2024

DAILY CURRENT AFFAIRS

Daily Current Affairs from *The Hindu, The Indian Express & The Assam Tribune*

12th Dec 2024

CONTENT LIST

GS 1: ART & CULTURE, HISTORY, INDIAN SOCIETY AND GEOGRAPHY

1. Vaikom — two States, two leaders and a tale of reform

Context: The Vaikom Struggle, which culminated in the lifting of the barriers to the entry of backward caste Hindus to the local temple in the erstwhile Travancore princely state, would be the first of many mass movements that brought political attention to religious reform. Since then, the Dravidian Movement founded by Periyar E.V. Ramasamy and its self-respect principles have enabled wider reforms within the Hindu religion and paved the way for a more egalitarian society. Celebrating the centenary of Vaikom is not just a tribute to Periyar's persistence and B.R. Ambedkar's acumen but also a re-assertion of the strong reformist tendencies that continue to pervade through modern-day politik in South India.

Vaikom struggle

- **News overview:** Recently, India commemorated the centenary of Vaikom satyagraha, a pivotal movement in India's history that challenged untouchability and caste oppression.
- **Background:** Vaikom Satyagraha, a nonviolent agitation, unfolded in Vaikom within the princely state of Travancore, Kerala precisely a century ago spanning from 30th March 1924 to 23rd November 1925. Efforts were made to negotiate with authorities, including Maharani Regent of Travancore, to open temple roads. It was the first among the temple entry movements in India, setting the stage for similar movements across the country.
- **Key Figures:** It was led by visionary leaders like Ezhava leader T K Madhavan, K.P. Kesava Menon, and K. Kelappan. Erode Venkatappa Ramasamy, revered as Periyar or Thanthai Periyar, played a crucial role, mobilising volunteers, delivering speeches, and enduring imprisonment, earning the title 'Vaikom Veerar'. The movement gained more power when Mahatma Gandhi reached Vaikom in March 1925 and held discussions with leaders of various caste groups.
- **Strategies and Initiatives:** The satyagraha initially focused on opening the roads surrounding the Vaikom temple to people from all castes. Leaders of the movement strategically chose nonviolent methods, inspired by Gandhian principles of protest.
- **Outcome:** The Vaikom Satyagraha led to significant reforms, including the opening of three out of four roads surrounding the temple to people of all castes.
- **Aftermath and Legacy:** In November 1936, the Maharaja of Travancore signed the historic Temple Entry Proclamation, which removed the age-old ban on the entry of marginalised castes into the temples of Travancore. The Vaikom Satyagraha led to a division in perspectives, with few viewing it as a Hindu reformist movement, while another saw it as a fight against caste-based atrocities. Memorials, including the Vaikom Satyagraha Memorial Museum and Periyar's Memorial, were established to commemorate the movement's significance.

Q. Since the decade of the 1920s, the national movement acquired various ideological strands and thereby expanded its social base. Discuss. (1920-ৰ দশকৰ পৰা ৰাষ্ট্ৰীয় আন্দোলনে বিভিন্ন আদৰ্শগত দিশ আহৰণ কৰিছিল আৰু ইয়াৰ ফলত ইয়াৰ সামাজিক ভিত্তি সম্প্ৰসাৰিত হৈছিল। আলোচনা কৰক।)

Q. With reference to Rowlatt Satyagraha, which of the following statements is/are correct?

1. The Rowlatt Act was based on the recommendations of the ‘Sedition Committee’.

2. In Rowlatt Satyagraha, Gandhiji tried to utilize the Home Rule League.

3. Demonstrations against the arrival of Simon Commission coincided with Rowlatt Satyagraha.

Select the correct answer using the code given below:

(a) 1 only

(b) 1 and 2 only

(c) 2 and 3 only

(d) 1, 2 and 3

GS 2: POLITY, GOVERNANCE, SOCIAL JUSTICE, INTERNATIONAL RELATIONS/INSTITUTIONS

2. India’s Malaria caseload, deaths fall by 69% each in 6 years

Context: India has finally managed to control malaria, reduce mortality and has gotten out of the High-Burden-High-Impact (HBHI) group of endemic countries, according to the World Malaria Report released on Wednesday. India reduced its malaria caseload by 69 per cent from 6.4 million in 2017 to 2 million in 2023. Similarly, the estimated malaria deaths registered a 69 per cent decrease from 11,100 to 3500 during the same period. Every year, the report serves as a vital tool to evaluate global progress and gaps in the fight against malaria. It provides a snapshot of efforts to control and eliminate the disease in 83 countries.

Key points

- Overview: Recent advancements in malaria prevention have shifted focus from genetically modified mosquitoes to genetically modified malaria-causing parasites. This innovative approach aims to enhance immune system priming during the liver stage of the parasite's life cycle, potentially leading to more effective malaria vaccines.
- Genetically Modified Parasites: Malaria causing parasites were genetically altered to study their behaviour, prevent diseases, or deliver treatments. They are designed to prime the immune system in the liver, preventing disease before entering the bloodstream.
  Trial Efficacy - In the trial conducted, 89% of participants exposed to late-arresting genetically modified parasites (p falciparum, in this case) were protected from malaria compared to only 13% for early arresting parasites.
  Comparison with Traditional Methods - Traditional methods, such as radiation-sterilized mosquitoes and radiation-attenuated sporozoites (the infective stage of malaria parasites), require significantly higher exposures (up to 1,000 mosquito bites) for similar protection levels.
- Malaria: Malaria, a life-threatening disease caused by Plasmodium parasites, is transmitted by female Anopheles mosquitoes. Of the five species infecting humans, P. falciparum and P. vivax are the most dangerous. After biting an infected person, a mosquito transmits malaria parasites to the next person it bites. The parasites travel to the liver, mature, and then infect red blood cells.
- Highlights of Malaria in India: According to the National Vector Borne Disease Control Programme (NVBDCP), malaria remains a significant public health challenge in India, with approximately 1 million cases reported annually. Approximately 95% of the population lives in malaria-endemic regions, with 80% of cases occurring in tribal, hilly, and inaccessible areas that house 20% of the population. In 2022, India represented 66% of malaria cases in the WHO South-East Asia Region, with Plasmodium vivax responsible for nearly 46% of these cases.
- Global Initiatives: World Malaria Day – 25th April (launched in 2007), WHO Global Malaria Programme (GMP) (launched in 2015).
- Government Initiatives Related to Malaria: National Malaria Control Programme (NMCP) – 1953, National Vector-Borne Disease Control Programme – 2003, Malaria Elimination Research Alliance-India (MERA-India) – Launched on the eve of 'World Malaria Day' in 2019. National Strategic Plan: Malaria Elimination 2023-27.

GS 2: POLITY, GOVERNANCE, SOCIAL JUSTICE, INTERNATIONAL RELATIONS/INSTITUTIONS

3. Growing misuse of IPC section 498A against husbands, their relatives

Context: The Supreme Court has come down heavily on the "growing tendency to misuse provisions like Section 498A of the Indian Penal Code" intended to protect married women "as a tool for unleashing personal vendetta against the husband and his family by a wife". A bench of Justices B V Nagarathna and Kotiswar Singh said on Tuesday, "The inclusion of Section 498A of the IPC by way of an amendment was

intended to curb cruelty inflicted on a woman by her husband and his family, ensuring swift intervention by the State. However, in recent years, as there have been a notable rise in matrimonial disputes across the country, accompanied by growing discord and tension within the institution of marriage, consequently, there has been a growing tendency to misuse provisions like Section 498A of the IPC as a tool for unleashing personal vendetta against the husband and his family by a wife."

Key points

- Overview: Recently, the Supreme Court observed that Section 498A Indian Penal Code (now Bharatiya Nyaya Sanhita) and Domestic Violence Act 2005 are among the most abused laws.
- Section 498A Indian Penal Code: Section 498A of the Indian Penal Code (IPC) deals with the criminal offence of cruelty against a married woman by her husband or his relatives. The section was introduced in 1983. Section 84 of Bhartiya Nyaya Sanhita, 2023 (BNS) deals with the same provision.
  Punishment - The offender can face up to three years in jail and may also be liable to pay a fine.
  Cognizability and non-bailability - The offence is cognizable and non-bailable, which means that immediate custody of the accused is possible.
- Domestic Violence Act 2005: The Protection of Women from Domestic Violence Act, 2005, was enacted to provide a comprehensive legal framework for the protection of women against domestic violence, recognizing violence in both physical and psychological forms within familial settings.
- Some factors Contributing to Domestic Violence: Patriarchal Social Structure - Deep-rooted patriarchal norms perpetuate gender inequality, reinforcing male dominance and control over women. This leads to the normalisation of violence to assert authority within households.
  Economic Dependency - Financial dependency on male family members often forces women to endure domestic violence. The lack of economic autonomy limits their ability to leave abusive relationships or seek legal recourse.
  Lack of Education and Awareness - Limited education and awareness about legal rights and support mechanisms contribute to the perpetuation of domestic violence.
- Misuse of Legal Measures: False Allegations for Personal Gain - Both the Domestic Violence Act, 2005, and Section 498A are sometimes misused by filing false complaints to harass husbands and their families.
  Coercion for Financial Settlements - In several instances, false cases are used to coerce husbands and their relatives into making large financial settlements or paying alimony.
  Immediate Arrest and Lack of Preliminary Investigation - Section 498A is a non-bailable and cognizable offence, leading to immediate arrests without the need for prior investigation.
- Way Forward: There is a need to establish clear distinctions between bailable and non-cognizable offenses within the law. Thorough investigations should be conducted prior to making any arrests. Individuals should be held accountable for false and misleading complaints. India must implement gender-just laws (recognising domestic violence against men as well) that promote equality and protect the rights of every individual, regardless of gender.

Q. Discuss the potential benefits and challenges associated with implementing Gender neutral laws in the context of achieving gender equality. (লিংগ সমতা প্ৰাপ্ত কৰাৰ সন্দৰ্ভত লিংগ নিৰপেক্ষ আইন ৰূপায়ণৰ সৈতে জড়িত সম্ভাৱ্য লাভালাভ আৰু প্ৰত্যাহ্বানসমূহৰ বিষয়ে আলোচনা কৰক।)

GS 3: ECONOMY, ECOLOGY, SCIENCE & TECHNOLOGY, DEFENCE, SECURITY AND DISASTER

4. Indian scientists develop novel gene therapy for haemophilia

Context: Scientists in India have reported success with using gene therapy to treat severe haemophilia A, a rare hereditary condition resulting from a faulty gene which triggers severe, spontaneous, and potentially fatal bleeding episodes. The results of the study were reported in the peer-reviewed *New England Journal of Medicine (NEJM)* earlier this week. The trial was led by Alok Srivastava of the Centre for Stem Cell Research (CSCR) at the Christian Medical College in Vellore, and financially supported by the Union Department of Biotechnology. Though only tested on five patients in Tamil Nadu so far, none of them have reported bleeding episodes over an average follow-up period of 14 months.

Key points

- **Overview:** The trials involved deploying a novel technology of using a lentiviral vector to express a FVIII transgene in the patient's own haematopoietic stem cell which will then express FVIII from specific differentiated blood cells.
- **Haemophilia:** Haemophilia is caused by a defect in the X chromosome. Britain's Queen Victoria (1819-1901) is the world's most widely known carrier of haemophilia. Haemophilia is a medical condition, mostly inherited, in which the ability of blood to clot is severely reduced so that even a minor injury can cause severe bleeding.
  Types - The most common type of Haemophilia is called Haemophilia A. Here, the person does not have enough clotting factor VIII. Haemophilia B is less common. Here, a person does not have enough factor IX.
- **Haemophilia A:** Haemophilia A, also known as classical haemophilia, is a rare and genetic bleeding disorder caused by insufficient levels of a blood protein called factor VIII. Factor VIII is a clotting factor (an essential protein required for blood to clot and stop bleeding).
  Caused by - Haemophilia A is caused by disruptions or changes (variants or mutations) to the F8 gene located on the X chromosome.
  Susceptible - Haemophilia A is mostly expressed in males but some females who carry the gene variant may have mild or, rarely, severe symptoms of bleeding.
  Statistics In India - Haemophilia A occurs in about 1 in 5,000 births, while Haemophilia B is even rarer at about 1 in about 20,000 births.
- **Gene Therapy for Haemophilia:** It is based on the transfer of a non-pathogenic and non-replicating recombinant adeno-associated virus (AAV), the viral DNA of which has been replaced by a bioengineered gene cassette, with a tissue-specific promoter and other regulatory elements. Roctavian is the first gene therapy to treat haemophilia A. The active substance in Roctavian, valoctocogene roxaparvovec, is based on a virus (adeno-associated virus or AAV) which has been modified to not cause disease in humans.
- **Conclusion:** The new approach is safer than using an adenovirus, and potentially opens the gene therapy treatment to children. This ground-breaking study is notable for several reasons. First and foremost, it establishes that initiating and executing studies involving new gene therapy is possible even in resource-constrained settings such as India.

GS 3: ECONOMY, ECOLOGY, SCIENCE & TECHNOLOGY, DEFENCE, SECURITY AND DISASTER

5. Webb confirms the cosmos is expanding at an unexpected rate

Context: Two years of data from NASA's James Webb Space Telescope have now validated the Hubble Space Telescope's earlier finding that the rate of the universe's expansion is faster by about 8% than would be expected based on what astrophysicists know of the initial conditions in the cosmos and its evolution over billions of years. The expansion rate of the universe, often referred to as the Hubble constant (H_0), has been a subject of intense study and debate in cosmology. Two primary methods have been used to measure this constant, leading to different estimates and creating what's known as the Hubble tension.

Expansion of the Universe

- **Background:** *Hubble Tension* - The Hubble tension arises from two equally valid methods of measuring the expansion rate of the universe, both yielding significantly different results. Despite repeated measurements and refinements in calculations, the tension persists, indicating a real discrepancy rather than a flaw in the data.
  Lambda Cold Dark Matter Model - The model is currently the standard cosmological model used to explain various features of the universe, including its expansion. However, the Hubble tension suggests that the model may be incomplete or incorrect in some respects, prompting cosmologists to search for alternative models.
- **Observational Techniques:** Cosmologists use two main methods to measure the expansion rate:
  - *Cosmic Microwave Background (CMB)* - Studies of the CMB, the afterglow of the Big Bang, provide one estimate of the expansion rate.
  - *Cosmic Distance Ladder* - This method involves measuring the distances to celestial objects, such as Cepheid variable stars, to estimate the expansion rate.
- **Recent Findings and its implications:** Studies comparing data from the Hubble Space Telescope and JWST found no significant difference in estimates of the stars' distances, reinforcing the reality of the Hubble tension. Continued research aims to identify the underlying causes of the tension, which could lead to new insights into the fundamental nature of the cosmos.
- **Cosmic Expansion:** The concept of the universe expanding was first proposed by Belgian astronomer Georges Lemaître in the 1920s and later supported by Edwin Hubble's observations. The expansion of the universe refers to the increasing distance between galaxies over time, leading to the stretching of space itself. Some evidence for the expansion are:-
  - *Hubble's Law* - The observation that galaxies are receding from us, with their redshift proportional to their distance, indicates universal expansion.
  - *Cosmic Microwave Background (CMB)* - An echo of the Big Bang, the CMB radiation is uniformly distributed and provides evidence of the universe's early hot and dense state.
  - *Large-Scale Structure* - Observations of the distribution of galaxies and galaxy clusters show a web-like structure, consistent with an expanding universe.
- **Conclusion:** *Critical Density* - The balance between the expansion rate and gravitational pull determines whether the universe will expand forever or eventually collapse.
  Current Understanding - Current observations suggest a flat universe dominated by dark energy, leading to an accelerated expansion.

Q. Discuss the Hubble tension and its implications for our understanding of the expansion of the universe. How do different methods of measuring the expansion rate contribute to this tension? (বিশ্বব্রহ্মাণ্ডৰ সম্প্ৰসাৰণৰ বিষয়ে আমাৰ বোধগম্যতাৰ বাবে হাবলৰ উত্তেজনা আৰু ইয়াৰ প্ৰভাৱৰ বিষয়ে আলোচনা কৰক। সম্প্ৰসাৰণৰ হাৰ জুখিবৰ বিভিন্ন পদ্ধতিয়ে এই উত্তেজনাৰ ক্ষেত্ৰত কেনেদৰে অৰিহণা যোগায়?)