ENVIRONMENT

Ethanol+petrol: How to blend more and blend better

In Context: India's ethanol production program has seen significant progress in the last five years.Quantities supplied by sugar mills/distilleries to oil marketing companies (OMCs) have increased substantially.The program has diversified its raw material sources from cane molasses and juice to rice, damaged grains, maize, and millets.

Details

Ethanol and its Blending

- ✓ Ethanol is a **high-purity alcohol that can be blended with petrol for fuel purposes**.
- ✓ It differs from rectified spirit (94%) used in industries and extra neutral alcohol (96%) for potable liquor.

PM Modi's Announcement

- ✓ Prime Minister Narendra Modi announced that India has achieved 20% ethanol-blended petrol and aims for nationwide coverage by 2025.
- ✓ This move is part of India's efforts to promote ethanol as an eco-friendly and renewable fuel.

Ethanol Production

- ✓ Sugar mills traditionally produced ethanol from 'C-heavy' molasses, containing around 40-45% sugar.
- ✓ Mills can optimize sugar extraction to produce ethanol from 'B-heavy' molasses (50%-plus sugar) or ferment the entire cane's fermentable sugars into ethanol.

Diversification of Feedstocks

- ✓ Ethanol supplies have surged from 38 crore liters in 2013-14 to an estimated 559 crore liters in 2022-23.
- ✓ Feedstocks have diversified, including B-heavy molasses, direct sugarcane juice, rice, maize, and other foodgrains.

Ethanol Yields from Grains

- ✓ Ethanol yields from grains are higher than from molasses.
- ✓ Rice (450-480 liters/tonne), broken/damaged grains (450-460 liters/tonne), maize (380-400 liters/tonne), jowar (385-400 liters/tonne), and millets (365-380 liters/tonne) contribute to higher ethanol production.

Challenges in Grain Ethanol Production

- ✓ Ethanol production from grains involves a longer process of converting starch into sucrose and simpler sugars before fermentation.
- ✓ Molasses already contain sugars and are more straightforward to convert into ethanol.

Year-round Production with Multiple Feedstocks

- ✓ Leading sugar companies have installed distilleries that can operate on multiple feedstocks, enabling year-round production.
- ✓ This flexibility ensures a consistent ethanol supply throughout the year.

Differential Pricing Policy

- ✓ The government's policy of differential pricing incentivizes the use of various feedstocks by fixing higher prices for ethanol produced from B-heavy molasses and sugarcane juice/syrup.
- ✓ This compensates mills for reduced sugar production.

Boost in Ethanol Blending: The policy boost has resulted in a significant increase in ethanol blending with petrol, reaching 11.75% in 2022-23 compared to 1.6% in 2013-14.

New Demand for Grains

- ✓ The incorporation of new feedstocks can create additional demand for grains like rice, barley, and millets.
- ✓ States like Uttar Pradesh and Bihar, known for sugarcane and maize, respectively, can contribute to "fueling India" with ethanol.

Byproduct Benefits

- ✓ Molasses-based distilleries have multi-effect evaporator (MEE) units that help in treating liquid effluent (spent wash).
- ✓ The concentrated wash can be used as boiler fuel, and the ash contains potash suitable for fertilizers.
- ✓ Grain distilleries produce distillers' dried grain with solubles (DDGS), a valuable animal feed product.

BiofuelDefinition

- ✓ Biofuels are **renewable fuels derived from organic materials**, such as plants and animal waste, rather than fossil fuels like coal, oil, and natural gas.
- ✓ They are considered a greener alternative to conventional fuels because they reduce greenhouse gas emissions and promote sustainability.

Purpose: The main purpose of biofuels is to **provide a cleaner and more sustainable source of energy to replace fossil fuels, which contribute significantly to climate change and environmental degradation.**Biofuels also aim to reduce the dependence on imported oil and enhance energy security.

Types of Biofuels

- ✓ **Ethanol:** Produced from fermenting sugars and starches found in crops like corn, sugarcane, and wheat.
- ✓ **Biodiesel:** Made from vegetable oils, animal fats, or recycled cooking oil through a chemical process called transesterification.
- ✓ **Biogas:** Generated from the anaerobic decomposition of organic matter, such as agricultural waste, sewage, and landfill gas.
- ✓ **Bioethanol:** Derived from cellulosic biomass, such as wood, grasses, and agricultural residues, using advanced technologies.

Ethanol Blending

Meaning

- ✓ Ethanol blending refers to the practice of mixing a certain percentage of ethanol with conventional gasoline or petrol to create blended fuels.
- ✓ It is an effective way to reduce greenhouse gas emissions, improve air quality, and promote renewable energy usage in the transportation sector.

How it is done?

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- ✓ Ethanol blending is achieved by mixing ethanol with gasoline in specific proportions.
- ✓ The most common blend is E10, which contains 10% ethanol and 90% gasoline.
- ✓ Blends like E15 (15% ethanol), E85 (85% ethanol), etc., are also used in certain regions depending on the suitability of vehicle engines.

Different Generations of Biofuels

- **First Generation Biofuels**
- ✓ Derived from food crops, such as sugarcane, corn, soybeans, and vegetable oils.
- ✓ Widely used and easily available, but criticized for potential competition with food production.
- ✓ Examples: Biodiesel, bioethanol, and vegetable oil-based fuels.
- **Second Generation Biofuels**
- ✓ Produced from non-food feedstocks like agricultural residues, woody biomass, and waste materials.
- ✓ Address concerns about food competition and offer more sustainable options.
- ✓ Examples: Cellulosic ethanol, biobutanol, and biofuels from algae.
- **Third Generation Biofuels**
- ✓ Focus on using microorganisms and algae to convert sunlight into biofuels through photosynthesis.
- ✓ Highly efficient in terms of land use and resource utilization.
- ✓ Examples: Algal biofuels and cyanobacterial biofuels.
- **Fourth Generation Biofuels**
- ✓ Utilize advanced technologies to engineer microorganisms for biofuel production.
- ✓ Aim for higher yields and cost-effectiveness compared to previous generations.
- ✓ Examples: Synthetic biology-based biofuels and genetically engineered biofuels.

Ethanol Blended Petrol (EBP) Programme

Implementation Scope

- ✓ The EBP Programme is implemented across India, except in the Union Territories of Andaman Nicobar and Lakshadweep islands.
- ✓ Oil Marketing Companies (OMCs) sell petrol blended with 10% ethanol to promote eco-friendly and renewable fuel.

Government Interventions for Increased Ethanol Production

- ✓ Since 2014, the government has taken multiple measures to boost indigenous ethanol production.
- ✓ These interventions include reintroducing the administered price mechanism, opening alternate routes for ethanol production, amending the Industries (Development & Regulation) Act for smooth ethanol movement, reducing GST on ethanol for EBP, differential pricing based on raw material, extending EBP nationwide, and interest subvention schemes.

Expanded Raw Materials for Ethanol Production

- ✓ In 2018-19, the EBP Programme allowed new raw materials for ethanol production, including B heavy molasses, sugarcane juice, sugar, sugar syrup, and damaged food grains (unfit for human consumption) like wheat and rice.
- ✓ Different ex-mill prices of ethanol were fixed based on the raw material used.

Increase in Ethanol Procurement

- ✓ The government's actions led to a significant increase in ethanol procurement by PSU OMCs.
- ✓ Ethanol procurement increased from 38 crore litres in ESY 2013-14 to 188.6 crore litres in ESY 2018-19, achieving an average blend percentage of 5.00% in ESY 2018-19.

Addressing Ethanol Distillation Capacity Constraint

- ✓ To achieve the target of 20% by 2030, the government identified a constraint in available ethanol distillation capacity.
- ✓ The Department of Food and Public Distribution (DFPD) introduced a Scheme to extend financial assistance to sugar mills for enhancing and augmenting ethanol production capacity.

Long Term Ethanol Procurement Policy

- ✓ The Ministry of Petroleum and Natural Gas (MoP&NG) issued a Long Term Ethanol Procurement Policy under the EBP Programme on 11th October 2019 to provide a strategic roadmap for achieving higher ethanol blending in petrol.

SCIENCE AND TECHNOLOGY

1. Global Report on the Food Crises

In Context: The **Global Report on the Food Crises (GRFC) 2023** was recently released.

About the Global Report on the Food Crises

- The GRFC is produced by the **Food Security Information Network** in support of the Global Network against Food Crises.
- It makes the assessment of the **acute food insecurity in countries**.
- The report sets the global contexts preceding and during the year under assessment, particularly paying attention to the increasing phenomenon of urbanisation, and its effects on food security.

Key highlights of the Report

- **Global crisis & attainment of SDGs:** This year's report records the historic moments that had an impact on the assessment — a pandemic and ensuing economic crisis, a war (in Ukraine), soaring prices of food, and agricultural inputs.
- ✓ The Global Report starts with a qualified assertion that hunger is **no longer on an alarming path upwards** at the global level, but still **far above pre-COVID pandemic levels,** and that the world is **far off track** towards achieving Sustainable Development Goal 2 — **Zero Hunger**.
- **No progress for 2022:** New estimates of Food Insecurity Experience Scale (FIES), as per the report, "confirm that **for 2022, no progress was made on food insecurity** at the global level.

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- ✓ Following a sharp increase from 2019 to 2020, the **global prevalence of moderate or severe food insecurity remained unchanged** for the second year in a row, but remained far above pre-COVID-19-pandemic levels."
- ✓ In 2022, an estimated 2.4 billion people did not have access to adequate food.
- ▪ This is still 391 million more people than in 2019.
- **Undernourishment:** Global hunger, measured by yet another metric — the prevalence of undernourishment — remained relatively unchanged from 2021 to 2022 but is, again, far above pre-COVID-19-pandemic levels, affecting around 9.2% of the world population in 2022 compared with 7.9% in 2019, according to the report.
- **Intake of healthy diet:**The revised analysis presented in this year's report shows that almost 3.2 billion people worldwide could not afford a healthy diet in 2020, with a slight improvement in 2021.
- ✓ The cost of a healthy diet increased globally by 6.7% between 2019 and 2021.
- ✓ It also projects that almost 600 million people will be chronically undernourished in 2030.
- **Stunting, wasting & obesity:** Some good news is that **stunting,** another key metric, defined as the **condition of being too short for one's age**, among children under five years of age has declined steadily, from 204.2 million in 2000 to 148.1 million in 2022.
- ✓ Simultaneously, child **wasting**, caused by **insufficient nutrient intake or absorption**, declined from 54.1 million in 2000 to 45 million in 2022.
- ✓ In terms of children who are **overweight or obese**, the study indicated a non-significant increase from 5.3% (33 million) in 2000 to 5.6 % (37 million) in 2022.

What is Food Security?

- Food security is defined (from the World Food Summit of 1996) thus: "When all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active, and healthy life".
- The prevalence of moderate or severe food insecurity in the population is based on the Food Insecurity Experience Scale (FIES).

Key drivers of Food Insecurity

- The report notes the following reasons as being responsible:
- ✓ slowing down, thanks to lockdowns, economic downturns, and other pandemic-related disruptions in 2020 that led to job losses and reduced incomes for many people;
- ✓ The Ukraine war;
- ✓ Governmental policies that may not be entirely favourable; and
- ✓ Increasing urbanisation that drives changes through the agrifood systems.
- The report's comparison of food insecurity among rural, peri-urban and urban populations reveals that global food insecurity is lower in urban areas.

GRFC Report Solutions for hunger reduction

- **Identifying vulnerability:** The report helps **identify vulnerable population groups,** contributing to evidence to inform decision-making and effective action through the appropriate targeting and design of policies and programmes.
- **Sound nutrition:** As the authors record, **sound nutrition is fundamental** to the achievement of the Sustainable Development Goals and must be central in government policy and supported by civil society and the private sector.
- **Supporting healthier food outlets:** Some of its recommendations include **supporting healthier food outlets** as key for enabling access to healthy diets.
- **Policy incentives:** Policy incentives are necessary to encourage shops to sell greater amounts of fresh and minimally processed foods.
- **Nutritional safety and quality of street food:** Another key input is on street foods, which an estimated 2.5 billion people worldwide consume every day, thanks to the convenience and cost factor.
- ✓ The report calls for addressing multiple infrastructure and regulatory gaps to improve nutritional safety and quality of street food.
- **Improving investments & infrastructure:** The GRFC also suggests **building rural infrastructure**, including **quality rural and feeder roads** to connect remote farms and enterprises to main road networks.
- ✓ Other **public investments to support linkages** between (mainly small) farms and small and medium enterprises could include warehousing, cold storage, dependable electrification, access to digital tools and water supply.
- **Role of local governments:** It underlines several times the role of local governments as fundamental actors in leveraging multilevel and multi-stakeholder mechanisms that have proved effective in implementing essential policies for making healthy diets available and affordable for all.

Way Ahead

- **Fixing the pre-existing schemes** is the obvious answer to addressing India's multi-dimensional nutrition challenge.Getting the already existing schemes right requires greater involvement of **local government and local community groups** in the design and delivery of tailored nutrition interventions.
- The need of the hour is to make **addressing child malnutrition the top priority** of the government machinery, and all year around.

2. Failure of Commission

In Context: Recently, the cases of molestation and rape of women in Manipur have brought them into focus.As, the incident of Manipur is one of cruel disregard and contempt for human dignity and human rights.

National women commission and its functions

- NWC was Established in 1992, as per the National Commission for Women Act 1990.

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- The commission is expected to take up the concerns of women at the national level. Each state also has its own commission.
- They are expected to consist of "persons of ability, integrity and standing who have had experience in law or legislation, trade unionism… committed to increasing the employment potential of women, administration, economic development, health, education or social welfare.
- The Manipur State Commission for Women (MSCW) was constituted in September 2006 as a statutory body as per the Manipur State Commission for Women Act, 2006.
- It is mandated to safeguard the interests of women with a wide mandate that covers all aspects of women's development. Protection from sexual assault, I am sure, is covered under it.

Functions and power of commission:

- The commissions are expected to "investigate and examine all matters relating to the safeguards provided for women under the Constitution and other laws."
- They are also mandated to look into complaints and take suo motu notice of matters relating to

✓ "Deprivation of women's rights,
✓ non-implementation of laws enacted to provide protection to women".

Concern over functioning of women commission and steps need to be taken to bring reform:

- A serious issue that has bothered many of us is whether women's commissions at the national and state levels have become toothless tigers, merely pushing papers around.

✓ Members and staff in different commissions of the country seem busy more in paper work, failing to prioritise field visits over files.
✓ Therefore, Members of human rights' and women's commissions need to get a sense of reality in order to empathise with the suffering of citizens.

- Another grave issue is the **political appointments in the commissions.**

✓ Since they are nominated by the political party in power, most of the commissions are wary of even minor criticism of the government.
✓ And they are sometimes over-enthusiastic in taking up states ruled by the Opposition. Irrespective of the party in power, this has become the culture of the nation.
✓ Therefore, Individuals who are genuinely interested and capable would then be selected by a committee. Members of the Opposition, judges from the Supreme Court, civil society organisations and the ruling party can form the selection committee.

- **There is need for social audit of the performance of different commissions**

✓ A social audit of the performance of different commissions by competent external agencies on a regular basis would give citizens an idea of their actual working.
✓ As a taxpayer has a right to find out whether the money she is paying is being used properly or half-heartedly or being squandered altogether

Conclusion:

- Therefore, It is time for members of women's commissions to priorities field works and along with it political neutral person should be appointment at the post of chairman and members in order to maintain impartiality and accountability.
- While considering these factors, there is need for regular social audit of the performance of different commissions to enhance the efficiency and functioning of commission in true sense.

PRELIM FACTS

1. Software-Defined Radio Tactical (SDR-Tac)

In context: Indian Navy has begun equipping its warships with 'Made in India' Software-Defined Radio.

About Software Defined Radio (SDR)

✓ SDR is a radio communication system that employs reconfigurable software-based components for the processing and conversion of digital signals.
✓ Unlike traditional radio communication systems, these radio devices are highly flexible and versatile.
✓ This is an emerging technology used to connect ever-increasing wireless world.

About Software-Defined Radio Tactical (SDR-Tac):

✓ Equipped with several multimedia capabilities, the indigenous SDR-Tac provides real-time voice, data and video information.
✓ It is built indigenously by the Navy's Weapons and Electronics Systems Engineering Establishment (WESEE).

What does SDR-Tac do?

✓ SDR-Tac is a four-channel multi-mode, multi-band, 19-inch rack-mountable, ship-borne software-defined radio system.
✓ It is intended to serve ship-to-ship, ship-to-shore, and ship-to-air voice-data communication for network-centric operations.
✓ It supports the simultaneous operation of all four channels covering V/UHF- and L-Band.
✓ This SDR system houses multiple types of waveforms for narrow-band and wide-band applications.
✓ Each ship will act as a relay wherein the data can jump from one ship to another.
✓ To transfer voice, data or video, the link device picks up the best-suited available network. It ensures that data reaches its destination.

2. PSLV-C56

In context: Recently, the Indian Space Research Organisation (ISRO) announced that the launch of the PSLV-C56 carrying Singapore's DS-SAR satellite will take place on July 30.

About PSLV-C56:

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- ✓ The PSLV-C56 carrying DS-SAR satellite along with six co-passengers will be launched from the Satish Dhawan Space Centre in Sriharikota.
- ✓ It is configured in its core-alone mode, similar to that of C55.
- ✓ It would launch DS-SAR, a 360 kg satellite into a Near-equatorial Orbit (NEO) at 5 degrees inclination and 535 km altitude.

What is The DS-SAR satellite?

- ✓ It is developed under a partnership between DSTA (representing the Government of Singapore) and ST Engineering.
- ✓ It will be used to support the satellite imagery requirements of various agencies within the Government of Singapore.
- ✓ ST Engineering will use it for multi-modal and higher responsiveness imagery and geospatial services for their commercial customers.
- ✓ It carries a Synthetic Aperture Radar (SAR) payload developed by Israel Aerospace Industries (IAI).
- ✓ This allows the DS-SAR to provide for all-weather day and night coverage and is capable of imaging at 1m resolution at full polarimetry.
- ✓ Along with DS-SAR, the PSLV-C56 will carry
- VELOX-AM: A 23 kg technology demonstration microsatellite.
- ARCADE : Atmospheric Coupling and Dynamics Explorer (ARCADE), an experimental satellite.
- SCOOB-II: A 3U Nano satellite flying a technology demonstrator payload;
- NuLIoN : An advanced 3U Nano satellite enabling seamless IoT connectivity in both urban and remote locations;
- Galassia-2: A 3U Nano satellite that will be orbiting at low earth orbit.
- ORB-12 STRIDER: Satellite is developed under an International collaboration.

3. INS Kirpan

In Context: INS Kirpan decommissioned from Indian Navy, handed over to Vietnam.

About INS Kirpan:

- INS Kirpan is a Khukri-class corvette.
- It was recently decommissioned and handed over to Vietnam People's Navy.
- It is the first active warship that India has ever gifted to another country.
- It is an indigenously built missile corvette.

4. Cannabis Medicine Project

In context: Jammu is set to lead India's first Cannabis Medicine Project. It is a collaboration between CSIR-IIIM Jammu and a Canadian firm under PPP.

Significance

- ✓ Atma- Nirbhar Bharat: After getting all the approvals, the project will be able to produce export quality drugs meant for different kinds of neuropathies, diabetic pains etc.
- ✓ Reduce import burden: It has the potential to produce those kinds of medicines which have to be imported from foreign countries.
- ✓ Development of Jammu and Kashmir: This kind of project will give an impetus for huge investment in the state.
- ✓ Since J&K and Punjab are affected by drug abuse, this kind of project will spread awareness

About Cannabis:

- ✓ Cannabis (also called marijuana) is a psychoactive drug from the cannabis plant, and has been used for recreational and medicinal purposes for centuries.
- ✓ In India, while trade and consumption of cannabis is banned under the Narcotic Drugs and Psychotropic Substances (NDPS) Act of 1985, calls for legalizing its use for medicinal purposes have grown stronger over the years.
- ✓ Cannabis is not completely prohibited in the country as its medical and scientific use is allowed after obtaining necessary permissions from state governments.
- ✓ Cannabis-based medical treatment utilizes compounds like THC and CBD to manage conditions like chronic pain, nausea, muscle spasms, and epilepsy, interacting with the body's endocannabinoid system.

ANSWER WRITTING

Q."Indian society is more rhetorical than rational." In the light of the statement, assess Indian society on the scales of rationality and scientific temper.

Introduction: Indian society is more emotional, reactionary and tolerant due to its socio-cultural background. In any event e.g. marriage or celebration, we tend to express our emotions in overwhelming way. Nowadays, whenever any big event or development happens, people immediately give their responses on social media.

This has acted as obstacle for rational thinking and has promoted many social evils. The Indian society has many social evils such as superstitions, dowry practice, domestic violence of women, religious obscurantism. These practices are deeply rooted in our society. Though with time, many social reformers such as Raja Ram Mohan Roy and rationalist in recent times such as Narendra Dabholkar and Kalaburgi has tried to promote scientific temper in our society.

Due to socio-cultural factors being tolerant is one such cause to corruption - society is tolerant because of soft nature. It is tolerant to both good things and bad things. It comes from belief in religion. There is no sense of rejection against bad practices. India is one major country which didn't experience revolution.

A scientific temper refers to an open, questioning, seeking mind. A mind that seeks truth and accepts it when proven. A mind that is ready to consider that an alternative viewpoint could have merit. A mind that is curious to understand the 'whys' and 'hows' of life while accepting that all questions may not be fully answerable. The defining characteristics of a scientific mindset are curiosity, logical ability, objectivity, criticality, emphasis on empirical evidence, open-mindedness, the ability to discern fact from hypothesis, ability to recognize self-limitation, and an interest in new developments.

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A person of scientific temper experiences indirectly an internal strength that orders life. Order results from internal strength than from external induction. Spiritualists call it Self-realisation. It is the Scientific Temper that helps in developing Secularism, Humanism & Spirit of enquiry and reform.

Scientific temper involves many parameters. It is characterized by healthy scepticism, universalism, freedom from prejudice or bias, objectivity, open mindedness and humility, willingness to suspend judgement without sufficient evidence, rationality, perseverance and last but not the least a positive approach to failure. The hallmark of all decision-making by a person with scientific temper is logic, rationality and verifiability.

Conclusion: Every person has the Constitutional Fundamental Duty to practice scientific temper and rationality. Role of educational institutions like schools and colleges and civil servants become important in inculcation of scientific temper among the children and common people in the country.

MCQ

1. The Global Report on the Food Crises (GRFC) 2023 was recently released. It is produced by which of the following?
a) Food Security Information Network
b) UN Food and Agriculture Organization
c) Feed The Need Foundation
d) World food Programme

2. Consider the following statements, With reference to National Commission for Women (NCW)
1. It is a statutory body which was set up under the National Commission for Women Act, 1990
2. The Chairperson of the National Commission for Women is nominated by the Central Government.
3. The commission must include at least one member from amongst persons belonging to the Scheduled Castes and Scheduled Tribes respectively
Which of the statements given above is/are correct?
a) 1 only b) 3 only
c) 2 and 3 only **d) 1,2 and 3 only**

3. Consider the following statements. With respect to PM-WANI scheme
1. The scheme is launched by the Department of Telecommunications to increase Wi-fi access throughout the country.
2. Under the scheme, Public Wi-Fi Networks will set up by Public Data Office Aggregators to provide public Wi-Fi service through Public Data Offices
3. There is no license fee for providing Broadband Internet through these public Wi-Fi networks.
Which of the statements given above is/are correct?
a) 1 only b) 3 only
c) 2 and 3 only **d) 1,2 and 3 only**

4. With reference to the India-Sri Lanka Economic Partnership Vision document, consider the following statements:
1. It aims to strengthen bilateral and economic partnership between India and Sri Lanka.
2. Combating terrorism is one of the pillars of the document.
3. Both countries have decided to designate Indian Rupee as currency for trade settlements between the two countries.
How many of the statements given above are correct?
a) Only 1 **b) Only 2**
c) Only 3 d) None

5. Consider the following statements regarding Software-Defined Radio Tactical (SDR-Tac):
1. It is built indigenously by the Defence Research and Development Organisation (DRDO).
2. It is intended to serve ship-to-ship, ship-to-shore, and ship-to-air voice-data communication for network-centric operations.
Which of the statements given above is/are correct?
a) Only 1 **b) Only 2**
c) Both1 and 2 d) Neither 1 nor 2

6. Consider the following statements regarding Cannabis Research Project of CSIR-IIIM Jammu:
1. It is a first of its kind in India initiated under the leadership of Ministry of Health and Family welfare.
2. It will be able to produce export quality drugs meant for different kinds of neuropathies, diabetic pains etc.
Which of the statements given above is/are correct?
a) Only 1 **b) Only 2**
c) Both1 and 2 d) Neither 1 nor 2

7. Long March 10 Rocket, is a new carrier rocket developed by which one of the following countries?
a) USA b) Russia
c) China d) India

8. Considered the following statement regarding World Drowning prevention day?
1. It observed on 25th July every year.
2. Theme of the day is 'Anyone can drown, no one should"
Which of the statements given above is/are correct?
a) Only 1 b) Only 2
c) Both1 and 2 d) Neither 1 nor 2

9. Kari Ishad mango" has recently got Geographical Indication (GI) tag. It is related to:
a) Maharashtra b) Goa
c) Karnataka d) Gujarat

10. Consider the following statements about Raigad Fort:
1. This hill fort is situated in the Sahyadri Mountain ranges.
2. It is also known as Gibraltar of the South.
3. In 1656, Chhatrapati Shivaji captured it from the More's of Javli who were under the suzerainty of the Adilshahi Sultanate.
How many of the statements given above are correct?
a) Only one **b) Only two**
c) All three d None

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Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com