

POLITY

❖ **The Uniform Civil Code**

❖ **CONTEXT:** Ahead of the upcoming Assembly elections, Gujarat joined the list of BJP-ruled States that have called for implementing the Uniform Civil Code (UCC). Gujarat Home Minister Harsh Sanghavi along with Union Minister Parshottam Rupala announced that the State will constitute a committee headed by a retired High Court judge to evaluate all aspects for implementing the UCC.

❖ **What did the Constituent Assembly say about the UCC?**

- Article 44 contained in part IV of the Constitution says that the state “shall endeavour to secure for the citizens a uniform civil code throughout the territory of India”.
- While there is no draft or model document yet for the UCC, the framers of the Constitution envisioned that it would be a uniform set of laws that would replace the distinct personal laws of each religion with regard to matters like marriage, divorce, adoption, and inheritance.
- Part IV of the Constitution outlines the Directive Principles of State Policy, which, while not enforceable or justiciable in a court of law, are fundamental to the country’s governance.
- The clause on UCC generated substantial debate in the Constituent Assembly about whether it should be included as a fundamental right or a directive principle.
- The matter had to be settled by vote; with a majority of 5:4, wherein the sub-committee on fundamental rights headed by Sardar Vallabhbhai Patel decided that securing a UCC was not within the scope of fundamental rights.
- Members of the Assembly took starkly contrasting stances on the UCC. Some also felt that India was too diverse a country for the UCC. Member Naziruddin Ahmad from Bengal argued that certain civil laws in all communities were “inseparably connected with religious beliefs and practices”. He felt the UCC would come in the way of Article 19 of the draft Constitution (now Article 25) which guarantees the right to freedom of religion subject to public order, morality, and health. While he was not against the idea of a uniform civil law, he argued that the time for that had not yet come, adding that the process had to be gradual and not without the consent of the concerned communities.
- Member K.M. Munshi however, rejected the notion that a UCC would be against the freedom of religion as the Constitution allowed the government to make laws covering secular activities related to religious practices if they were intended for social reform. He advocated for the UCC, stating benefits such as promoting the unity of the nation and equality for women. He said that if personal laws of inheritance, succession and so on were seen as a part of religion, then many discriminatory practices of the Hindu personal law against women could not be eliminated.
- Dr. B.R. Ambedkar had more of an ambivalent stance toward the UCC. He felt that while desirable, the UCC should remain “purely voluntary” in the initial stages. He stated that the Article “merely” proposed that the state shall endeavour to secure a UCC, which means it would not impose it on all citizens. The amendments to protect personal laws from the UCC were eventually rejected.

❖ **What are the various arguments around the UCC?**

- It has been argued that while India does have uniformity in most criminal and civil matters like the Criminal Procedure Code, Civil Procedure Code, and the Contract Act, States have made over 100 amendments to the CrPC and IPC, as well as several amendments to civil laws. For instance, BJP-ruled States reduced the fines prescribed and justified by the Centre under the amended Motor Vehicles Act. Another example could be that the law of anticipatory bail differs from one State to another.
- Experts thus argue that if there is plurality in already codified civil and criminal laws, how can the concept of ‘one nation, one law’ be applied to diverse personal laws of various communities? Besides, constitutional law experts argue that perhaps the framers did not intend total uniformity, which is why personal laws were placed in entry 5 of the Concurrent List, with the power to legislate being given to Parliament and State Assemblies.
- Looking at the codified personal laws of various communities in India — all Hindus are not governed by a homogenous personal law even after the enactment of the Hindu Code Bill, neither are Muslims and Christians under their personal laws. Even at the time of drafting the Hindu Code Bill, several of its provisions actually sought to locate the complex links between the importance of inheritance, succession rights and the right to divorce. But facing staunch opposition from conservative quarters, it was amended, diluted, and watered down multiple times to finally be separated into four different Acts — the Hindu Marriage Act, the Hindu Succession Act, the Hindu Minority and Guardianship Act, and the Hindu Adoptions and Maintenance Act — in the 1950s.
- Constitutional law scholar Faizan Mustafa notes that while marriages amongst close relatives are prohibited by the Hindu Marriage Act of 1955, they are considered auspicious in the south of India. Even the Hindu Succession Act of 1956 made several compromises and could not make the daughter a coparcener till 2005. Wives are still not coparceners nor do they have an equal share in inheritance.
- There is still no uniform applicability when it comes to the Muslim personal law or the Shariat Act that was passed in 1937. For instance, the Shariat Act is not applicable in Jammu and Kashmir and Muslims continue to be governed by customary law which is at variance with the Muslim personal law in the rest of the country. The applicability also varies for certain sects of Muslims. Besides, many tribal groups in the country, regardless of their religion, follow their own customary laws
- While the Supreme Court in 2019 hailed Goa as a “shining example” of an Indian State which has a functioning UCC, experts point out that the ground reality in Goa is more complex and that the Code has legal pluralities.
- The Goa Civil Code was given by the Portuguese in 1867; it permits a certain form of polygamy for Hindus while the Shariat Act for Muslims has not been extended to Goa with Muslims of the State being governed by Portuguese law as well as Shastric Hindu law. The Code gives certain concessions to Catholics as well. Catholics need not register their marriages and Catholic priests can dissolve marriages performed in church.

- The BJP's 2019 manifesto as well as the Uttarakhand Chief Minister Pushkar Singh Dhami's UCC committee proposal argue that the uniform code would be formed by taking the best practices of various religions and tailoring them for modern times. According to researchers this would essentially mean picking up certain Muslim practices and applying them to the Hindu community (or vice-versa), and question whether there would not be any opposition to the same.
- ❖ **What has the Supreme Court said about the UCC?**
- The Supreme Court in various judgements has called for the implementation of the UCC. In its Mohd. Ahmed Khan vs Shah Bano Begum judgement of 1985, where a divorced Muslim woman demanded maintenance from her former husband, the apex court while deciding whether to give prevalence to the CrPc or the Muslim personal law, called for the implementation of the UCC.
- The Court also called on the government to implement the UCC in the 1995 Sarla Mudgal judgement as well as in the Paulo Coutinho vs Maria Luiza Valentina Pereira case (2019).
- ❖ **What has the Law Commission said?**
- The government in 2016 requested the Law Commission of India to determine how to form a code in the presence of "thousands of personal laws" in the country.
- In 2018, the Law Commission submitted a 185-page consultation paper on the reform of family law and paper stated that
 - A unified nation did not necessarily need "uniformity"
 - Secularism could not contradict the plurality prevalent in the country.
 - The term "secularism" had meaning only if it assured the expression of any form of difference.
 - While saying that a UCC "is neither necessary nor desirable at this stage", the report recommended that discriminatory practices, prejudices and stereotypes within a particular religion and its personal laws should be studied and amended.
- The Commission suggested certain measures in marriage and divorce that should be uniformly accepted in the personal laws of all religions. Some of these amendments include
 - Fixing the marriageable age for boys and girls at 18 years so that they are married as equals
 - Making adultery a ground for divorce for men and women and simplifying the divorce procedure
- It also called for the abolition of the Hindu Undivided Family (HUF) as a tax-exempted entity.
- ❖ **What is the government's stance?**
- According to the Government's response in Parliament in 2022 that the government currently had no plans to set up a panel to implement the UCC and requested the 22nd Law Commission of India to undertake an examination of various issues relating to the same. The chairperson and members of said Law Commission, which was set up in 2021, have not yet been appointed.
 - Experts argue that if there is plurality in already codified civil and criminal laws, how can the concept of 'one nation, one law' be applied to diverse personal laws of various communities.
 - The Supreme Court in various judgements has called for the implementation of the Uniform Civil Code
 - The Law Commission suggested certain measures in marriage and divorce that should be uniformly accepted in the personal laws of all religions.

SCIENCE AND TECHNOLOGY

- ❖ **The Falcon Heavy launch**
- ❖ **CONTEXT:** Recently, Elon Musk-owned SpaceX launched the Falcon Heavy rocket into a geosynchronous Earth orbit from the Launch Complex 39A at the Kennedy Space Center in Florida, U.S.
- This is considered as a National Security Space Launch for the U.S. military. The company hails this as the most powerful operational rocket in the world. This is the fourth launch of the giant rocket system, and the first one in nearly three years since its last launch in 2019.
- ❖ **What is its current mission?**
- The rocket is carrying satellites to space for the U.S. military in a mission named as U.S. Space Force (USSF)-44. The mission deployed two spacecraft payloads,
 - One of which is the TETRA 1 microsatellite created for various prototype missions in and around the geosynchronous earth orbit.
 - The other payload is for national defence purposes. It will place the satellites for the Space Systems Command's Innovation and Prototyping.
- Space Systems Command (SSC) is the oldest military space organisation in the United States Armed Forces. It is responsible for developing, acquiring, equipping, fielding and sustaining lethal and resilient space capabilities.
- SSC mission capability areas include launch acquisition and operations, communications and positioning, navigation and timing, space sensing, battle management command, control, and communications, and space domain awareness and combat power.
- The Falcon Heavy uses three boosters for added thrust and lift capacity. The centre booster plunged into the ocean as planned and the two side boosters landed on ground pads at the Cape Canaveral Space Force Station. These two boosters will be refurbished for a subsequent U.S. Space Force mission later this year, according to a press release by the Space Systems Command. The boosters are reused on other missions to cut down on mission costs.
- ❖ **What are the specifications of the Falcon Heavy rocket?**
- SpaceX claims Falcon Heavy to be the most powerful rocket in the world today by a factor of two. With a lifting capacity of around 64 metric tonnes into orbit, Falcon Heavy can lift more than twice the payload of the next closest operational vehicle, the Delta IV Heavy.
- The rocket has a height of 70 m, a width of 12.2 m and a mass of 1,420,788 kg.

- Falcon Heavy has 27 Merlin engines which together generate more than five million pounds of thrust at lift-off, equalling around eighteen 747 aircraft at full power. This makes it the most capable rocket flying. The rocket can lift the equivalent of a fully loaded 737 jetliner, complete with passengers, luggage and fuel.
 - Merlin is a family of rocket engines developed by SpaceX for use on its Falcon 1, Falcon 9 and Falcon Heavy launch vehicles.
 - Merlin engines use RP-1 and liquid oxygen as rocket propellants in a gas-generator power cycle. These engines were designed for recovery and reuse, according to SpaceX.
- ❖ **When was the Falcon Heavy last launched?**
- SpaceX last launched its Falcon Heavy rocket in June 2019 from NASA's Kennedy Space Center. It carried 24 satellites as part of the Department of Defense's Space Test Program-2.
- The satellites included four NASA (National Aeronautics and Space Administration) technology and science payloads to study non-toxic spacecraft fuel, deep space navigation, "bubbles" in the electrically-charged layers of Earth's upper atmosphere, and radiation protection for satellites, according to a NASA release.
- According to the space agency the mission was useful for smarter spacecraft design and benefitted the agency's Moon to Mars exploration plans by providing greater insight into the effects of radiation in space.
- It also tested out an atomic clock that could change how spacecraft navigates and looked at how the space environment around the Earth affects us.
- ❖ **What about the other launches of Falcon Heavy ?**
- The Falcon Heavy debuted in 2018 when SpaceX CEO Elon Musk sent his personal red Tesla Roadster, an electric sports car with a dummy driver, into space as a test payload. The car is still in space, orbiting around the sun, travelling as far away as Mars' orbit and, at times, as close as Earth's orbit.
- SpaceX launched the other two Falcon Heavy missions in 2019. One carried a TV and phone service satellite to orbit for Saudi Arabia-based Arabsat, and the other carried experimental satellites for the U.S. Department of Defense.
- ❖ **Are there any future launches?**
- According to a report SpaceX is working on even bigger rockets. The company is targeting early December to launch its giant Starship rocket system.
- According to space X these test flights of Starship are all about improving our understanding and development of a fully reusable transportation system designed to carry both crew and cargo on long-duration interplanetary flights, and help humanity return to the Moon, and travel to Mars and beyond.
- The company claim Starship to be the world's most powerful launch vehicle ever developed, with the ability to carry an excess of 100 metric tonnes to Earth orbit.

PRELIMS

1. **Oxfam report says about carbon emissions of the world's richest people**
 - ❖ **CONTEXT:** An Oxfam report titled, **Carbon Billionaires: The investment emissions of the world's richest people, has said the world's richest people emit "unsustainable amounts of carbon," as compared with an ordinary person.**
 - This report is based on the fact that every human on Earth has a carbon footprint, which can be divided into "personal consumption emissions, emissions through government spending and emissions linked to investments."
 - ❖ **What does the Oxfam report say?**
 - An analysis of the investments of 125 of the world's richest billionaires was conducted by Oxfam International, and the report was published November 2022. It demonstrated that on average, billionaires are responsible for emitting "3 million tonnes" of carbon a year, which is, "more than a million times the average for someone in the bottom 90% of humanity."
 - It further found out that the 125 billionaires taken as a sample fund about 393 million tonnes of CO₂e (carbon dioxide equivalent) per year. This is equivalent to the "annual carbon emissions of France," which is a nation of 67 million people.
 - In comparison, it said, "it would take 1.8 million cows to emit the same levels of CO₂e as each of the 125 billionaires," and "almost four million people would have to go vegan to offset the emissions of each of the billionaires."
 - ❖ **How was the research conducted?**
 - Oxfam listed the 220 richest people in the world, based on Bloomberg Billionaire List (August 2022), and obtained emissions data from data provider Exerica. It then identified the ownership of these billionaires in corporations and their emissions:
 - Scope 1 emissions: These are a direct result of the company's operations.
 - Scope 2 emissions: They constitute indirect emissions, for example, energy to operate machines.
 - Scope 3 emissions are other indirect emissions such as those resulting from a company's supply chains.
 - To focus on investments and sectors where billionaires have a massive influence, their final research database involved 183 corporates, with investments by 125 billionaires worth \$2.4 trillion.
 - They utilised the Greenhouse Gas Protocol, which "provides the world's most widely used GHG accounting standards", to calculate the carbon footprint of these companies.
 - ❖ **Why does the report matter?**
 - The report comes at a time when discussions to meet the globally agreed target of limiting the world's temperature to below 1.5°C is underway at COP 27 in Egypt and has significant implications for climate policymaking. It takes a critical look at the relationship between economic inequality and climate crisis.

- The idea is that since billionaires hold significant wealth and stakes in globally recognised corporations, they hold the power to influence the ways in which those corporations behave.
- As people from low and middle-income backgrounds do not exercise much control over their energy choices, the report says it is imperative for world leaders to ensure that “those who emit the most carbon also do the most to reduce those emissions.”

- One can also gauge the ways in which the conduct of investors in the global economy impacts our environment. The decisions made by the investors — whether to invest in corporations failing to reduce carbon emissions, or to fund fossil fuel and similar industries — can further determine the intensity of future emissions.

❖ **What are billionaires' 'personal consumption emissions'?**

- Apart from investments by billionaires, their personal consumption also adds up. For example, in 2018, emissions from the private yachts, planes, helicopters and mansions of 20 billionaires generated, on average, about 8,194 tonnes of carbon dioxide (CO₂e). As evident in the billionaire space race, a single space flight can emit as much carbon dioxide as a normal person will in their lifetime, the report highlighted.

- In 2021, research conducted by Oxfam and the Stockholm Environment Institute revealed: “The richest 1 per cent (around 63 million people) alone were responsible for 15 per cent of cumulative emissions and that they were emitting 35 times the level of CO₂e compatible with the 1.5°C by 2030 goal of the Paris Agreement.”

❖ **What can be done to curb their carbon footprint?**

- To make the 2050 climate change plans of 'net-zero' total carbon emissions, they are heavily relying on using land in low-income countries to plant trees but the report points out some flaws in that plan.
- In 2021 Oxfam revealed that using land alone to remove the world's carbon emissions to achieve 'net zero' by 2050 would require at least 1.6bn hectares of new forests, an area equivalent to five times the size of India.
- At present, the report states, “no state in the world compels corporates to reduce their carbon footprints. It is the responsibility of governments to create climate policies that work towards green transition, mainly, through the regulation of corporate investments in highly polluting industries.
- They should aim to set strong and binding science-based GHG reduction targets and demand greater transparency. Governments should also include workers' rights, protection of their livelihoods and that of marginalised communities who are adversely affected by climate change in policy decisions.
- The report suggests that a wealth tax on the richest could aid the urgent climate finance needs of developing countries and “raise hundreds of billions of dollars to help and protect those already suffering the impacts of catastrophic climate change.”

2. **Law Commission of India**

- ❖ **CONTEXT: Retired High Court Chief Justice Rituraj Awasthi was appointed chairperson of the Law Commission and Justice K.T. Sankaran, Professor Anand Paliwal, Professor D.P. Verma, Professor Raka Arya and M. Karunanithi have been appointed members of the commission**

- The Law Commission of India is a non-statutory body constituted, which advises the government on all legal issues, from time to time by the Government of India.
- The commission was originally formed in 1955 and is reorganized every 3 years.
- It works as an advisory body to the Ministry of Law and Justice.
- The first Law Commission was established during colonial rule in India, by the East India Company under the Charter Act of 1833, and was presided by Lord Macaulay.
- The first Law Commission of independent India was established in 1955. The Chairman of this commission was Mr. M. C. Setalvad, who was also the First Attorney General of India.

❖ **The 22nd Law Commission.**

- It was constituted by the Government on February 21, 2020, for a period of three years from the date of publication of the Order of Constitution in the Official Gazette.
 - Chairperson
 - A member-secretary and three other members
 - Secretary (Department of Legal Affairs as ex-officio Member)
 - Secretary (Legislative Department as ex officio Member)
 - Part-time Members (Not more than five).

❖ **Responsibilities of 22nd Law Commission**

- It will identify laws that are no longer needed or are irrelevant and can be repealed immediately.
- The 22nd Law Commission will examine the existing laws and suggest ways for reforms.
- It will also suggest the necessary laws to implement the Directive Principles mentioned in the Preamble of the Constitution.
- It will take all necessary measures to use law and legal processes in the service of poor people.
- The law commission will revise the laws of general importance to simplify them and remove anomalies, ambiguities, and inequities.

3. **Indian Black Honeybee**

- ❖ **CONTEXT: A new species of endemic honeybee called Indian black honeybee has been discovered in the Western Ghats.**

- The last honeybee discovered from India was Apis indica in 1798 by Fabricius.
- The new species has been named Apis karinjodian and given the common name Indian black honeybee.

- Apis karinjodian has evolved from Apis cerana morphotypes that got acclimatised to the hot and humid environment of the Western Ghats.
- Indian black honeybee is endemic to Western Ghats.
- Ranges from the central Western Ghats and Nilgiris to the southern Western Ghats, covering the States of Goa, Karnataka, Kerala and parts of Tamil Nadu.
- Nesting Type – Cavity nesting (Type of honey bee used in India for commercial honey production)
- Indian black honey bee produces thicker and consistent high quality honey.
- IUCN Status is Near Threatened
- Indian black honey is one among the 3 species of cavity-nesting honey bees in India. The other 2 are - Apis indica and Apis cerana

4. **National Bio Energy Programme**

❖ **CONTEXT: The Ministry of New and Renewable Energy (MNRE), Government of India has notified the National Bioenergy Programme on November 2, 2022.**

- MNRE has continued the National Bioenergy Programme for the period from FY 2021-22 to 2025-26. The Programme has been recommended for implementation in two Phases. The Phase-I of the Programme has been approved with a budget outlay of Rs. 858 crore.
- The National Bioenergy Programme will comprises of the following sub-schemes:
 - **Waste to Energy Programme** (Programme on Energy from Urban, Industrial and Agricultural Wastes /Residues) to support setting up of large Biogas, BioCNG and Power plants (excluding MSW to Power projects).
 - **Biomass Programme** (Scheme to Support Manufacturing of Briquettes & Pellets and Promotion of Biomass (non-bagasse) based cogeneration in Industries) to support setting up of pellets and briquettes for use in power generation and non-bagasse based power generation projects.
 - **Biogas Programme** to support setting up of family and medium size Biogas in rural areas.
- To utilize huge surplus biomass, cattle dung, industrial and urban biowaste available in the country for recovery of energy, the MNRE has been promoting bioenergy in India since 1980s.
- One major support extended by MNRE has been Central Financial Assistance provided for setting up of Bioenergy projects such as Biogas, BioCNG, Power from urban, Industrial and Agricultural Waste / Residues for reducing their capital cost/ interest on loan therefore increase project viability.

ANSWER WRITING

Q. Analyse the salience of 'sect' in Indian society vis-a-vis caste, region and religion.

- Sects and Cults are a smaller group of faith that follows either a traditional religion or has its fundamentals in a different religion.
- Sects are subgroups from a single faith or religion, such as Christianity, Hinduism, Islam, Buddhism, and others.
- Sects can also refer to religious groups that have separated themselves from an established religion and now follow their own rules.
- On the other hand, a cult is a social group that follows unusual religious, philosophical, spiritual beliefs to attain a common interest or goal in life.
- ❖ **Salience of 'sect' vis-a-vis Caste:**
 - Sects encourages its members to work for a common vision of brotherhood, equality and goals. Sects frequently form when society is undergoing rapid transformation.
 - Owing to the rising socio-economic status of the sub-caste in India, they are asserting their dominance in political and socio sectors. E.g. Gujjar, Jats, Patidhar etc.
 - Even though the position of sub-sectors have improved, yet the practice of homogeneity, culture are still prevailing which cannot be said to be modernizing.
- ❖ **Salience of 'sect' vis-a-vis Region:**
 - Sects also emerges from geographic aspects e.g. hill tribes like gaddis are nomadic in their practice, also, the shiekh are Muslim Community found in the north Indian states. There are four main sections in Shaikh e.g. siddiqi, farooq, usmani, abbasi.
 - Various sects emerged in Maharashtra due to experience of inequality in the observance of religion on the part of various sections of the society, invasion of Muslims and the political predominance acquired by the Muslim rulers over Hindu society.
- ❖ **Salience of 'sect' vis-a-vis Religion:**
 - Hinduism is divided into four major denominations: Vaishnavism, Shaivism, Smartism and Shaktism. The denominations differ primarily in the god worshipped as the Supreme One and in the traditions that accompany worship of that god.
 - Muslims are divided into several sects based on their understanding of Islamic law (fiqh) and Islamic history. On the basis of sect, Muslims are divided into two parts- Sunni and Shia.
 - Buddhism was divided into two sects namely Mahayana and Hinayana.
 - Christians are divided into two sects - the Catholics and the Protestants. The former may be considered as the traditionalists and the latter the reformists. The two are divided mainly on the question of the authority of the Church.

Indian society is the result of a journey from the Indus civilization to today's globalized world.

In this journey, it has gone through many transformations under the influence of the outside world and reform movements within society. However, what is unique and appreciable is the fact that it has managed to adopt and accept various features while preserving its past.

MCQs

1. With reference to Uniform Civil Code, consider the following statements
 1. At present no state/UT in India has implemented Uniform Civil Code.
 2. The term "Uniform Civil Code" is mentioned in Constitution.
 3. The implementation of UCC will support the national integration.
 4. The code would be applicable to all religious communities in matters such as marriage, divorce, inheritance, adoption.
 Select the correct statement/s using the codes given below.
 a) 1,2 and 3 only **b) 2,3 and 4 only** c) 1,3, and 4 only d) 1,2 and 4 only
2. With reference to the Law Commission of India, consider the following statements:
 1. It is a statutory body constituted by the Government of India from time to time.
 2. The commission works as an advisory body to the Ministry of Law and Justice.
 3. The retired Supreme Court judge or chief justice of a high court head the Commission.
 Select the correct answer using the code given below:
 a) 1 and 2 only **b) 2 and 3 only** c) 1 and 3 only d) 1, 2 and 3
3. Consider the following statements
 1. A carbon footprint is the total amount of Greenhouse Gases released into the atmosphere by different human activities which can be associated with an individual, an organization, a product or an event, among others.
 2. WHO defines the term "carbon footprints".
 Choose the correct answer using the codes given below
 a) 1 only b) 2 only **c) Both 1 and 2** d) Neither 1 nor 2
4. Which city has become the first in India to launch Carbon Watch, a mobile application to assess the carbon footprint of an individual?
a) Chandigarh b) Delhi c) Mumbai d) Kolkata
5. The term "Apis cerana" sometimes seen in the news, is related to which of the following?
a) A species of Insect
b) A species of Honeybee
 c) A species of fungus
 d) A species of bacteria
6. Consider the following statements with regards to Falcon Heavy Launch Vehicle
 1. Falcon Heavy's base is reusable.
 2. The Falcon Heavy uses three boosters for added thrust and lift capacity.
 3. The boosters can be reused.
 Choose the correct statement/s using the codes given below
 a) 1 and 2 only b) 2 and 3 only c) 1 and 3 only **d) 1,2 and 3**
7. Consider the following statements:
 1. Indian National Space Promotion and Authorisation Centre (IN-SPACe) will oversee the participation of private actors in the Indian space industry.
 2. Indian Space Association (ISpA) will facilitate services and assist private players in conducting their own independent space activities.
 Which of the above statement/s is/are correct?
 a) 1 only b) 2 only **c) Both 1 and 2** d) Neither 1 nor 2
8. State of the Global Climate Report 2022 and the Greenhouse Gas Bulletin are two of the major reports produced by which of the following organisation?
a) World Meteorological Organization (WMO)
 b) UNFCCC
 c) UNDP
 d) UNEP
9. Question: Consider the following statements:
 1. Petroleum and Natural Gas Regulatory Board (PNGRB) is the first regulatory body set up by the Government of India.
 2. One of the tasks of PNGRB is to ensure competitive markets for gas.
 3. Appeals against the decisions of PNGRB go before the Appellate Tribunals for Electricity.
 Which of the statements given above are correct?
 a) 1 and 2 only b) 2 and 3 only **c) 1 and 3 only** d) 1, 2 and 3
10. Consider the following statements with reference to bioenergy as a renewable energy source:
 1. Plants ensure a continuous supply of gas due to their continuous growth
 2. Cost of obtaining energy from biogas is less than that from fossil fuels
 3. Digestion of sludge may produce H₂S and NO_x which are injurious to human health
 Which of the above statements are correct?
 a) 1, 2 and 3 b) 1 and 3 only c) 2 and 3 only **d) 1 and 2 only**