rupee lending by Indian

banks to PROIs in the ongoing financial year, according to the annual report.

It will also enable foreign direct investment (FDI) and portfolio investment through special accounts, such as special non-resident rupee (SNRR) and special rupee vostro account (SRVA). **ENS**

anced. The report said as the headline inflation eases towards the 4 per cent target, it will spur con-

ket volatility, international commodity price movements and erratic weather developments pose

- Indian economy is likely to grow at 7% in the current fiscal year starting April, the Reserve Bank of India (RBI) said in its annual report released on May 30.
- The Indian economy, it said, expanded at a robust pace in 2023-24 (April 2023 to March 2024 financial year), with real GDP growth accelerating to 7.6% from 7.0% in the previous year – the third successive year of 7% or above growth.
- “The real GDP growth for 2024-25 is projected at 7.0% with risks evenly balanced,” it said.
- India’s GDP growth is robust on the back of solid investment demand which is supported by healthy balance sheets of banks and corporates, the government’s focus on capital expenditure and prudent monetary, regulatory and fiscal policies, the RBI said. The Reserve Bank’s Annual Report for 2023-24 said that the Indian economy is navigating the drag from an adverse global macroeconomic and financial environment.

Indian Express :Page 16_GS 3-Economy

FDI inflows fall 3.5% to \$44 bn in FY24

PRESS TRUST OF INDIA
NEW DELHI, MAY 30

FOREIGN DIRECT investment (FDI) equity inflows in India declined 3.49 per cent to \$44.42 billion in 2023-24 due to lower infusion in sectors such as services, computer hardware and software, telecom, auto and pharma, according to the government data.

FDI inflows stood at \$46.03 billion during 2022-23.

Inflows during January-March FY24, however, rose by 33.4 per cent to \$12.38 billion as against \$9.28 billion in the year-ago period.

The total FDI -- which includes equity inflows, reinvested earnings and other capital -- declined marginally by one per cent to \$70.95 billion during 2023-24 from \$71.35 billion in 2022-23, data from Department for Promotion of Industry and

INFLOWS ROSE IN JAN-MAR QUARTER

INFLOWS DURING January-March FY24, however, rose by 33.4 per cent to \$12.38 billion as against \$9.28 billion in the year-ago period

DURING THE last fiscal, foreign direct investment equity inflows decreased from major countries, including Mauritius, Singapore, the US, the UK, UAE, Cayman Islands, Germany, and Cyprus

Internal Trade (DPIIT) showed. In 2021-22, the country received the highest ever FDI inflows of \$84.83 billion.

During the last fiscal, FDI equity inflows decreased from major countries, including

SECTORALLY, INFLOWS contracted in services, computer software and hardware, trading, telecommunication, automobile, pharma and chemicals

IN CONTRAST, construction (infrastructure) activities, development and power sectors registered healthy growth in inflows during the period under review

Mauritius, Singapore, the US, the UK, UAE, Cayman Islands, Germany, and Cyprus.

However, inflows increased from the Netherlands and Japan.

Sectorally, inflows contracted in services, computer software

and hardware, trading, telecommunication, automobile pharma and chemicals.

In contrast, construction (infrastructure) activities, development and power sectors registered healthy growth in inflow during the period under review

FDI equity inflows into India declined 22 per cent in 2022-23

The data also showed that Maharashtra received the highest inflow of \$15.1 billion during the last fiscal. It was \$14.8 billion in 2022-23. Similarly, inflow into Gujarat rose to \$7.3 billion in 2023-24 from \$4.7 billion in 2022-23. Growth was also recorded in Tamil Nadu, Telangana and Jharkhand.

Overseas capital inflows in Karnataka plunged to \$6.57 billion from \$10.42 billion in 2022-23. Other states/Union Territories where FDI dipped during the period under review included Delhi, Rajasthan, Uttar Pradesh and Haryana.

- According to the latest data released by the government, foreign direct investment (FDI) equity inflows in India decreased by 3.49 per cent in FY24 to \$44.42 billion. Reduced investments in sectors such as services, computer hardware and software, telecom, auto, and pharma, are being attributed as the primary reasons for the slump.
- During the last fiscal year, FDI equity inflows from major countries such as Mauritius, Singapore, the US, the UK, UAE, Cayman Islands, Germany, and Cyprus declined. Conversely, inflows from the Netherlands and Japan increased.
- Singapore remained the largest source of FDI into India, contributing \$11.8 billion in FY24, though this was \$5.4 billion less than the previous year.
- FDI inflows from Mauritius increased by 31 per cent in FY24, reaching \$8 billion.

Indian Express :Page 19_GS 2 -Governance

THIS WORD MEANS

STATUTORY BAIL

Sharjeel Imam has got bail in one case under Section 436A CrPC. But he remains in jail in another case

APURVA VISHWANATH
NEW DELHI, MAY 30

JNU SCHOLAR Sharjeel Imam got bail on Wednesday in a case of sedition and unlawful activity under the Unlawful Activities Prevention Act (UAPA). But Imam will not be released because he remains in custody in another case involving the 2020 North East Delhi riots.

Several other cases are pending against him in at least four other states; however, he is not in custody in these cases, and does not need to apply for bail.

A Bench of Justices Suresh Kumar Kait and Manoj Jain granted statutory bail to Imam after he had spent almost four years in prison as an undertrial for an alleged inflammatory speech.

With no prospect of a speedy trial, statutory bail was the only viable option for Imam's release in this case. On merits, he has had his bail pleas rejected several times by trial courts and the High Court.

Charges against Imam

Charges under Section 13 of the UAPA ("Punishment for unlawful activities") carry a maximum sentence of seven years.

Sedition, under Section 124A of the Indian Penal Code (IPC), carries a maximum sentence of life imprisonment. However, in 2021, the Supreme Court stayed the operation of Section 124A. Until the constitutional validity of this provision is determined, all trials on sedition, including Imam's, are effectively stayed.



Sharjeel Imam in custody. PTI

for the purpose of granting statutory bail. However, the sedition charge is currently inoperative.

The provision for statutory bail was introduced in 2005 in response to the problem of rising numbers of undertrials in prison. This is especially helpful for undertrials in offences that carry shorter sentences. National Crime Records Bureau data for 2022 show there were 63,502 undertrials across the country charged with offences that carry a sentence shorter than two years.

Other protections

In all bailable offences, courts must mandatorily grant bail under Section 436 CrPC to an accused who is willing to furnish a bail bond. In non-bailable offences, bail is granted at the court's discretion.

To shield from lengthy periods of

- Delhi High Court granted statutory bail to JNU scholar and student activist Sharjeel Imam in connection with a 2020 communal riots case involving allegations of sedition. Section 13 (punishment for unlawful activities) of the Unlawful Activities (Prevention) Act, 1967, was invoked against him under which the maximum punishment prescribed is seven years.

Do you know?

The provision of statutory bail under Section 436A of the CrPC was introduced through an amendment in 2005 to tackle the issue of the rising number of undertrials in prisons. It imposes a statutory limit on detention in cases where trial has not yet commenced. As per the provision, if an undertrial has been in custody for more than half of the maximum period of imprisonment prescribed for the offence (excluding cases where the death penalty is a possible punishment), they are entitled to be released on bail on their personal bond, with or without sureties.

HEADLINES OF THE DAY

Indian Express :GS 3-S&T-Page 19

'AUTISTIC PEOPLE MUCH MORE LIKELY TO HAVE PARKINSON'S-LIKE SYMPTOMS'

A STUDY of a quarter million people — the largest of its kind — with autism, intellectual disabilities, or both has found that their risk of developing symptoms associated with Parkinson's disease is three times that in the general population. The findings, presented at the annual meeting of the International Society for Autism Research in Melbourne this month, are yet to be peer reviewed.

Previous studies have suggested that autistic people have disproportionately high rates of 'parkinsonism' — symptoms common in Parkinson's disease, including tremors, sudden freezing while walking and difficulty holding a posture — compared with the general population.



**PAPER
CLIP**

NEW RESEARCH

Researchers in the new study reviewed three years' medical records (2014–16) for 247,539 people in the US aged 45 and older. Of these, 23,686 had autism; 223,853 were not autistic but had an intellectual disability; 13,302 had both.

The records showed diagnoses of parkinsonism in 5.98% of the autistic people who had no intellectual

disability, 6.01% of people who had an intellectual disability but were not autistic, and 7.31% of those with both conditions.

These rates are much higher than in the general population, where between 0.11% and 1.85% of people in the same age group have Parkinson's-like symptoms.

NATURE NEWS

Parkinson disease (PD) is a brain condition that causes problems with movement, mental health, sleep, pain and other health issues.

PD gets worse over time. There is no cure, but therapies and medicines can reduce symptoms. Common symptoms include tremors, painful muscle contractions and difficulty speaking.

Parkinson disease results in high rates of disability and the need for care. Many people with PD also develop dementia.

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HEADLINES OF THE DAY

AIR :GS 2-IR

India, Japan Hold Sixth Meeting Of Joint Working Group On Counter-Terrorism



- India and Japan held the sixth meeting of the Joint Working Group on counter-terrorism.
- during the meeting held yesterday, both countries exchanged views on the terrorist threats in their respective regions. They also discussed state-sponsored cross-border terrorism in South Asia, South East Asia, East Asia, and the Middle East, as well as terror activities in the Afghanistan and Pakistan region.

HEADLINES OF THE DAY

AIR :GS 2/3-IR /Defense

Indian Air Force Contingent Reached Alaska To Participate In Multi-National Exercise, Red Flag 24



- An Indian Air Force contingent reached the Eielson Air Force Base of the U.S. Air Force in Alaska, United States of America, today to participate in the upcoming edition of the multi-national exercise Red Flag 24.
- The Indian Air Force said that, ably supported by its IL-78 air-to-air refuellers and the C-17 transport aircraft, the IAF Rafale fighters took a transatlantic flight with staging halts at Greece and Portugal. Ex-Red Flag is a two-week advanced aerial combat training exercise aimed at integrating aircrew in a multinational environment.