POLITY

The Citizenship (Amendment) Act (CAA): Govt. Ready with Rules for CAA

Why in News?

- According to the government sources, Rules for the Citizenship (Amendment) Act 2019 will be notified much before the announcement of the Lok Sabha elections.

The Citizenship (Amendment) Act (CAA) 2019

- About:
  - The Act seeks to amend the definition of illegal immigrant for Hindu, Sikh, Parsi, Buddhist, Jains and Christian (but not Muslim) immigrants from Pakistan, Afghanistan and Bangladesh, who have lived in India without documentation.
  - They will be granted fast track Indian citizenship in 5 years (11 years earlier).
  - The Act (which amends the Citizenship Act 1955) also provides for cancellation of Overseas Citizen of India (OCI) registration where the OCI card-holder has violated any provision of the Citizenship Act or any other law in force.
- Who is eligible?
  - The CAA 2019 applies to those who were forced or compelled to seek shelter in India due to persecution on the ground of religion. It aims to protect such people from proceedings of illegal migration.
  - The cut-off date for citizenship is December 31, 2014, which means the applicant should have entered India on or before that date.
  - The act will not apply to areas covered by the Constitution's sixth schedule, which deals with autonomous tribal-dominated regions in Assam, Meghalaya, Tripura, and Mizoram.
  - Additionally, the act will not apply to states that have an inner-line permit regime (Arunachal Pradesh, Nagaland and Mizoram).
- Implementation of the law: The rules for implementation of the Act were never notified (and that is why the law can't be implemented) and the government sought repeated extensions for framing the rules.

Reasons for the Delay in the Implementation of the CAA

- One of the prime reasons is the vociferous opposition faced by the CAA in several states including Assam and Tripura.
- The protests in Assam were fuelled by fears that the legislation would permanently alter the demographics of the state.
  - The CAA is seen in Assam as a violation of the 1985 Assam Accord which allows foreign migrants who came to Assam after January 1, 1966 but before March 25, 1971 to seek citizenship.
  - The cut-off date for citizenship to be extended under the CAA is December 31, 2014.
- The protests didn't remain confined to the North-East, but spread to other parts of the country.
  - A clutch of petitions, including by the Indian Union Muslim League, are before the Supreme Court, challenging the constitutional validity of the CAA.
  - The petitioners have contended that the law is anti-Muslim, violating Article 14 (Right to Equality) of the Indian Constitution.
  - It is arbitrary as it leaves out the persecuted Rohingya of Myanmar, Tibetan Buddhists from China and Tamils from Sri Lanka.

Counterclaims in Response to the Petitions against CAA

- The Centre said the basis of the "reasonable classification" made by the 2019 Act was not religion, but "religious discrimination" in neighbouring countries which are "functioning with a state religion".
- The Parliament, after taking cognizance of the said issues over the course of the past 7 decades, has taken into consideration the acknowledged class of minorities and has enacted the present amendment.
- The CAA is a specific amendment which seeks to tackle a specific problem prevalent in the specified countries.
- The legislation was not meant to be an omnibus solution to issues across the world.
  - The Indian Parliament cannot be expected to take note of possible persecutions that may be taking place across various countries in the world.

Rules for the CAA

- The rules are now ready and the online portal is also in place.
- Once the rules are issued, the law can be implemented and those eligible can be granted Indian citizenship.
- The entire process will be online and applicants can apply even from their mobile phones.
- The applicants will have to declare the year when they entered India without travel documents. No document will be sought from the applicants.
- Requests of the applicants, who had applied after 2014, will be converted as per the new rules.

SCIENCE & TECHNOLOGY

World's Largest Radio Telescope Project

Why in News?

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- Scientists in India will now also be part of the international mega-science project, the Square Kilometer Array Observatory (SKAO),that will function as the world's largest radio telescope.
- India's Giant Metrewave Radio Telescope (GMRT) is amongst the world's six large telescopes.

What is a Radio Telescope?

- Radio telescopes detect and amplify radio waves from space, turning them into signals that astronomers use to enhance our understanding of the Universe.
- All astronomy is about observing waves of light.
- Stars, galaxies and gas clouds in space emit visible light as well as light from other parts of the electromagnetic spectrum in the form of radio waves, gamma rays, X-rays, and infrared radiation.
- In its simplest form a radio telescope has three basic components:
  - One or more antennas pointed to the sky, to collect the radio waves
  - A receiver and amplifier to boost the very weak radio signal to a measurable level, and
  - A recorder to keep a record of the signal.
- Radio telescopes can be used both night and day.

About Giant Metrewave Radio Telescope (GMRT)

- The Giant Metrewave Radio Telescope (GMRT), located near Narayangaon, Pune, is an array of 30 fully steerable parabolic radio telescopes of 45 metre diameter, observing at metre wavelengths.
- It is a low-frequency radio telescopethat helps investigate various radio astrophysical problems ranging from nearby solar systems to the edge of the observable universe.
- The telescope is operated by the National Centre of Radio Astrophysics (NCRA). It became operational in the year 2000.
  - NCRA is a part of the Tata Institute of Fundamental Research (TIFR), Mumbai.
- GMRT is one of the most challenging experimental programmes in basic sciences undertaken by Indian scientists and engineers.
- Astronomers from all over the world regularly use this telescope to observe many different astronomical objects such as the Sun, Jupiter, exoplanets, magnetically active stars, etc.
- In 2021, GMRT became only the third in India to be recognised with the Institute of Electrical and Electronics Engineers (IEEE) Milestone facility.

National Centre for Radio Astrophysics

- The National Centre for Radio Astrophysics is a research institution in India in the field of radio astronomy.
- It is located in the Pune University Campus.
- The Centre has its roots in the Radio Astronomy Group of TIFR, set up in the early 1960s under the leadership of Prof. GovindSwarup.

Square Kilometer Array Observatory (SKAO)

- About
  - The Square Kilometer Array is an intergovernmental international radio telescope project being built in Australia and South Africa.
  - It is being built in the southern hemisphere as the view of the Milky Way galaxy is the best and radio interference at its least.
  - Some of the countries taking part in building the SKA include the UK, Australia, South Africa, Canada, China, France, India, Italy and Germany.
- Objective:
  - To build and operate cutting-edge radio telescopes to transform our understanding of the Universe, and deliver benefits to society through global collaboration and innovation.
- Construction
  - The project has two phases of construction: the current SKA1, commonly just called SKA, and a possible later significantly enlarged phase sometimes called SKA2.
  - The construction phase of the project began in December 2022 in both South Africa and Australia.
- Headquarters: Jodrell Bank Observatory, United Kingdom
- India's Role:
  - India, through the NCRA and some other institutions, has been involved in the development of SKAO since its inception in the 1990s.
  - India's main contribution to the SKA is in the development, and operation, of the Telescope Manager element, the "neural network" or the software that will make the telescope work.
    - NCRA led an international team from nine institutions and seven countries to develop the software.
  - Countries have to sign, and ratify, the SKAO convention to formally become members.
  - Recently, the Central Government decided to join the project, with a financial sanction of Rs 1,250 crore.

Gravitational Waves

- Gravitational waves are 'ripples' in space-time caused by some of the most violent and energetic processes in the Universe.
- Albert Einstein predicted the existence of gravitational waves in 1916 in his general theory of relativity.

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- Einstein's mathematics showed that massive accelerating objects (things like neutron stars or black holes orbiting each other) would disrupt space-time in such a way that 'waves' of undulating space-time would propagate in all directions away from the source.
- These cosmic ripples would travel at the speed of light, carrying with them information about their origins, as well as clues to the nature of gravity itself.

Laser Interferometer Gravitational-Wave Observatory (LIGO)

- It is the world's largest gravitational wave observatory.
- LIGO consists of two widely-separated interferometers within the United States—one in Hanford, Washington and the other in Livingston, Louisiana—operated in unison to detect gravitational waves.

PRELIM FACTS

1. Kochi-Lakshadweep islands submarine optical fiber connection Project

- Recently, the Prime Minister of India in Kavaratti, Lakshadweep, inaugurated Kochi-Lakshadweep islands submarine optical fiber connection (KLI-SOFC) project.

About Kochi-Lakshadweep islands submarine optical fiber connection project:

- It is the submarine cable connectivity project from Mainland (Kochi) to eleven Lakshadweep Islands namely, Kavaratti, Agatti, Amini, Kadmat, Chetlet, Kalpeni, Minicoy, Androth, Kiltan, Bangaram and Bitra has been extended.
- The project is funded by Universal Services Obligation Fund (USOF), Department of Telecommunication.
- Bharat Sanchar Nigam Limited (BSNL) was the Project Executing Agency and the work was awarded to M/s NEC Corporation India Pvt Ltd through Global Open Tendering process.
- The major activities related to the project include Marine Route Survey, Submarine Cable laying, Civil Construction of CLS stations, Installation, Testing and Commissioning of End Terminals (SLTE).
- Significance of the project
  - The KLI-SOFC project will lead to an increase in internet speed unlocking new possibilities & opportunities.
  - For the first time since independence, Lakshadweep will be connected through Submarine Optic Fibre Cable.
  - The dedicated submarine OFC will ensure a paradigm shift in communication infrastructure in the Lakshadweep islands, enabling faster and more reliable internet services, telemedicine, e-governance, educational initiatives, digital banking, digital currency usage, digital literacy etc.

2. Cyber kidnapping

- Recently, a Chinese student who was the victim of "cyber kidnapping" has been discovered unharmed.
- In the US, cyber kidnappers have been targeting Chinese foreign exchange students, and extorting huge amounts of money from parents.

About Cyber Kidnapping:

- Cyber kidnapping refers to a crime where the 'kidnappers' convince their victim to hide, and then contact their loved ones for ransom.

How does Cyber Kidnapping work?

- The victim is made to send pictures that make it look like they are being held captive — showing them bound or gagged which are then shared with the family.
- The 'kidnappers', though not physically present, monitor the victim online through video-call platforms.
- Unlike traditional abductions, virtual kidnappers have not actually kidnapped anyone.
- Instead, through deceptions and threats, they coerce victims to pay a quick ransom before the scheme falls apart.

Prevention from Cyber Kidnapping:

- Strong passwords: Use unique, complex passwords for all accounts and enable multi factor authentication (MFA) wherever possible.
- Software updates: Regularly update operating systems, applications, and firmware to patch vulnerabilities that cybercriminals might exploit.
- Antivirus and anti-malware: Use reputable security software to detect and remove malicious software. Keep it updated for the latest threats.
- Phishing awareness: Be wary of unsolicited emails, texts, or calls, especially those requesting personal information or prompting urgent action.

3. Swadesh Darshan 2.0 Scheme

- The tourism ministry has included Debrigarh Wildlife Sanctuary in the Swadesh Darshan 2.0 scheme.

About Swadesh Darshan Scheme:

- It was launched in 2015 by the Ministry of Tourism, Government of India, to develop sustainable and responsible tourism destinations in the country.
- It is 100% centrally funded scheme.
- Under the scheme, the Ministry of Tourism provides financial assistance to State governments, Union Territory Administrations or Central Agencies for development of tourism infrastructure in the country.

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- Operation & Maintenance (O&M) of the projects sanctioned under Swadesh Darshan Scheme is the responsibility of the respective State Government/UT Administration.
- Swadesh Darshan 2.0:
  - The Ministry of Tourism has revamped its Swadesh Darshan scheme as Swadesh Darshan 2.0 (SD2.0) for development of sustainable and responsible tourist destinations covering tourism and allied infrastructure, tourism services, human capital development, destination management and promotion backed by policy and institutional reforms.
  - The objective for the Swadesh Darshan 2.0 scheme envisage increase in private sector investment in tourism & hospitality.
  - It may help in increasing Public Private Partnerships (PPP) in the field of tourism and operation and maintenance of the created assets under the scheme.

About Debrigarh Wildlife Sanctuary:

- Location: It is situated in the Bargarh district of Odisha near the Hirakud dam (Mahanadi River).
- It finds a special mention because of noted freedom fighter Veer Surendra Sai. During his rebellion against the British, his base at 'Barapathara" was located within the sanctuary.
- It was declared a wildlife sanctuary in 1985.
- Vegetation: Dry deciduous mixed forests.
- Flora: Major trees found here are Sal, Asana, Bija, Aanla, Dhaura etc.
- Fauna: A huge variety of wild animals reside in the dense forest of the sanctuary, such as Tiger, Sloth Bear, Leopard, Hyena, Spotted Deer, Antelopes, Sambar, Gaur, Nilgai, Bison, Langur Monkeys etc.

4. SMART 2.0 Program

- The Central Council for Research in Ayurvedic Sciences (CCRAS) along with National Commission for Indian System of Medicine (NCISM) has launched 'SMART 2.0' program.

About SMART 2.0 program:

- Scope for Mainstreaming Ayurveda Research among Teaching professionals (SMART) program promotes robust clinical studies in priority areas of Ayurveda with Ayurveda academic institutions/hospitals across the country through mutual collaboration.
- The objective of 'SMART 2.0' is to generate a tangible evidence to demonstrate efficacy and safety of Ayurveda interventions using interdisciplinary research methods and translating it into public health care.
- The study aims at safety, tolerability and adherence to Ayurveda formulations in the priority research areas of Bal Kasa, malnutrition, insufficient lactation, Abnormal Uterine Bleeding, Osteoporosis in post-menopausal women and Diabetes Mellitus (DM) II.

What is CCRAS?

- It is an autonomous body of the Ministry of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy), Government of India.
- It is an apex body in India for the formulation, coordination, development and promotion of research on scientific lines in Ayurveda and Sowa-Rigpa system of medicine.

Key facts about National Commission for Indian System of Medicine:

- It is the statutory body constituted under NCISM Act, 2020.
- An Act to provide for a medical education system that improves access to quality and affordable medical education, ensures availability of adequate and high quality medical professionals of Indian System of Medicine in all parts of the country.
- Composition: It consists of 29 members, appointed by the central government. A Search Committee will recommend names to the central government for the post of Chairperson, part time members, and presidents of the four autonomous boards set up under the NCISM.
- Functions
  - Framing policies for regulating medical institutions and medical professionals of Indian System of Medicine
  - Assessing the requirements of healthcare related human resources and infrastructure.
  - Ensuring compliance by the State Medical Councils of Indian System of Medicine of the regulations made under the Bill
  - Ensuring coordination among the autonomous boards.

5. Square Kilometer Array Observatory

- The Government of India has accorded its approval for India's participation in the international mega science project, Square Kilometer Array (SKA), at an estimated cost of 1250 Cr rupees.

About Square Kilometer Array Observatory:

- It is a state of the art, mega science international facility to build the world's biggest and most sensitive radio telescope for addressing a wide variety of cutting-edge science goals.
- The SKAO, collocated in Australia (SKA-Low) and South Africa (SKA-Mid) with operational headquarters in the UK, is expected to revolutionize radio astronomy, while driving the growth of many important new state-of-the-art technologies.

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- Other ten countries involved are - Australia, Canada, China, India, Italy, New Zealand, South Africa, Sweden, and the Netherlands.

India and SKAO:

- Subsequent to this approval, India will be signing the SKAO treaty to become a full-fledged member of the SKA Observatory and thus join the growing list of countries participating in the project.
- This approval covers funding support for the construction phase of the international SKA Observatory (SKAO) spread over the next 7 years.
- The project will be jointly funded by the Department of Atomic Energy (DAE) and Department of Science and Technology (DST), with DAE as the lead agency.
- The Indian participation in SKA is a truly nationwide, inclusive project led by a consortium of more than 20 academic and research institutes (with NCRA-TIFR as the nodal institute).
- During the design phase of the SKA (2014-2020), India has contributed actively to the project, with a lead role in the successful design of the complex Telescope Manager system.
- In the subsequent early prototyping phase, India was actively engaged in three areas of work namely Telescope Manager Package, SKA-Low digital hardware package and Science Data Processor work package.
- Participation in this project will open up possibilities for development of niche skills in Indian industry and research organizations in different areas of next generation technologies, such as modern antenna design, sophisticated cryogenic receiver systems, and high volume optical fibre data transport technology etc.

ANSWER WRITTING

There is a view that absolute economic equality is neither possible nor desirable. It is argued that the most a society can do is to try and reduce the gaps between the richest and poorest members of society. Do you agree?

Economic equality refers to a relatively equal distribution of resources and opportunities among individuals. Whereas, absolute economic equality, suggests a state where every member possesses the exact same level of wealth and income, which is considered both unattainable and undesirable in practice.

At the same time, extreme inequality refers to a significant and disproportionate disparity in wealth, income, or resources between the richest and poorest members of society which again is undesirable. Therefore, there is a need to achieve a state of reasonable equality which refers to a state where there are still some disparities, but the gaps between the wealthiest and poorest members of society are significantly reduced and more balanced (Article 39 (b) and (c) are provided to counter extreme inequality).

Reasons why absolute economic equality is not possible:

- Varied skills: Not everyone is equal in skills and talents, therefore, doctors, engineers, and artists may contribute differently in society and derive varied remuneration.
- Global economic disparities: Achieving absolute economic equality is complex due to disparities in resources, infrastructure, and geopolitical factors among countries due to uneven distribution of wealth and resources.

Reasons why absolute economic equality is not desirable:

- Incentive and motivation: Absolute economic equality may discourage individuals from striving for success and productivity.
- Resource allocation and efficiency: Allocating the same amount of resources to everyone, regardless of their needs, could lead to inefficiencies.
- Economic growth and development: In certain circumstances, economic inequality can serve as a driving force for economic growth and development. It can incentivize investments, innovation, and entrepreneurship, leading to overall prosperity.
    - For example, entrepreneurs may take risks and invest in new ventures due to the potential for higher returns.

Conclusion

Since absolute economic equality is neither possible nor desirable, only option the society is left with is to reduce the gap between its rich and the poor members. However, reducing the gap between rich and poor by development of underprivileged-class and not by diminishing wealth of the rich, can be the first step to achieve reasonable economic equality. It requires integrated effort to rout out not just economic but socio-political causes of inequality as well through appropriate affirmative actions.

MCQs

1. With reference to Cyber Kidnapping, consider the following statements:
   1. Cyber Kidnapping involves obtaining the personal information of another person to use their identity to commit fraud.
   2. The kidnappers are not physically present and monitor the victim online through video-call platforms.

   Which of the statements given above are incorrect?
   a) 1 only
   b) 2 only
   c) Both 1 and 2
   d) Neither 1 nor 2
2. With reference to the Australia-India Economic Cooperation and Trade Agreement (ECTA), consider the following statements:

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1. The flow of India's agricultural goods into Australia has significantly decreased since the ECTA entered into force.
2. ECTA connects professional bodies of two countries dealing with services to work on standards, recognition and licensing.

Which of the statements given above are correct?
a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

3. With reference to Polar bears, consider the following statements:
1. Polar bears are listed as critically endangered in the International Union for Conservation of Nature (IUCN) Red List.
2. They are susceptible to deaths due to the Avian Influenza.

Which of the statements given above are incorrect?
a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

4. With reference to Space missions recently seen in the news, consider the following pairs:

Mission	Mandate
1. Europa Clipper:	to explore the moon's South Pole
2. JAXA MMX:	to study Phobos and Deimos
3. Hera:	to explore one of Jupiter's largest moons

How many of the above pairs are correctly matched?
a) Only one
b) Only two
c) All three
d) None

5. Consider the following countries and Islands:
1. Somalia
2. Socotra Islands
3. Yemen
4. Djibouti

How many of the above border the Gulf of Aden?
a) Only one
b) Only two
c) Only three
d) All four

6. With reference to Benami transactions, consider the following statements:
1. The holder of the asset is not it's true beneficial owner in a benami transaction.
2. The properties held benami are liable for confiscation by the Government without payment of compensation.

Which of the statements given above are incorrect?
a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

7. With reference to the Square Kilometre Array Observatory (SKAO), consider the following statements:
1. The SKAO project is spread across different sites in South Africa and Australia.
2. Countries have to sign, and ratify, the SKAO convention to formally become its members.
3. India is contributing to the SKAO by the development of the software that will make the telescope work.

How many of the above statements are correct?
a) Only one
b) Only two
c) All three
d) None

8. With reference to the Kochi-Lakshadweep Islands Submarine Optical Fiber Connection (KLI-SOFC) project, consider the following statements:
1. The Project envisages the provision of a direct communication link between Kochi and Lakshadweep.
2. The Project would be entirely funded by the International Telecommunication Union (ITU).

Which of the statements given above are incorrect?
a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

9. Which of the following species is known as "Ghost of the Mountains"?
a) Brown bear
b) Yak
c) Snow Leopard
d) Lammergeier

10. With reference to coastal landforms, consider the following statement?
1. High rocky coasts are smooth with lagoons and tidal creeks, where depositional features dominate.
2. Low sedimentary coasts have highly irregular coastlines with extensions of water into land where erosional features dominate.
3. The west coast of India is a high, rocky, retreating coast, and the east coast of India is a low, sedimentary coast.

How many of the statements given above are correct?
a) Only one
b) Only two
c) All three
d) None

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