



PLUTUS ACADEMY

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1. Brahmos Missile with an indigenous booster: Test Flight Successful

The surface-to-surface supersonic cruise missile BrahMos with an indigenous booster and airframe section was successfully flight tested at Balasore, Odisha.

Brahmos

It was developed as a joint venture of DRDO (Defence Research Development Organization) and NPOM of Russia. It is named after the rivers Brahmaputra and Moskva. It has a flight range of 300 km. It is a two-stage missile. The solid propellant engine at the first stage and liquid ramjet in the second.

The range of Brahmos missile was increased to 450-600 km after India entered into the Missile Technology Control Regime (MTCR)

MTCR

India became a member of MTCR in 2016. The MTCR was started in 1987 by the G-7 countries. There are a total of 35 members in MTCR. The members of MTCR should establish national export control policies for cruise missiles, ballistic missiles, unmanned aerial vehicles, drones, space launch vehicles, remotely piloted vehicles, underlying components and technologies.

Different other treaties

Limited Ban Treaty

India has ratified the treaty. The treaty prohibits nuclear experiments in ground, outer space and under water.

Treaty on Outer Space

India signed the treaty in 1967. It prohibits countries to test nuclear weapons in the orbit of the moon and other celestial bodies.

NPT

NPT is a Non-Proliferation Treaty. India has not signed the treaty. India is one among the five countries that did not sign the treaty. The other four countries are South Sudan, Pakistan, Israel and North Korea. Three main objectives of NPT are non-proliferation, disarmament and the right to peacefully use nuclear technology.

Comprehensive Test Ban Treaty

This treaty intends to ban all nuclear explosions. So far 182 countries have signed the treaty after it opened for signature in 1996. India has still not signed the treaty.

Fissile Material Cut-Off Treaty

It prohibits the production of nuclear weapons based on two main components. They are Plutonium and highly-enriched Uranium.

2.NSO Survey: 92% Indian Women and only 27% men take part in unpaid domestic work

The National Statistical Office conducted a survey between January 2019 and December 2019. According to the survey, 92% of Indian Women and only 27% of men participate in employment related activities.

Key Findings of the Survey

- **Only 22% of Indian women participated in employment related activities. On the other hand, 71% of men participated in employment related activities.**
- **In rural area the employment related activities were as follows**
 - **Male: 69.7%**
 - **Female: 22.5%**
- **In Urban Area, the Employment related activities were as follows**
 - **Male: 73%**
 - **Female: 19.9%**
- **In rural areas, the unpaid domestic works were as follows**
 - **Male: 29.2%**
 - **Female: 93.2%**
- **In Urban areas, the unpaid domestic works were as follows**
 - **Male: 22.5%**
 - **Female: 88.8%**

States

The Percentage that participated in unpaid domestic activities were the highest in Assam, Goa and Arunachal Pradesh. In the Southern, western and central states more women went to work as compared to other states. However, Goa outlines where more

men participated in household works. In northern and eastern states, majority women participated in household works.

Gender Gap in India

India ranked 112th out of 153 countries in Global Gender Gap Index, 2020. The Gender Gap Index is published by the World Economic Forum. The index said that Indian women were not getting the same access to health as that of men. On the other hand, the Gender Inequality Index is released by the United Nations Development Programme.

Legal and Constitutional Safeguards

- Article 15 of the Constitution provides prohibition of discrimination on the grounds of sex
- The Sati Prevention Act, 1987 makes the inhuman custom of Sati punishable
- The Special Marriage Act, 1954 gives rightful status to married couples
- Prenatal Diagnostic Techniques (Regulation and Prevention of Misuse) Act stopped female infanticide
- Section 304 B was added to Indian Penal Code to make bride burning and dowry offences punishable.

3. September 30: International Translation Day

Every year the International Translation Day is celebrated by the United Nations on September 30. The day is celebrated to pay tribute to the works of language professionals who have played an important role in bringing nations together, understanding and cooperating, and contributing to the development and strengthening of world peace and security.

Why September 30?

September 30 has been selected to celebrate the day as the day celebrates the feast of St Jerome. St Jerome was a priest from Italy who translated Bible from Greek to Latin manuscripts. He also translated the Hebrew Gospel into Greek. His mother tongue was Illyrian dialect. He learned Latin in school and was fluent in Hebrew and Greek.

International Translation Day

The UN passed a resolution in 2017 to celebrate September 30 as the International Translation Day. 2019 was celebrated as International Year of Indigenous Languages.

Languages in India

- Hindi and English are the official languages in India.
- There is no national language in India.

- The Eighth Schedule of the constitution lists the official languages of India. Currently, it consists of 22 languages
- Six languages in India enjoy the status of Classical Language in India. They are Telugu, Tamil, Kannada, Sanskrit, Odia and Malayalam.
- Article 351 says that it is the duty of the Union Government to promote the spread of Hindi Language in the country
- Article 29 of the constitution says that every citizen has a right to conserve his language, script and culture
- A special officer for linguistic minority shall be appointed to safeguard the interests of language spoken by minority groups according to Article 350B
- When a language is included in Eighth Schedule, it will enjoy the following advantages
 - MP and MLA could speak in the language in State Assemblies and Parliament
 - Recognition from Sahitya Akademi.
 - Special funds from Central Government
 - Use the language to teach at primary school levels.

4.MECL begins gold mining in Kolar after 16 years

The Mineral Exploration Corporation Limited recently began the Kolar Gold Field exploration after 16 years.

Background

The Kolar Gold mines are located nearly 100 km from Bengaluru. They were closed in 2001 due to the fall in gold prices. The pyroclastic and pillow lava at the mines were declared as a National Geological Monument by the Geological Survey of India. This was done for the protection, maintenance and encouragement of Geo-Tourism.

The power generation units in Shivanasamudra, Mandya were built to support the mining operations in 1889. The Kolar Gold mines were nationalized in 1956. The mining operations were closed by the Union Government in 2001 citing the production did not justify the investment.

Gold Reserves in India

Karnataka is the largest producer of gold in India. Kolar gold mines of Karnataka is one of the deepest mines in the world. Mponeng Gold Mines of South Africa is the deepest gold mine in the world.

Andhra Pradesh is the second largest producer of gold in India. Ramagiri, Anantapur of Andhra Pradesh is the most important gold field in Andhra Pradesh.

According to the World Gold Council, India has the 10th largest gold reserves in the world with more than 600 tonnes. The US has the highest gold reserves in the world

(8,133 tonnes) followed by Germany (3,366 tonnes). The International Monetary Fund alone holds 2,451 tonnes of gold.

Gold Imports and Exports

India imported 11.5 billion USD of gold in 2019-20. India is the largest importer of gold in the world. Gold imports in India is one of the main reasons of Current Account Deficit.

Current Account Deficit

It is the measurement of a country's trade where the value of goods and services of its imports exceeds the exports.

Gold Vs Currency

The value of a country's currency is tied to the value of its imports and exports. When the imports of the country are greater, the value of its currency decreases. Thus, imports of gold in India has a major role towards depreciation of Indian rupees.

5.Second Sero Survey results of ICMR: Key Findings

The Indian Council of Medical Research released a report on second sero survey findings. The survey was conducted in 700 villages from 21 states. The Government of India recommends a 5T strategy called Test, Track, Trace, Treat and Technology to be followed to prevent susceptibility.

Key Findings

- According to the report, 7.1% of adults (18 years and above) were exposed to COVID-19 virus. This is a massive increase as compared to the first survey. 0.73% were exposed according to the first survey
- One in fifteen individuals of age 10 years and above are estimated to be exposed to COVID-19.
- Containment and Behavioural change among the people have checked the potential spread of COVID-19.

Slums and Rural Areas

Under Slums and non-slum areas had higher prevalence of the virus than the rural areas. Sero prevalence was found in 15.6% of people in urban slums. It was 8.2% in non-slum areas and 4.4% in rural areas. The first survey found that the sero prevalence was the highest in rural areas. The first survey reported that the prevalence was 69.4% in rural areas, 15.9% in urban slums and 14.6% in urban non-slums.

Metropolitan Cities

Mumbai showed the highest sero prevalence with 57.8% of samples testing positive. Delhi recorded 29.1% sero prevalence. This is higher than the 23.1% that was recorded in the first survey.

Following Delhi, Puducherry of Tamil Nadu had the next highest prevalence of 22.7%. Chennai recorded 21.5%, Ahmedabad 17.6% and Indore registered 7.8%.

Current Scenario

India currently has more than 61 lakh confirmed cases. Around 70,000 were detected in the last 24 hours (on September 29, 2020 alone).

About the survey

The survey was conducted through RT-PCR based tests, ELISA tests. The survey tests blood serum of individuals and checks for antibodies in the samples. The survey collects venous blood samples. Veins in the human body impure blood (deoxygenated) and arteries carry pure blood (oxygenated blood).

6. India-Bangladesh to hold virtual summit

India and Bangladesh will hold the 6th round of Joint Consultative Commission meet. The summit is to be held between the Prime Ministers of both the countries.

Highlights

The announcement about the summit was made by the External Affairs Minister S Jaishankar. Along with this, he also made the following announcements

- On December 16, 2020, India will release a commemorative stamp on the birth centenary of Bangabandhu. This is being done to appreciate the gesture of Bangladeshi Government to release a commemorative stamp on Mahatma Gandhi on the occasion of 150th year of his birth anniversary.
- A Bangabandhu-Bapu Digital Museum is to be established to commemorate 150 years of Mahatma and celebrate Mujib Barsho.

About the meet

The leaders will mainly discuss the early return to normalcy in trade and travel between the countries that are now affected by COVID-19. The meeting will also discuss concerns of economic and commercial issues of both sides.

What is Mujib Barsho?

Both India and Bangladesh are celebrating 2020 as “Mujib Barsho” in the memory of Sheikh Mujibur Rahman, the father of Bangladesh. Mujib Barsho means Mujib Year. This is being done as 2020 is the centennial birth anniversary of the leader. The United

Nations has also joined the countries in their celebrations. This decision was taken during the 40th General Assembly of UNESCO.

Mujbur Rahman

He was a Bangladeshi politician and has been considered as the driving force behind the independence of Bangladesh. He is popularly known as “Bangabandhu” by the people of Bangladesh. The current Prime Minister Sheikh Hasina is the daughter of the leader.

He has an important role for East Pakistan to gain political autonomy. In 1975, a group of army officers invaded his residence and killed Mujib and his family. Only his two daughters Sheikh Hasina and Sheikh Rehana escaped.

7.India’s ASTROSAT completes five successful years of mapping stars

The ASTROSAT was the first multi-wavelength satellite launched by Indian Space Research Organization (ISRO). It was launched on September 28, 2015. It has now completed five years of successful imaging of celestial objects.

Highlights

The ASTROSAT explored stars, star clusters and mapped large and small galaxies of the Milky Way galaxy called “Magellanic Clouds”. The Magellanic Clouds are energetic phenomenon such as Gamma-ray bursts, supernovae, and active galactic nuclei. In simple terms, they are called Satellite Galaxies of the Milky Way.

The resolution of ASTROSAT is three times better than the resolution of NASA Mission, GALEX.

ASTROSAT

With the success of ASTROSAT, India has become one of the exclusive club of nations to have space-based observatories. The other countries that have space observatories are USA, Japan, European Space Agency, Russia and Japan. The satellite aims to provide high energy processes in binary star systems that contain black holes and neutron stars.

ASTROSAT was the first dedicated Indian Mission that studied celestial sources in X-ray, UV and optical spectral bands simultaneously with its five UV Telescopes and X-ray telescopes. The ground command and control centre of ASTROSAT is located in ISRO Telemetry Tracking and Command Network (ISTRAC), Bangalore

ISTRAC

The ground stations of ISTRAC are located in Bangalore, Hyderabad, Port Blair, Thiruvananthapuram, Sriharikota and Lucknow.

GALEX

GALEX is Galaxy Evolution Explorer. It was launched by NASA in 2003 and it operated till 2012. The mission was to observe hundreds of thousands of galaxies. It aimed to determine the distance of each galaxy from the earth. It also found the rate at which star formation occurs in each galaxy.

ASTROSAT 2

It is the successor of the one launched in 2015. The operation time of ASTROSAT-1 was five years and is ending in 2020. No steps have been taken towards ASTROSAT-2, but a proposal has been made by ISRO.