

**SOCIAL JUSTICE [GS-II]****Promotion of Regional language by utilization of Primers**

Recently, The Central Board of Secondary Education (CBSE) has instructed all its schools to make use of educational material which will focus on learning in one's mother tongue and encourage multilingual education.

**CBSE emphasizing on promoting Regional language in learning**

In the Recent Circular of the CBSE in line with the National Education Policy 2020 and the National Curriculum Framework 2022, which emphasize teaching and learning in the child's mother tongue, or regional and local language.

- National Council for Educational Research and Training and the Indian Institute of Languages have collaborated to produce a series of 52 entry-level primers tailored to various mother tongues and local languages spoken across India.
- The CBSE has said that these primers should be used to aid students in acquiring and mastering language skills early on, particularly if their mother tongue or local language is not the medium of instruction in schools.

**52 Primers initiative**

The 52 primers or short textbooks in Indian languages is going to be a transformational step for young learners, especially for Early Childhood Care and Education (ECCE), providing them access to education in their mother tongue/local language.

- Developed by: the Department of School Education and Literacy (DoSEL) in pursuance to National Education Policy, 2020.

Features :

- It forms a basal reader for the local language,
- It introduce numerals to the kids of Balvatikas and Anganwadis,
- It gives impetus to adult literacy programmes.
- It helps in pronunciation and comprehension of the letters of the alphabet and symbols of a language.
- It helps Children to become familiar with the meaning of one or more sets of letters made through their combinations in initial, medial and final positions in a word..

Utility & Importance :

- It will initiate an inspirational journey for young minds, paving the way for deeper understanding, lifelong learning, more familiarity and rootedness in indigenous culture and greater success in academics and beyond.
- Due to challenges of multilingual teaching like availability of skilled teachers for teaching in local languages.
- These primers will help in teaching children from three to eight years of age in their local language at the foundational stage.
- Bhotia, Bodo, Garo, Khandeshi, Kinnauri, Kuki, Manipuri, Nepali, Sherpa and Tulu are some of the languages the primers are available in.

**Importance of Regional Language**

Regional languages encapsulate traditions, folklore, and centuries-old wisdom, fostering a connection to cultural heritage.

- To Nurture Young Minds through Linguistic Diversity :
- Impact on Cognitive Development : Multilingualism enhances cognitive development, challenging the brain and stimulating problem-solving skills and creativity.
- Holistic Intellectual Toolkit : Language learning provides a holistic intellectual toolkit, extending beyond language proficiency to encompass cognitive flexibility.
- To Foster a Sense of Belonging : Language fosters belonging by creating a shared space where students feel acknowledged and valued.
- To Embrace Cultural Diversity in Education : Emphasizing regional languages in education connects students with diverse cultures and preserves traditions.
- Impact of New Education Policy 2020 : The implementation of the New Education Policy 2020 in India promotes education in regional languages to preserve cultural heritage and enhance cognitive understanding.

**SCIENCE AND TECHNOLOGY [GS-III]****CRISPR-Cas9 Gene Editing Clinical Trial treating cases of Inherited blindness**

CRISPR-Cas9 (a human gene editing tool) was used to treat people with a rare form of inherited or congenital blindness.

**Crispr-Cas9 and Inherited Blindness**

The Clinical trial was named BRILLIANCE with 14 participants (12 adults and two children).

They suffered from a rare form of inherited blindness, known as Leber congenital amaurosis (LCA) and is the first to use gene therapy to treat children who had been born with a form of blindness.

- Test: The study tested how well participants could see colored lights, navigate a small maze in varying amounts of light, and read from a chart after receiving the treatment.
- Treatment: Participants in the study received a single dose of a CRISPR gene therapy called EDIT-101.
- The treatment cuts out the mutation in CEP290 and inserts a healthy strand of DNA back into the gene which restores normal function of the protein CEP290, allowing the retina to detect light.
- Findings: 11 out of 14 participants experienced improved vision overall with 6 participants having major improvements and could identify objects and letters on a chart.
- EDIT-101 caused no serious adverse side effects in participants. Some patients reported mild adverse effects which resolved quickly.

#### **Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR-Cas9)**

- It is a Gene Editing tool and is a precise way of altering DNA. It cuts out specific strands of DNA, and replaces them with new strands.
- CRISPR: It is the DNA-targeting part of the system which consists of an RNA molecule, or 'guide', designed to bind to specific DNA bases through complementary base-pairing.
- Cas9: It stands for CRISPR-associated protein 9, & is the nuclease part that cuts the DNA.
- The CRISPR-Cas9 system: The technology was adapted from a naturally occurring genome editing system used by bacteria as an immune defense.
- It helps the organisms recognise and fight off similar viruses in the future by acting like an immune system.
- Recognition: In 2020, Emmanuelle Charpentier and Jennifer A. Doudna were awarded the Nobel Prize in chemistry for discovering CRISPR-Cas9.
- Application: Researchers use CRISPR to edit DNA precisely and can be used for various purposes
- Treating genetic diseases
- Creating drought-resistant plants
- Modifying food crops
- De-extinction projects.
- Future Scope:
- As of now, only one CRISPR treatment has been approved for clinical use i.e. Casgevy (a treatment for sickle-cell disease) available in the US, the UK, and the EU since December 2023.
- Ongoing clinical trials: Other CRISPR therapies are being tested for HIV/AIDS, diabetes, cancer, cardiovascular diseases, and antibiotic resistance with more than 200 people been treated with experimental CRISPR technologies.

### **EFFECTS OF LIBERALIZATION ON THE ECONOMY [GS-III] AND STATUTORY, REGULATORY AND VARIOUS QUASI-JUDICIAL BODIES [GS-II]**

#### **The globalization of the Indian legal industry**

The article provides a critical analysis of recently notified "Rules for Registration and Regulation of Foreign Lawyers and Foreign Law Firms in India, 2022" that allows foreign lawyers to set up their offices in India for some limited purposes. These rules have been notified by the Bar Council of India. The globalization of the Indian legal industry

This insulation was partly due to the suitability of Indian lawyers for applying laws according to India's socio-economic values.

- India has become a prominent center for cross-border commerce. Thus, globalization of the legal industry became inevitable.
- BCI emphasizes that the world is increasingly interconnected and refers to the need for the legal profession in India to adapt accordingly.

#### **Functions authorized for foreign lawyers according to the new regulations**

1) Under the new rules, registered foreign firms and lawyers can engage in transactional or corporate work, such as joint ventures, mergers, acquisitions, and intellectual property matters, on a reciprocal basis.

2) They can now advise and appear in international arbitration cases conducted in India, irrespective of whether foreign law may or may not be involved. However, foreign lawyers cannot appear before Indian courts, tribunals, or statutory authorities.

previous restriction on foreign lawyers practicing in India, and how have the new rules changed this?

1) The Supreme Court of India had prohibited foreign lawyers from practicing law in India in either litigation or the non-litigation side.

2) The court limited their involvement in international arbitration cases to temporary visits to India. However, the BCI Rules indicate a broader scope for foreign lawyers, albeit within a heavily regulated structure.

**Long-term benefits of these new rules**

- 1) Enhancing Access for Indian Lawyers – The reciprocity requirement can ensure that Indian lawyers receive increased access to the legal profession in foreign jurisdictions. This could enable a sustained exchange of know-how, skills, and expertise between lawyers across jurisdictions.
- 2) Fostering Competition and Opportunities– The entry of foreign firms in India will increase competition. This will lead to more job opportunities for Indian lawyers, fostering a better work culture and remuneration. This will also incentivize competing stakeholders to improve the quality of their services.
- 3) Economic Leadership-This is likely to be beneficial not just for the Indian legal community but also for India’s ascent as a leading economic power.

**Risks posed by these new rules**

- 1) Regulatory Disparities -Differences in regulations between Indian and foreign law firms in their home countries can create unintended distortions.
- 2) Advertising Restrictions -Although Indian lawyers are barred from seeking clients through advertising, such limitations are less likely to be present in other legal systems.
- 3) Difference in Ethical guidelines-The ethical guidelines for foreign-qualified lawyers may vary from those in India, leading to uncertainty about which set of rules applies in a transaction or arbitration context.
- 4) Monetary Capabilities of Foreign Firms– Certain multi-jurisdictional law firms with offices in various countries may have greater monetary capabilities than their Indian counterparts. This will make it difficult for the Indian firms to compete.

How is the Bar Council of India addressing these benefits and risks?

- 1) The Bar Council of India has imposed stringent registration requirements on foreign entrants and excludes them from litigious work.
- 2) They are also engaged in dialogue with critics to carefully balance the benefits and risks. This demonstrates a consultative approach to decision-making.

**PRELIM FACT**

**1.Chloropicrin**

The U.S. State Department has accused Russia of using a chemical weapon- Chloropicrin against Ukrainian forces, which violates the Chemical Weapons Convention.

About Chloropicrin

Aspects	Description
About	1. Chloropicrin (Cl3CNO2) is a toxic organic compound. 2. It is listed as a banned choking agent by the Hague-based Organisation for the <u>Prohibition of Chemical Weapons (OPCW)</u> .
Compounds involved in manufacture	1. It is manufactured by a chemical reaction involving sodium hypochlorite (which in dilute form is called bleach) and nitromethane (a common industrial solvent). 2. It can also be made by combining chloroform with nitric acid, which yields chloropicrin and water.
Characteristics	1. It is a colourless to yellow oily liquid. 2. This chemical is an irritant, like a tear gas. 3. It has a strong, irritating odour and can enter the body through breathing, swallowing, or skin contact.
Uses of Chloropicrin	Chloropicrin is used widely as a chemical compound for various purposes. 1. It serves as a fungicide, herbicide, insecticide, nematocide, and antimicrobial agent. 2. It has been used as a warfare agent during world war-I, but now it is no longer authorized for military use.
Risk associated with it	1. Chloropicrin causes severe irritation to the eyes, skin, and respiratory and gastrointestinal tracts, with potential effects including eye damage, burns in the mouth, esophagus, and stomach, shortness of breath, nausea, dizziness, and bluish skin discolouration. 2. Severe exposure can lead to pulmonary edema, which may be fatal. 3. Chloropicrin is highly toxic and carcinogenic, and it may affect developmental or reproductive health through chronic exposure.

## **2. Secure IoT**

IIT Madras startup Mindgrove Technologies has launched Secure IoT, India's first microcontroller chip, which is cheaper and more efficient.

Running at 700 MHz, Secure IoT is 30% cheaper than other chips and offers high performance, versatility, and security features. It aims to bridge the gap between premium and budget options in embedded systems. With potential global interest, it enhances India's semiconductor self-sufficiency. Mindgrove's chip powers various devices from wearables to smart city infrastructure, promoting innovation and local production.

What is a microcontroller chip?

A microcontroller chip is a small integrated circuit that combines the functions of a central processing unit (CPU), memory, input/output ports, and other peripherals into a single chip. It is commonly used to control and manage electronic devices, ranging from simple household appliances to complex industrial machinery.

## **3. SC directive on promoting products in media**

The Supreme Court has mandated that advertisers must provide self-declarations to confirm the accuracy of their product claims before advertising in the media, aiming to protect consumers from deceptive marketing. This ruling was prompted by a case involving misleading advertisements by Patanjali Ayurved.

### **About the SC directive on promoting products in media**

1. S.C directed the advertisers to submit self-declarations, affirming the accuracy of their product claims, before promoting them through various media channels.
2. Implementation Plans:
  - a) To enforce this directive effectively, advertisers are mandated to adhere to the Cable TV Network Regulations Rules of 1994.
  - b) Advertiser must upload their self-declarations on the Information and Broadcasting Ministry's 'Broadcast Seva' portal before airing ads on TV channels. Copies of these declarations are also required to be provided to the broadcasters.
  - c) A similar portal for print advertisers will be established within a four-week timeframe.
3. Responsibility of Promoters: The Supreme Court has emphasized on the responsibility of social media influencers, celebrities, and public figures endorsing products. They have been urged to possess sufficient knowledge about the products they promote and to ensure that their endorsements are not contributing to deceptive advertising practices.
4. Enhanced Consumer Protection Measures:
  - a) Recognizing the importance of consumer empowerment, the Court has directed the Centre to establish a clear and accessible procedure for filing complaints against misleading advertisements.
  - b) Consumers are entitled to be informed of the outcomes of their complaints, ensuring transparency and accountability.
5. Government Action: The Ministry of Health has been directed to furnish data regarding complaints received by the Food Safety and Standards Authority of India (FSSAI) pertaining to misleading advertisements and misbranding of food and health products. This transparency aims to bolster consumer trust and regulatory efficacy in the realm of product advertising and marketing.

## **4. West Nile Fever in Kerala**

The Kerala government has recently issued a warning in the state regarding West Nile fever, a viral illness spread by mosquitoes.

### **About West Nile Fever**

- This fever is caused by West Nile virus with a single-stranded RNA.
- Natural hosts: Birds serve as the primary hosts for West Nile virus.
- First outbreak: This fever was initially discovered in a female resident of the West Nile region of Uganda in 1937.
- Transmission: This fever Spread through Culex mosquito bites
- It Can infect humans, birds, mosquitoes, horses, and certain other mammals
- Currently, there have been no reported cases of human-to-human transmission.
- Lack of Vaccine: There is currently no vaccine available for humans against West Nile virus.

## **5. Hicky's Bengal Gazette**

- On World Press Freedom Day (May 3), India remembers Hicky's Bengal Gazette, the country's first newspaper.
- Launched in 1780 by James Augustus Hicky in Kolkata, it highlighted government corruption and civic issues but faced closure due to lawsuits. It was a weekly English-language publication that faced closure in 1782 after criticizing Governor General Warren Hastings.
- Despite its short lifespan, it paved the way for journalism in India, inspiring future publications and promoting freedom of the press.

**ANSWER WRITING**

**Q. Discuss the significance of India's acceptance of the Artemis Accords and its implications for the country's space policy.**

The Artemis Accords, led by NASA, sets a framework for international cooperation in the exploration of outer space, primarily concerning the Artemis Program, which aims to return humans to the moon. Recently, India has accepted these accords, marking a significant evolution in its space policy and engagement with global partners in space exploration.

**Significance of India's Acceptance**

- **Global Recognition and Visibility:** By signing the Artemis Accords, India further bolsters its position in the global space community, showcasing its willingness to follow globally recognized space laws and norms, thus enhancing its international visibility.
- **A shift in International Alliances:** The acceptance reflects a shift in India's space alliances, aligning more closely with the US-led alliance, which signifies India's readiness for enhanced collaboration in space exploration.
- **Strengthening National Space Capabilities:** Participation in the alliance allows India to enhance its national space capabilities, with potential benefits from technology sharing and collaboration with other nations, contributing to the growth of the domestic space industry.
- **Sustainable Space Exploration:** The Accords emphasize peaceful and sustainable exploration of space. Accepting them aligns India with these principles, reinforcing its commitment to avoiding harmful interference and ensuring transparency in operations.

**Implications for India's Space Policy**

- **Evolution of Space Policy:** Aligning with the Artemis Accords will require evolution and adjustments in India's space policy to mirror the principles set by the Accords, emphasizing transparency, interoperability, and sustainable use of space resources.
- **Access to Advanced Technologies:** As a part of the US-led alliance, India stands to gain access to advanced space technologies and capabilities, supporting its missions related to moon landings, planetary explorations, and the establishment of a space station.
- **Strategic Diplomacy:** The diplomatic landscape becomes more complex with India needing to maintain a careful balance between its new alliances and the traditional strong ties with Russia in the space sector.
- **Commercial Space Sector:** The Accords promote commercial participation in space exploration. This could stimulate India's burgeoning commercial space sector, encouraging private entities to engage in space-related activities.
- **Resource Utilization:** The Accords allow for the use of space resources. This could influence India's future missions, allowing it to plan for missions aimed at exploiting resources on the Moon, Mars, and asteroids.

**Concerns Associated with This Development**

- **Overreliance on External Technologies:** While collaboration offers many benefits, an overreliance on external technologies could potentially restrict India's ability to independently develop and sustain its own space technologies and capabilities.
- **Potential Loss of Autonomy:** As India aligns with the US-led alliance, there could be concerns about a potential loss of autonomy and decision-making power in shaping its space program.
- **Impact on Existing Partnerships:** The decision could strain India's existing partnerships, particularly with Russia. It will be crucial for India to manage these relationships effectively.

India's endorsement of the Artemis Accords reflects its commitment to space exploration best practices and opens new pathways for collaboration. However, this move requires delicate navigation of diplomatic relationships and a careful balance of independence and collaboration. With a considered approach, India can leverage this opportunity to accelerate its space program and solidify its position as a significant player in global space exploration.

**MCQs**

1. Consider the following statements regarding 'CRISPR-Cas9':
  1. CRISPR-Cas9 edits genes by cutting the desired DNA and allowing natural DNA repair processes to take over.
  2. CRISPR are short DNA sequences found in the genome of eukaryotic organisms.
  3. It cannot be used in obtaining biological organs for transplantation.
 How many of the above statements is/ are correct?
  - a) Only one
  - b) Only two
  - c) All three
  - d) None
2. With reference to the West Nile Virus, consider the following statements:
  1. The Anopheles species of mosquito acts as the principal vector for transmission of the Virus.
  2. The virus directly affects the respiratory system in human beings.

3. The virus is spread through human-to-human transmission.  
How many of the above statements is/ are incorrect?  
a) Only one  
b) Only two  
**c) All three**  
d) None
3. Consider the following statements about National Health Systems Resource Centre  
1. It was established under the National Rural Health Mission (NRHM).  
2. It prepares National Health Account (NHA) estimates.  
Which of the statements given above is/are correct?  
a) 1 only  
b) 2 only  
**c) Both 1 and 2**  
d) Neither 1 nor 2
4. Consider the following statements about Hicky's Bengal Gazette:  
1. It was the first newspaper published in India.  
2. It was established by James Augustus Hicky in the 19th century.  
Which of the statements given above is/are correct?  
**a) 1 only**  
b) 2 only  
c) Both 1 and 2  
d) Neither 1 nor 2
5. In India, the 'Sarna Code' refers to the religious and cultural practices of indigenous tribal communities that worship nature. Which one of the following constitutional provisions supports the recognition of Sarna as a separate religion?  
a) Article 15  
**b) Article 25**  
c) The Preamble  
d) Article 29
6. Which one of the following brain's regions is responsible for regulating body temperature and can be affected by schizophrenia and some antipsychotic medications?  
**a) Hypothalamus**  
b) Hippocampus  
c) Amygdala  
d) Pituitary gland
7. Consider the following statements:  
1. Brazil, China, India, and the U.S. account for 60% of the world's plastic waste.  
2. Plastic Waste Management Amendment Rules (2021), implemented by India, do not cover plastic bottles and multi-layered packaging such as milk cartons.  
Which of the statement(s) given above is/are correct?  
a) 1 only  
b) 2 only  
**c) Both 1 and 2**  
d) Neither 1 nor 2
8. Consider the following statements:  
1. Microcontroller chips typically integrate a CPU, memory, and various peripherals on a single chip.  
2. Microcontroller chips are primarily used in high-performance computing applications.  
3. Microcontroller chips do not require any external components to function.  
4. Microcontroller chips are only programmed using specialized hardware and cannot be programmed via software.  
How many of the above statements are correct?  
**a) Only one**  
b) Only two  
c) Only three  
d) All four
9. Consider the following statements:  
1. Health is officially defined by the World Health Organization as free from disease or infirmity.  
2. India has no law covering end-of-life care.  
3. The Supreme Court has interpreted 'Right to die with dignity' as a fundamental right under the Article 21 of the Indian Constitution.  
Which of the statement(s) given above is/are correct?  
a) 1 and 3 only  
**b) 2 and 3 only**  
c) 1 only  
d) 3 only
10. Consider the following statements regarding Bar Council of India's (BCI) Rules for Registration and Regulation of Foreign Lawyers and Foreign Law Firms in India, 2022:  
1. Under the BCI Rules, foreign lawyers are allowed to appear before Indian courts, tribunals, or statutory authorities.  
2. Under the BCI Rules, foreign lawyers and firms can engage in transactional or corporate work such as joint ventures, mergers and acquisitions, and intellectual property matters on a reciprocal basis.  
Which of the statement(s) given above is/are correct?  
a) 1 only  
**b) 2 only**  
c) Both 1 and 2  
d) Neither 1 nor 2