

PERFECT 7

FORTNIGHTLY CURRENT AFFAIRS

June 2022 / Issue - 1

Useful for UPSC and State PCS exams



- Relevance of sedition law in present scenario
- Pharmaceutical Innovation & Entrepreneurship
- Impact of Sri Lanka's economic crisis on India & the world
- Bulldozer justice : Right or Wrong
- Edible Oil crisis:- Causes, effects & Solutions
- Financial inequalities related to climate change in the current context
- Politics of freebies: Impact on Economy



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PMI

(PRE+MAINS+INTERVIEW)
PROGRAMME 2022

**JUNE
2022
SCHEDULE**

**19th
June**

PRELIMS

SYLLABUS

PRELIMS & MAINS

(TOPIC : Geography & Environment,
Current of February 2022)

Source :

NCERT-6th to 10th (Dhyeya Class Notes
+ Magazine Perfect-7 + Open Sources)

**26th
June**

MAINS

SYLLABUS

ESSAY

(TOPIC : Effects of globalization on Indian society,
Social empowerment, communalisms,
regionalism & secularism,
Ethics and Human Interface, Human Values)

Source : Open source, Dhyeya booklet

**3rd
July**

INTERVIEW

Personality Test by a Panel of Retd. & Working Bureaucrats and Professors



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Director's Message



Mr. Vinay Kumar Singh

The guiding philosophy of the institute, throughout, has been creation of knowledge base. Dhyeya IAS inculcates human values and professional ethics in the students, which help them make decisions that are good not only for them, but also for the society, for the nation, and for the world as a whole. To fulfil its mission in new and powerful ways, each student is motivated to strive towards achieving excellence in every endeavor. It is done by making continuous improvements in curricula and pedagogical tools.

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Yours very truly,

Vinay Kumar Singh
CEO and Founder



Mr. Q H Khan

Dhyeya IAS is an institution that aims at the complete development of the students. Our faculty are highly experienced and qualified to ensure that the students are given every possible support in all their academic endeavors. It is a multidisciplinary institution which ensures that the students have ready access to a wide range of academic material.

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Yours very truly,

Q H Khan
Managing Director

PREFACE



Current Affairs has an important role in the examinations conducted by Union Public Service Commission and State Public Service Commissions. It is necessary for the candidate to have knowledge of relevant information on issues of national and international importance. Perfect 7 Magazine is being presented fortnightly in front of the students to fulfill this requirement. Preparation of civil services exam is only completed when candidates have holistic knowledge and analysis of the dynamic nature of the current affairs. 'Perfect 7' keeps this vision and approach and understands the multidimensional need of students at the content level, so this magazine has presented the current affairs with relevant issues of general studies. Keeping in mind the mains exam, current articles on 7 burning issues, Ethics Case Studies, Biographies of important personalities, coverage of most useful topics of various sections of General Studies and the most important current affairs issues are being covered for Preliminary Examination in which emphasis is being given on environmental, ecology, art and culture, science and technology, economy issues. A short section on Terminology will also be part of Perfect 7 Magazine.

Brain boosters with 7 themes based graphics are being presented in a concise form to enhance the conceptual understanding of the students. Apart from this, updated information on Global Initiatives, Global Institutions, Structure of Organizations, Functioning, Important Reports, and Indices will be included in this magazine, which is asked prominently in the Civil Services Examination. To give emphasis on facts and analysis, keeping in view the trends of new nature of questions in Preliminary and Main Examination of Civil Services, an inclusive magazine is being provided to the students so that they can give the right direction to their preparation by understanding the new requirements of Civil Services Examination. We hope that Perfect 7 in its new form will prove to be very useful. Your suggestions are always welcome.

Vinay Kumar Singh
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PERFECT 7

FORTNIGHTLY CURRENT AFFAIRS

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Hindi & English
Current Affairs
Monthly
News Paper



DHYEYA TV
Current affairs Programmes hosted
by Mr. Qurban Ali
Ex. Editor RSTV) & by Dhyeya Team
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Financial Inequality Related to Climate Change in the Current Context

Introduction

In an August 2021 report, the Intergovernmental Panel on Climate Change concluded the Paris Agreement climate targets could soon be out of reach without immediate and massive greenhouse gas emission reductions this decade. António Guterres, the UN Secretary General, warned the report “is a code red for humanity.”

Climate change and economic inequality are often thought of as separate issues. However, addressing one of these issues without addressing the other is impossible, as they are intricately intertwined.

Human-caused greenhouse gas emissions have risen from a negligible level to more than 40 billion tons per year since the Industrial Revolution. As a result of these emissions accumulation in our atmosphere, the average yearly temperature has risen by around 1 degree Celsius since the pre-industrial period. Glaciers and ice caps have melted, sea levels have risen, and more frequent and intense weather phenomena, such as heat waves and droughts, have occurred as a result of increasing temperatures, with cascading consequences on ecosystems, agricultural production, human health, and livelihoods.

Financial inequality and climate change

Climate change poses a serious threat to poverty reduction, threatening to cut off decades of progress. Although climate change is a global phenomenon, poor people and

nations are suffering because of its devastating effects.

The richest 1% of the world’s population emits 100 times more CO₂ per year than the lowest 50%. According to a study by Thomas Piketty and Lucas Chancel, the richest 10% of individual emitters contribute to 45% of global emissions. The world’s poorest 50% make up about 13% of the world’s total emissions. Annual carbon emissions per capita of 1% of Canadians, citizens of one of the richest countries, were 35 times the world average, placing Canada fifth on carbon emitter levels. At the individual level, the richest 10% generate about half of all CO₂ emissions from consumption, according to a 2015 Oxfam study. Oxfam research also shows that the lifestyle of the wealthiest Americans is 10 times more emission-intensive than that of the richest Chinese.

How poor is more vulnerable to climate change

1. A 2018 report by the United Nations Intergovernmental Panel on Climate Change estimates that “temperature increase even by 1.5 degrees Celsius could cause tens of millions of people to live in poverty.”
2. According to the 2018 World Food Programme’s report ‘Global Report on Food Crises’, “weather disasters caused food shortages in 23 countries, mainly in Africa, due to drought-related shocks that

left more than 39 million people in need of emergency care.”

3. According to the 2018 Global Report on Internal Displacement, “30.6 million new internal migration-related conflicts and natural disasters were recorded in 2017 in 143 countries and territories.”

4. Climate refugees can be found around the world, evacuated by coastal floods in Dhaka, Hurricane Maria in Puerto Rico, or because of the desertification of Lake Chad in West Africa. It is estimated that the number of people seeking asylum in the European Union due to climate change will increase by 28% by 2100.

5. This increases the chances of the intensification of existing conflicts and also creates new ones. Cape Town, being a huge example where the crisis started in 2015, the city is shadowed under the horrors of being the first major city in the world to run out of water.

6. On the other hand, Democratic Republic of Congo experiences shifts in the timing and patterns of rainfall which have led to lower food production and greater competition on arable land, increasing ethnic tensions, and conflicts in the country.

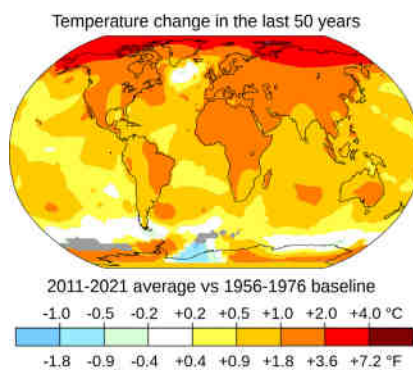
Such conflicts and incidents have a profound effect on the poor and lead to an increase in poverty and migration, which push people into a vicious circle around the world.

Impact on India

Speaking of India means that climate change has had a dramatic impact on India.

- Heat waves are becoming more and more prevalent, as several cities by 2022 face temperatures above 48 ° C.
- Since 1950, the number of incidents of heavy rainfall has tripled, but the rainfall has dropped: one billion people in India now suffer from severe water shortages for at least one month a year.
- A third of India's population living along the coast, while the North Indian Ocean has risen by an average of 3.2 mm per year over the past two decades, sea levels are threatening.
- India is ranked fifth in the world for the losses it has suffered as a result of climate change.

Climate change is disproportionately affecting low-income and marginalised communities. Those who rely on outdoor labour for their daily supper or who live in overcrowded, poor-ventilated homes are especially suffering from prolonged temperatures. At least 50% of the country's farms are rain-fed, and changes in rainfall will have a major impact on their livelihoods. According to one study, declining agricultural production and rising grain prices could increase India's national poverty rate by 3.5 percent by 2040, leading to an increase of 50 million poor people. Frequent floods and droughts caused by climate change are causing food shortages and rising food prices in many parts of India. This leads to famine and malnutrition, which affects the poorest.



Need of hour

Reducing global warming to 1.5 ° C will require reaching zero CO₂ emissions by 2050 and a 50% reduction in global emissions by 2030 compared to 2010 levels.

Policies that dramatically change the way we use energy and transport, the production and use of food and other resources, and the shelter are urgently needed. The problem is how these policies should be implemented.

The responsibility for reducing carbon emissions should be borne by countries with higher incomes, as well as more privileged civil society groups in developing countries. Achieving this goal will require a significant reduction in usage habits. The surest way to meet the goals of COP21 is to address inequality and strengthen social responsibility - especially if we are to achieve the very important goal of shutting the global average temperature by just 1.5 ° C.

Other measures can be considered

- o Installing indoor and public biogas units for the production of thermal methane stoves;
- o Replacing conventional wood-burning stoves;
- o Providing solar lights;
- o Promoting scientifically and eco-

niques through the use of information technology (IT) platforms such as smart-phone applications.

- o Implementing low carbon farming techniques.

Conclusion

No matter how many efforts we can put to resolve this issue, what exactly will help out is the unique perspective, skills and wealth of knowledge of various communities on this planet to the challenge of strengthening resilience and climate change. Rather being seen as recipients, we should be working as participants in developing resilience.

NOTES



Edible Oil Crisis:- Causes, Effects & Solutions

Context

The prices of six edible oils-groundnut oil, mustard oil, vanaspati, soya oil, sunflower oil and palm oil have risen between 9% and 56% at all-India levels in the last one year.

Introduction

After a brief lull, edible oil prices are shooting up yet again. Malaysian palm oil futures climbed to their all-time high as tensions between Ukraine and Russia escalated. Edible oil prices have been climbing unabated globally and in India since the onset of the pandemic. The climb has been so steep that the Indian government had to take several measures to rein in the increase in prices.

Edible oil consumption in India

Rising incomes and changing food habits, consumption of edible oils has been rising over the years. The mustard oil is consumed mostly in rural areas, the share of refined oils sunflower oil and soyabean oil is higher in urban areas.

Between 1993-94 and 2004-05, monthly per capita consumption of edible oils increased from 0.37 kg to 0.48 kg in rural areas, and from 0.56 kg to 0.66 kg in urban areas. By 2011-12, it had risen further to 0.67 kg in rural areas and 0.85 kg in urban areas. Steady rise in the per capita availability of vegetable oils, through domestic sources as well as imports, indicates that demand has continued to rise. According to the Ministry of Agriculture and Farmers' Welfare, the per capita availability

of vegetable oils in the country has been in the range of 19.10 kg to 19.80 kg per annum during the last five years.

Cause of Price rise of Edible oil

- The domestic edible oil production has not been able to keep pace with the growth in consumption and the country is incurring heavy costs owing to its dependence on imports. Import growth in edible oils during the last decades is about 174 per cent.

- In the past five years, India's production of oilseed has increased by more than 44 percent, from about 25.3 million tonnes in 2015-16 to near 36.6 million tonnes in 2020-21. Nonetheless, even this meets less than half of India's edible oil demand. Based on annual per capita consumption figures 19 kg per year, India has an annual demand of 25 million tonnes of edible oil, of which only 10.5 million tonnes are supplied from domestic production. The remaining 60 per cent is supplied by imports. Now a days, the prices of oilseeds and edible oil in the international market are at record high, therefore affecting domestic prices.

- India imports about 175,000-200,000 tonnes of sunflower oil per month and the conflict between Russia and Ukraine has disturbed the sunflower oil supply. Just 152,000 tonnes arrived in India in February 2022 and the supplies could dry up if the war escalates. Around 90% of India's annual crude sunflower oil requirement of 22-23 lakh tonne comes from Ukraine to the tune of 70% and 20% from

Russia and the remaining 10% from Argentina. For the current year starting from November 2021, volume wise, the highest import has been of palm oil.

- Apart from this, unfavourable weather in major oil-exporting countries coupled with a labour shortage due to the Covid-19 pandemic led to a decline in exports from oil producers. Soybean oil prices rose last year because of dry weather in Argentina, the largest exporter, and higher demand from major consumers like India and China. Sunflower oil prices were up because of drought-like conditions in Ukraine and Russia.

- Recently Indonesia's blanket ban on exports of both crude palm oil and its refined products, such as cooking oil in order to ensure cooking oil is available in the domestic market also aggravated the edible oil crisis because Indonesia is the world's largest supplier of palm oil.

- India is among the largest buyer of palm oil including China. Palm oil is widely used in various types of food products including in cosmetics, biscuits, detergents and chocolate.

- Malaysia which is the second-largest producer of palm oil has been hit by a labour shortage due to the pandemic and is unlikely to fill the gap soon.

Effect of edible oil crisis-

- Edible oil prices had hardened domestically and were a contributor to the stubborn price

pressures. The soaring cost of vegetable oils is an ever-growing threat to India's efforts to bring inflation under control. Prices of palm oil, the most-consumed edible oil in the world, have jumped 15% this year to a record, while rival soybean oil has gained 12%, contributing to a surge in global food inflation to near all-time highs.

- As per survey, around 24 per cent of Indian households have been forced to reduce their consumption of edible oils due to a sharp spike in its retail rates, while 29 per cent downgraded their cooking oil to available cheaper alternatives due to the hike.

- This year, India will end up spending about \$20bn (£16bn) in importing cooking oil, double the amount it spent two years ago.

- It is aggravating the already rising retail inflation in India. As Consumer price index-based inflation rose more than expected to 7.79% in April year-on-year, remaining above the Reserve Bank of India's (RBI) tolerance band of 6% for a fourth month in a row.

Step taken by the Government-

- As of now, the government has the limited option of urging the processors or producers to cut down their margins. The Centre has been taking various measures such as lowering import duties on imports of edible oils. In November last year, it slashed the basic import duty on crude palm, soyabean and sunflower oils to nil from 2.5 per cent. It also reduced the agricultural infrastructure cess to 7.5 per cent for crude palm oil and 5 per cent for crude soyabean and sunflower oil from 20 per cent. Also, it cut the import duty on refined palmolein, soyabean and sunflower oil to 17.5 per cent.

- India is trying to boost do-

dependence on imports. The government launched a \$1.5 billion initiative called the National Mission on Edible Oils-Oil Palm last year to improve self-sufficiency.

- India aims to more than double crude palm oil output to 2.8 million tons by 2029-30 from an estimated 1.12 million tons in 2025-26.

- The land under winter crops has climbed to a record high this year due to more sowing of oilseeds. The oilseed crop area was estimated at about 10.3 million hectares (25.5 million acres) as of Feb. 4, 23% higher from a year earlier, according to the agriculture ministry data.

Way Forward-

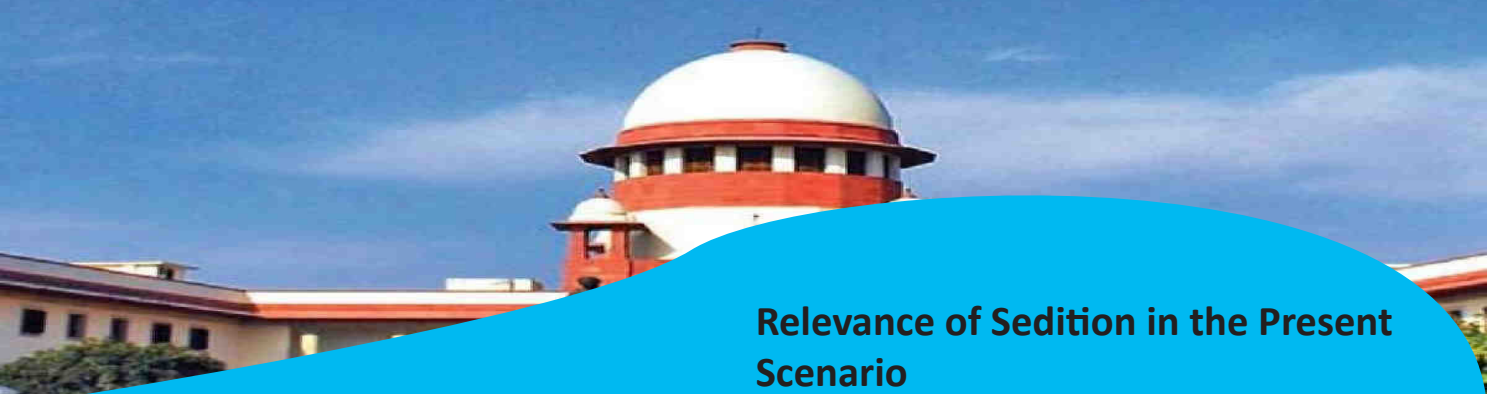
- India should build an edible oil reserve to insulate from any price spikes. This will allow the government to release supply in times of shortage, to soften prices and to curb speculation trading and hoarding.

- As India has shown progress in land diversion to grow oilseeds more land should be diverted to grow soybeans, sunflower and rapeseed crops.

- The country may eventually have to turn to genetically-modified rapeseed in India, to help boost overall oilseed output. Mustard oil accounts for more than 10% of India's annual cooking oil needs of 22.5 million tons. As GMO have potential to boost productivity it should be adopted cautiously.



NOTES



Relevance of Sedition in the Present Scenario

Context

Recently, independent MP Navneet Rana was accused of sedition in Maharashtra. Here this situation becomes questionable whether sedition on a public representative is relevant in the current democratic scenario?

Introduction

Recently, there was a stir in the political activities of the state of Maharashtra when Navneet Rana, an independent MP from Maharashtra, was accused of sedition in a case (performing Hanuman Chalisa in front of the residence of the Chief Minister). So once again the question is raised on the relevance of sedition law. It is to be noted that Section 124A of the Indian Penal Code provides for the punishment of sedition. Section 124A is part of Chapter VI of the Code which deals with offenses against the State.

What is the provision related to sedition - Section 124A of the Indian Penal Code

According to this section whoever by word, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards, the government established by law in India; shall be punished with imprisonment for life, to which fine may be added, or with imprisonment which may extend to three years, to which fine may be added or with fine.

- Explanation 1.- The expression

“disaffection” includes all feelings of dislike and hostility.

- Explanation 2. - Comments expressing disapproval of measures of law by the Government to achieve their change utilizing law, without thrill or attempt to incite hatred, contempt, or disaffection, under this section do not constitute an offense.

- Explanation 3. - Comments expressing disapproval of administrative or other action by the Government, exciting or without incitement to hatred, contempt, or disaffection, shall not constitute an offense under this section.

Historical development of the law of sedition

- This law was first introduced in Britain during the 17th century to prevent opposition to the monarchy and government.

- The law of sedition in India was first envisaged in the form of section 113 in 1837, but it did not find a place in the code.

- During the Wahhabi movement in 1870, it was codified against Muslim preachers who preached to start a crusade against the British Raj in India. This law was brought at the suggestion of James Stephen.

- The 1870 version was substantially modified through the IPC Amendment Act of 1898. The present clause is identical to this 1898 clause.

- However, at various points in India's colonial and post-colonial history, minor changes were made in the 1937, 1948, and 1950 and Part B States (Laws) Act, 1951.

- People like Mahatma Gandhi, Bal Gangadhar Tilak, Shankarlal Banker, etc. were tried under this act.

Arguments in favor of the relevance of the sedition law in the present times

- Democracy has not been fully established in India at present. Many issues related to terrorism, Naxalism, and regionalism affect the national unity and integrity of the country. The law of sedition is necessary to deal with these challenges.

- Social, economic, and political inequality in the country gives rise to anarchy in the country. And as long as there are anti-national slogans like ‘Bharat tere tukde honge’, the position of laws like sedition will remain strong.

- An argument can also be made in this regard that just as there is a provision for punishment for contempt of judiciary and contempt of Parliament, similarly sedition ensures the provision of punishment for contempt of executive.

- There are many such anarchic elements active in India (from inside and outside the country as well) who conspire against the elected government. The existence of laws like sedition is necessary to stop these chaotic elements and for the stability of the elected government.

Arguments against the relevance of sedition

- This law was brought to promote colonial forces and to stop nationalist activities. But such laws are

not appropriate in present-day democratic India.

- There is a lack of clarity in this law. The words used like 'dissent' under section 124A are ambiguous and become subject to various interpretations of the whims and fancies of the investigating officers.

- It restricts freedom of speech and expression. Sometimes governments impose sedition even after criticizing the policies. This situation is not conducive to the democracy and parliamentary system of India.

- The Constituent Assembly of India recognized that the sedition law could be used as a weapon to suppress the people's legitimate and constitutionally guaranteed right to protest. That is why the Constituent Assembly of India did not place law in the Constitution.

- This law has become a symbol of authoritarianism and the political vendetta of the government. In the present time, many misuses of this law have been seen like coercive action of sedition by the Andhra Pradesh government on two Telugu (language) news channels, Kanhaiya Kumar case, etc. Hence it is appropriate to repeal it.

- This law was introduced in Britain. But now this law has been repealed in many countries like Britain, so there is a demand to repeal it in India as well.

- The Supreme Court upheld the constitutionality of Section 124A in 1962 in Kedar Nath Singh v State of Bihar but limited it to activities intended to create disorder, disturbance of law and order, and incitement to violence. But judgments in the Supreme Court are also disregarded by leveling sedition charges against academicians, lawyers, socio-political activists, and students

- The Indian Penal Code and the Unlawful Activities (Prevention).



Act, 1967 have other provisions that make it an offense to "disrupt public order" or "overthrow the government by violence and illegal means". Therefore, section 124A is not required.

Sedition law and judiciary Tara Singh Gopi Chand Vs State (1951)

In 1951, the Punjab High Court declared Section 124A unconstitutional. A similar judgment was passed by the Allahabad High Court in 1959, with the court holding that it affected the very essence of free speech.

Kedar Nath Singh Vs State of Bihar, 1962:-

In 1962, the Supreme Court upheld the constitutionality of Section 124A in Kedar Nath Singh v State of Bihar but limited it to activities intended to create disorder, disturbance of law and order, and incitement to violence.

Balwant Singh Vs State of Punjab, 1995:-

The Supreme Court had acquitted people of sedition charges for raising slogans like Khalistan Zindabad. The Court categorically held that the raising of slogans by only two persons cannot be termed sedition. Further, this activity is also not considered to be an attempt to incite hatred or discontent against the government.

Conclusion

This law is indeed misused which is against democratic values but such laws are relevant from the point of

view of unity and integrity of the country. However, the government must use an exceptional position in the application of law such as sedition, because after a person is accused of sedition (although he is not guilty or was later acquitted) there is a decrease shown in his and his family's social-political situation and there is also a loss of trust in the government. The definition of sedition should, therefore, be narrowed down to include only issues relating to the territorial integrity of India as well as the sovereignty of the country. Civil society should take the initiative to raise awareness about the arbitrary use of this law.

NOTES



Pharmaceutical Innovation and Entrepreneurship

Context

Recently, the Ministry of Chemicals and Fertilizers has issued guidelines on Pharmaceutical Innovation and Entrepreneurship. These guidelines have been issued for educational institutions to motivate the Indian pharma industry.

Introduction

India is the largest provider of generic drugs globally. Along with this, the potential of India's pharmaceutical sector has been shown all over the world during the Corona period. In this situation, India must make its pharmaceutical sector world-class, for which innovation is needed. Keeping this objective in mind, the Ministry of Chemicals and Fertilizers has issued Guidelines on Pharmaceutical Innovation and Entrepreneurship for Educational Institutions to motivate the Indian Pharma Industry.

Key Objectives of the Guidelines

- The main objective of these policy guidelines is to convert academic research into innovative and commercially viable technologies.
- This policy guideline is to enhance contribution to the self-reliant India mission by creating a strong ecosystem for entrepreneurial activities.
- It encourages the faculty and students of academic institutions to entrepreneurship.
- This policy is driven by the principle of ensuring the availability of resources for pre-incubation and providing common facilities for potential inventors and entrepreneurs.

- In this context, a fixed percentage (minimum 1 percent) of the annual budget should be allocated, so that innovation and startup-related activities can be supported and supported.

- In return for the services and facilities provided, an organization may receive a certain percentage (2-9.5%) of equity in the startup/spin-off company, based on employee contributions and assistance provided and the institution's intellectual property.

- Entrepreneurial initiatives will be assessed regularly by defined impact assessment parameters such as intellectual property listing, products developed and their commercialization, and the number of jobs created and startups.

- To encourage students to appear in the examination by providing relaxation in attendance, even if their attendance is less than 75% so that they can also give time to entrepreneurial activities and Ph.D. students associated with the institutes. For this also, leniency will be brought into the rules.

Pharmaceutical sector of India

- India is the largest supplier of generic drugs globally. The Indian pharmaceutical sector supplies 50% of the global demand for various vaccines, 40% of generic demand in the US, and 25% of all drugs in the UK. Globally, India ranks third in terms of drug production by volume and 14 in terms of value.

- India occupies an important place in the global pharmaceutical

sector. The country also has a large pool of scientists and engineers who have the potential to take the industry to greater heights.

- Currently, more than 80% of the antiretroviral drugs used globally to combat AIDS (Acquired Immune Deficiency Syndrome) are supplied by Indian pharmaceutical firms.

- According to the Economic Survey of India 2021, the domestic pharmaceutical market is expected to grow 3 times in the next decade. India's domestic pharmaceutical market is estimated to be worth US\$ 42 billion in 2021 and is expected to reach US\$ 65 billion by 2024 and is expected to reach US\$ 120-130 billion by 2030.

- India's medical devices market stood at US\$ 10.36 billion in FY15. The sector is expected to grow at a CAGR of 37% to reach US\$ 50 billion from 2020 to 2025.

- In August 2021, CARE Ratings projected India's pharmaceutical business to grow at an annual rate of 11% annually to reach a value of over US\$60 billion over the next two years.

- Indian pharmaceutical exports stood at US\$ 24.44 billion in FY 2021 and US\$ 22.21 billion in FY 2022 (till February 2022).

- The country's pharmaceutical sector contributes 6.6% of the total merchandise exports. As of May 2021, India supplied a total of 586.4 lakh COVID-19 vaccines to 71 countries, including grants (81.3 lakh), commercial exports (339.7 lakh), and exports under the COVAX

platform (165.5 lakh).

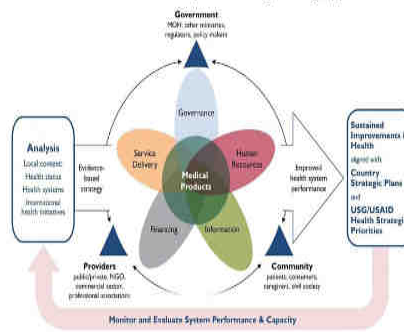
Challenges before India's pharmaceutical sector

- Human resources in India are in good position, yet India lags in terms of innovation and entrepreneurship. The main reason for this is that educational institutions and the private sector in India do not show much interest to research.
- At present, Active Pharmaceutical Ingredients (API) is being widely used in the medicines of India. India imports about 80% of its API from China. Therefore, the dependence of the pharmaceutical sector on the products of foreign countries is a big problem. This can bring problems in India supply disruptions and unpredictable price fluctuations in India.
- India's pharmaceutical sector undergoes rapid policy changes. The challenge is arising due to unpredictable and frequent changes in domestic pricing policy in India. As a result, an unclear environment has been created for investment and innovations.
- India's pharmaceutical sector is sometimes faced with the problem of quality compliance. Sometimes there are problems in the trial process of drugs.
- India's pharmaceutical sector contributes less to the global level. The Indian pharmaceutical market is estimated at US\$ 40 billion though it is a small part of the US\$ 1.27 trillion global pharmaceutical markets.

Government Initiatives in the Pharmaceutical Sector

- In March 2022, the Pharmaceutical Industry (SPI) Strengthening Plan was announced. For this, a provision has been made to provide a total financial outlay of Rs.500 crore

USAID Pharmaceutical System Strengthening Approach



for the period from FY 21-22 to FY 25-26.

- In November 2021, Prime Minister Shri Narendra Modi inaugurated the first Global Innovation Summit for the pharmaceutical sector. More than 40 national and international speakers at the conference will deliberate on a range of topics including the regulatory environment, funding for innovation, industry-academic collaboration, and innovation infrastructure.
- In June 2021, the Minister of Finance and Corporate Affairs, Ms. Nirmala Sitharaman announced an additional outlay of Rs.197,000 crore. This will be used in 13 key sectors of pharmaceuticals viz., active pharmaceutical ingredients, pharmaceutical intermediaries, and key starting materials PLI scheme over five years. Till August 31, 2021, the PLI scheme has received a total of 278 applications. This is likely to benefit 55 manufacturers.
- Along with this, the Department of Pharmaceuticals has established the National Institutes of Pharmaceutical Education and Research (NIPERs) as institutions of national importance for imparting quality education and conducting high-end research.

- The department is also coming out with a 'Policy for Promoting Research and Development and Innovation in Pharma-MedTech Sector in India' soon.

Conclusion

At present, the pharmaceutical sector of India is growing rapidly. But it still has a long way to go to become a global leader. India can rapidly grow its pharmaceutical sector through innovation and entrepreneurship. Due to schemes like Startup India, and PLI, manufacturing is growing rapidly in India, which has also affected the pharmaceutical sector. Growth in the pharmaceutical sector will strengthen not only India's economy but also the international situation as seen during the Corona vaccination. This initiative of the Ministry of Chemicals and Fertilizers will help increase the pharmaceutical sector in India.

NOTES



Impact of Sri Lanka's Economic Crisis on India & The World

Context

Recently Mahinda Rajapaksa, Sri Lanka's prime minister resigned due the anti government protest which injuring at least 78 people and prompting authorities to impose a nationwide curfew. As Sri Lanka is facing the worst economic crisis in its history rising price and unemployment raged this anti government protest.

Introduction

Sri Lanka is going through the worst economic crisis since independence in 1948. A crippling shortage of foreign reserves has led to long queues for fuel, cooking gas and other essentials while power cuts and soaring food prices heaped misery on the people. The economic crisis has also triggered a political crisis in Sri Lanka.

Present status of Sri Lanka

- Sri Lanka has foreign-currency reserves of around USD two billion, while the total debt repayment target in the year 2022 is USD seven billion. Of this, USD 1 billion worth of bonds are maturing as early as July 2022.
- External debt in Sri Lanka has been on a steep rise since 2005. From USD 11.3 billion in 2005, it rose to USD 21.7 billion in 2010, USD 43.9 billion in 2015, and USD 56.3 billion in 2020 during the Covid pandemic.
- Sri Lankan Rupee depreciated by more than 50 per cent against the US dollar this year alone.

- The retail price of rice in the last week was 60 per cent more than the year-ago level, while the price of onions was 79 per cent, that of potatoes 66 per cent, and that of an egg was 93 per cent higher year-on-year.
- Altogether, headline inflation rose to 18.7 per cent in March 2022 from 15.1 per cent in February 2022. Food inflation stood at 30.2 per cent in March and rising food inflation causes public protest.

Causes of Sri Lanka's economic crisis

- In 2019 the then newly-formed government promised to revive the growth of the Sri Lankan economy and reduce Value Added Tax (VAT) on the ground that a lesser tax rate would attract more consumer expenditure which would pay the incurred deficit to them. But the pandemic disturbed the cycle of increasing consumption expenditure and led to a failure of tax cuts in VAT.
- The move sparked quick punishment from the global market. Creditors downgraded Sri Lanka's ratings, blocking it from borrowing more money as its foreign reserves nosedived.
- In April 2021, in order to revive the falling foreign exchange reserve, Sri Lanka announced a complete shift to organic farming banning all chemical and inorganic fertilizers. A part of the nation's economy is spent on importing chemical fertilizers. Instead, it caused a negative effect on the economy, causing huge economic losses, this impacted negatively. It led to lower yields that resulted in a

a loss of \$425 million. Sri Lanka which was self-sufficient in rice production ended up importing rice within six months. Tea was a major item of export which contributed 16.57 per cent of total export income, but no longer.

- The Easter Sunday bombings in 2019 and the Covid pandemic led to a downturn in tourism that accounts for 12.9 per cent of GDP. The war between Russia and Ukraine further accelerated the weakening economy as 25 per cent of the tourists come from Russia and Ukraine.

- Sri Lanka is also facing a labour shortage. In 2018, Malik Fernando, head of the industry body of the Tourism Skills Committee said the country needs 100,000 more tourism sector employees within the next three years.

- The country's heavy dependence on imports for essential goods like sugar, pharmaceuticals, fuel, pulses and cereals worsened the crisis.

Impact on India -

- India witnessed that whenever there is a political or social crisis in Sri Lanka, large number of refugees come from the Sri Lanka to India through Palk strait & Gulf of Munnar. First reason is that the people belong to the same Tamil Community who are connected to each other for centuries and second is that after the Sri Lankan Civil war, the faith of ethnic Tamil community has been reduced in the Sri Lankan



government. India may find it difficult to handle such a big influx of refugees.

- India relies considerably on the Port of Colombo for global trade given its status as a transshipment hub. 60 percent of India's transshipment cargo is handled by the port. India-linked cargo, in turn, accounts for 70 percent of the port's total transshipment volume. Any disruption in operations at the Port of Colombo makes India vulnerable to an increase in costs and congestion issues.
- India is also one of the largest contributors to foreign direct investment (FDI) in Sri Lanka. FDI from India amounted to about US\$1.7 billion from 2005 to 2019. India was the third biggest source of FDI for Sri Lanka in 2019 at US\$139 million. Any instability in Sri Lanka might affect the interests of large Indian companies invested in Sri Lanka.

Global Impact

- Major economies invested in Sri Lanka was China, USA, India, Japan etc and economic crisis in Sri Lanka affected the interest of investors; this led to the loss of its credibility among the global investors.
- Whenever a political or social crisis has occurred in Sri Lanka, neighbours witnessed a large influx of refugees from Sri Lanka.
- Sri Lanka has defaulted on its debts for the first time in its history as it struggles with an economic

and political crisis will make it difficult for Sri Lanka to get new funds.

Assistance to Sri Lanka

- India has extended nearly \$3 billion to cash-strapped Sri Lanka since January 2022, by way of currency swaps, credit lines for essentials, and loan deferments.
- India extended an additional \$500 million credit line to help Sri Lanka import fuel as the country has been struggling to pay for imports after its foreign exchange reserves plummeted sharply in recent times, causing a devaluation of its currency and spiralling inflation.
- 400 \$ million currency swap with the Reserve Bank of India, extended early this year. A billion credit line for essential imports is operational and around 16,000 MT of rice has been supplied under it so far.
- India has helped Sri Lanka defer repayment of loans totalling \$1 billion under the Asian Clearing Union.
- Further 400,000 MT of fuel has been delivered to Sri Lanka through a \$500 million credit facility.
- The World Bank will also extend \$600 million in financial assistance to Sri Lanka in two phases to address its economic crisis to meet medicinal drugs and health needs, social security, agricultural and food security and gas needs.
- The International Monetary Fund (IMF) will also support Sri Lanka's efforts to overcome the current economic crisis by working closely with the authorities on their economic programme, and by engaging with all other stakeholders for a timely resolution of the crisis.

Way Forward

- To bring Sri Lanka out of this deep economic crisis, the first step would be to have a stabilised government at the Centre.

- An ambitious fiscal consolidation that is based on high-quality revenue measures needed for Sri Lanka. Its low tax-to-GDP ratio, has scope for raising income tax and VAT rates and minimising exemptions, complemented with revenue administration reform.
- Country needs to either restructure the debt or go to the International Monetary Fund for a relief package.
- Like India's Green Revolution, Sri Lanka also needs to become self-reliant by taking important steps in the field of food grains.

NOTES



Bulldozer Justice

Context

The nation has been witnessing a frenzy of demolition drives for the past few weeks, many state governments such as Madhya Pradesh, Uttar Pradesh and other states and Union territories has used the bulldozer against alleged law-breakers. Recent demolition of several properties associated with alleged suspects of the Ram Navami violence in Khargone raises questions about the legality of such a move.

Introduction

Chief Minister Yogi Adityanath earned the nickname of 'Bulldozer Baba' in Uttar Pradesh for his extensive use of the machinery to free up over 67,000 acres of government land from the clutches of land mafia in the state.

The versatile bulldozer has been put to effective administrative use in the last few years, leading to an unambiguous message to the underworld, the crime syndicates and the mafia that their ill-gotten immovable property is no longer safe — such assets are under the real threat of being razed to the ground.

The bulldozer was used very effectively, primarily to remove public nuisance and obstructions earlier, but also as an effective tool against the spoils of crime belonging to the land mafia and hardened criminals. This experiment was an instant hit and won the hearts and minds of the public at large.

Act of Demolition

- The demolitions can happen within the scope and provisions of law, and not otherwise. In most cases, such illegal constructions are brazen encroachments of and built on valuable government land.
- The other targeted category is of such cases where all channels of appeal have been exhausted by the complainant, and the authorities concerned, primarily the revenue and municipal authorities, operating under the provisions of various demolition laws, as also Section 133 CrPC, are empowered to remove obstructions, public nuisances, etc.
- Municipal laws have their own standard operating procedures in respect of demolition; of course, special interest groups would like to believe that the decision to demolish any property is invariably one-sided and perverse, little realising that all such actions are in the purview of judicial scrutiny and can be questioned in courts of law, regarding the circumstances of demolition, because anything that is not procedurally correct can seriously jeopardise the careers of the demolition team members.
- The demolition drill is very elaborate, incorporating service of notices, photography and videography of operations.

Why is there a sudden spurt in the use of bulldozers

- The earlier setups were either compromised, looked the other way, or had a soft corner for

the land grabbers. In any case, this is one measure that has gone down so well with the public that the sale of bulldozers has skyrocketed.

- It is reported that the government of Uttar Pradesh was able to reclaim property worth Rs 1,800 from illegal occupation, which seems to be just the tip of the iceberg, because it is difficult to find a single district or department where illegal encroachment and construction have not assumed epidemic proportions. In this age of technology, it is easy to have digitised maps and a system of drone and CCTV surveillance to collect real-time information in respect of landholding and attempted encroachments. Thus there is immense scope for immediate and effective intervention wherever there is a reasonable apprehension of encroachment.

- It is to the credit of the existing ecosystem of reclaiming lost government land and property that this aspect of administration enjoys very high priority. It is also well-known that most persons who have transgressed the rule of law have also indulged in illegal constructions, and it is here that they give an opportunity to the law enforcement agencies to subject them to anti-encroachment drives

Law and Rights of Illegal encroachment

- States and Union Territories has law for example the National Capital Territory, the Delhi Municipal Corporation Act, 1957 contains an

elaborate procedural mechanism to deal with illegal construction.

- There is a mandatory requirement of a notice to the illegal occupant to justify their occupation. The requirement of serving a notice and providing an opportunity of being heard to the affected person is a sine qua non before the lawful taking of any coercive action. The requirement of notice is not in the realm of procedure, but is a fundamental principle of natural justice and a facet of the rule of law.

- In 1979, the 44th amendment to the Constitution did away with the right to property as a fundamental right but introduced Article 300A, which retained the right to property as a constitutional right. Article 300A categorically states "No person shall be deprived of his property save by the authority of law". Subsequent judgments of the Supreme Court have reiterated that any deprivation of property by the State should not only have a statutory sanction, but also should adhere to touchstones of 'reasonableness' and 'due process'.

- In 1985, in the landmark judgement of *Olga Tellis & Ors. v. Bombay Municipal Corporation & Ors.*, the Supreme Court observed that even a trespasser should be given a reasonable opportunity to depart before force is used to expel them.

- In 1978, in the now famous case of *Maneka Gandhi vs Union of India*, the Supreme Court, while interpreting the scope of Article 21 of the Constitution, stated that the "due process of law" is an integral part of "procedure established by law", explaining that such procedure must be fair, just and reasonable.

- The Supreme Court once again in a case titled *Municipal Corpn., Ludhiana v. Inderjit Singh* categorically stated that if the requirement of giving notice is

provided under a municipal legislation, then this requirement must be necessarily complied with.

Justifiable of demolition action

- The authorities have termed the demolitions as removal of encroachment, leaders of the ruling dispensation have stated that these drives are targeted towards the people suspected or accused of committing crimes.

- Some political leader accused that some demolitions are targeting a community means a collective punishment for a particular community.

- The idea of collective punishment, in any manner, is prohibited under several international documents, including the Geneva Convention of 1949, which was ratified by India in 1950.

- The demolition as a remedial measure of state action against an accused is completely unsanctioned in Indian law. There is absolutely no penal legislation in the country that provides for demolition as a penalty of any offence.

- Any justification for a demolition drive, as a penal consequence to a criminal act is totally against established canons of criminal justice.

Conclusion

- The recent demolition drives in Madhya Pradesh, Uttar Pradesh, Gujarat and Delhi without complying with the requirement

of notice thus prima facie appear to be violative of constitutional rights of the affected persons as well as in the teeth of settled law laid down by the Supreme Court.

- But as per state governments after serving proper notice action has been taken.

- The contentious practise of using bulldozers to pull down residential and commercial properties of persons "suspected" goes against the spirit of impartial justice and results in irreparable harm to the residents of the area.

- Just and transparent action will invariably enhance the credibility of the administration and reduce the probability of false allegations being levelled against the field officers.

NOTES





POLITICS

Free Politics

Why in discussion

- Recently in the Supreme Court a PIL. An appeal has been made to ban the symbols and registration of those political parties. Who promise to give free gifts and other free services to the public to win the election.

Free Gifts and Services in Indian Politics

There is a system of multi-party system in Indian elections. Every party participates in the electoral process to come to power and propagate their vote through election campaigns.

- In the recently concluded Indian State Legislative Assemblies elections, various parties have announced to give free gifts and services to the people to vote in their favour.
- Free politics has been an integral part of elections for years. The recent elections were also not untouched by this, some political parties were seen promising free electricity, some unemployed, daily wage labourers and women with monthly allowance etc. Scooters, smartphones, laptops etc. are also part of this.
- Free politics has raised serious issues of governance for the post-election period, even raising fundamental questions about the viability of the democratic process in the future.
- On the other hand, some free schemes given by the government also give relief to the target group/classes in living life. Like free food, especially during covid to the below poverty line and covid vaccination etc.
- Though free politics has been

going on since independence but its excess and unreasonable promises can put additional pressure on resources and hinder all round development.

Pros Welfare State

- The democratic government of a conscious society is expected to fulfil the basic needs of the people which is a fundamental right of every citizen under the right to life and personal liberty, but there is a huge shortage in these basic services.
- It is also expected from the welfare government that its decisions will raise the standard of living of the common man.

Inequality in society

- There is a huge disparity between the rich and the poor in the Indian society. Governments have restrictions to remove this inequality and their effort is to remove inequality by making resources accessible to the people.

Helpful for farmers, poor and marginalized sections

- There are some very useful free facilities and subsidies given by the governments which are effective to deal with the basic problems of the poor and live a dignified life. Like- food and water subsidies which act as a link in making a healthy and strong India. Subsidies given in the agriculture sector to make agriculture sustainable and profitable.

Helpful during emergency

covid is the world's biggest health

disaster. In the meantime, free food, healthy information, free bed-scale vaccination provided by the government made this epidemic prudent management.

- Similarly, the free service and facility provided by the government from other natural disaster affected areas gives relief to the people.

Economic push

- Free pensions to the poor and targeted sections, other financial issues stimulate consumption/demand in the economy, which prevents the growth rate from decelerating further.
- Free education and health improve human development thereby increasing the productivity of labour.

Social stability

- Inequality in Indian society can generate dissatisfaction among the people but the government is able to remove this dissatisfaction by its free service and facilities.

Cons

It undermines the spirit of democracy:-

- It is essential to have free and fair elections through the democratic system. But the primary concern is that political parties have created an alternative to money for votes (note for votes) through freebies. People vote on the basis of free incentives given by them and fail to judge on the basis of their performance and do not vote on the basis of merit.
- The Supreme Court has also said that freebies shake the roots of

free and fair elections.

Decline in productivity:

- Free items/gifts create a feeling in people that life can be done with less effort. This makes them indifferent to labour, which leads to a decline in productivity. For example, people take loans from banks and do not repay them with the expectation of discounts during elections, this creates productivity and moral hazard.

Financial burden on the exchequer

- After coming to power with such assurances for power, there will be a real crisis of resources.
- The victorious governments will try to fulfill at least some of the promises to maintain some credibility. States with already poor financial assets will face severe financial crisis and put additional pressure on the exchequer.
- If the resources are used to give these free things, then the state will fail to pay its debts.

Negative impact on tax payers

- The politics of freebies can create a feeling of dissatisfaction in the mind of an honest taxpayer as the tax paid by him is being used to fulfill the promise of freebies and not to improve public services.

Lack of work culture

- These promises will increase the wishes of the people and this desire can go ahead and change into demand, which will have a negative effect on the people's tendency to work, morality will decrease and as a result they will become puppets in the hands of politicians.

Encourage misuse of resources

- Free water and electricity will encourage misuse of resources. For example, states like Punjab and Haryana where



groundwater is over-exploited.

Way ahead**Election Commission**

- More and more powers should be given to the Election Commission such as the power to cancel the registration of a political party, the power of contempt, etc.

Public benefit

- There is a need to focus on improving public spending efficiency which is based on results and not just expenditure.

Awareness

- People have to understand whether they have to choose between free things or freedom? These two cannot be together.
- It must also be understood that the distribution of private goods with public money before elections, which are not for public purposes, is against equality.

Political party

- Political parties should not make promises in election campaigns that are not supported by proper policies, budgetary allocation and an administrative structure to deliver them.

Government

- Government should spend money in employment generation

and not in distributing free things

Conclusion

Free politics has been going on since independence. Political parties see it as a convenient way to take an edge over the competition and gain emotional control over the minds of voters. But the politics of unreasonable freebies can ultimately bankrupt the state.

- The Election Commission has also said that freebies impede equal opportunity and spoil the free, fair electoral process.
- There is nothing wrong in bringing in a comprehensive policy based social security program that propels the society on the path of development.
- Similarly, some plans and campaigns of governments are only to fulfill the political purpose, while some schemes are appreciated by international forums. For example, the campaign organized by the Bengal government on the pre-election "Duare Sarkar" and on the other hand, "Kanya Shree" program giving relief to the targeted classes etc.

NOTES

1 Lookout Circular (LOC) Issue

Why in News?

Recently, Lookout Circular (LOC) has been issued against several important personalities including Aakar Patel, chairman of Amnesty International India.

What is a lookout circular?

It is a notice to stop any individual wanted by the police, investigating agency or even a bank from leaving or entering the country through designated land, air and seaports. Immigration is tasked to stop any such individual against whom such a notice exists from leaving or entering the country. There are 86 immigration check posts across the country. As per norms, a LOC will stay valid for a maximum period of 12 months and if there is no fresh request from the agency then it will not be automatically revived.

Who can issue LOCs?

A large number of agencies including the Central Bureau of Investigation (CBI), Enforcement Directorate, Directorate of Revenue Intelligence (DRI), Income Tax, State police and intelligence agencies are authorised to generate LOCs. The officer should

not be below the rank of a district-magistrate or superintendent of police or a deputy secretary in the Union Government. Are individuals entitled to any remedial measures? Many citizens have moved courts to get the LOC quashed. The Ministry of Home Affairs has asserted that "LOCs cannot be shown to the subject" at the time of detention nor can any prior intimation be provided. What are the details required to generate a LOC and who issues it? According to a 2010 official memorandum of the Ministry, details such as First Information Report (FIR) number, and court case number are to be mandatorily provided with the name, passport number and other details. The BOI (Bureau of Immigration) under the MHA is only the executing agency. They generate LOCs based on requests by different agencies.

How are banks authorised?

After several businessmen including liquor baron Vijay Mallya, businessmen Nirav Modi and Mehul Choksi fled the country after defaulting on loans, the MHA in 2018 brought changes to the 2010 guidelines authorising the chairman, managing

director and chief executives of all public sector banks to generate LOCs against persons who could be detrimental to economic interests of the country. Are individuals entitled to any remedial measures? Many citizens have moved courts to get the LOC quashed. The Ministry of Home Affairs has asserted that "LOCs cannot be shown to the subject" at the time of detention nor can any prior intimation be provided as it defeats the purpose of LOC.

Way forward-

LOC should be issued only for exceptional cases regarding national security. There cannot be any unfettered control or restriction on the right to travel as it is a violative of article 21 of the constitution. The Punjab and Haryana High Court passed instructions to the Ministry of Home Affairs (MHA) and the Bureau of Immigration (BOI) to serve a copy of an issued LOC to the affected person, state the reasons for issuing the LOC and also provide a post-decisional opportunity.

2 Bharat Tap Initiative

We are well aware of the importance of water in life, it is impossible to imagine life without water. Therefore, many efforts are being made by the central and state government for its conservation. In this sequence, a 'Bharat Tap' initiative was launched by the Minister

of Housing and Urban Affairs and Petroleum and Natural Gas Hardeep Singh Puri at the 'Plumbex India' exhibition.

The 'Plumbex India' exhibition has been organized to make people aware about cleanliness

and water conservation in the country. The exhibition is organized to showcase products and services related to tap equipment, water and sanitation industry. In the same exhibition, Hardeep Singh Puri, Minister of Housing and Urban Affairs and Petroleum and Natural Gas

has launched a 'Bharat Tap' initiative. If the mouth of the tap in the bathroom is made a little smaller, then less water will come out from it and thus the water consumption will be less. The 'Bharat Tap' initiative also has the same objective. Under this, low-flow sanitary-ware will be made available on a large scale thus reducing the consumption of water at the source. During the same program, Union Minister Shri Puri also launched 'Nirmal Jal Prayas' initiative of NAREDCO Mahi. Under this initiative, work will be done to save 500 crore liters of water every year. The National Real Estate Development Council (NAREDCO), set up under the aegis of the Ministry of Housing and Urban Affairs, is a national level apex body.

It represents the stakeholders involved in various aspects of real estate development. In the year 2021, a women's wing of the same NAREDCO was established, which is called NAREDCO Mahi. It was established with the objective of empowering women entrepreneurs and encouraging

the participation of women in the real estate sector and allied sectors. It seeks to create an environment where women in the real estate sector can come together to share their experiences, harness their skills, mobilize resources and drive sustainable change. In fact, the increase in the demand for water, its limited storage, arbitrary exploitation of ground water, continuous pollution of water due to various reasons, its not properly regulated and indiscriminate deforestation are all such issues which show the dire need of water conservation. Several steps have also been taken by the government for this, including Swachh Bharat Mission, AMRUT Mission, National Aquifer Mapping and Management Program (NAQUIM), MGNREGA, Jal Kranti Abhiyan and National Water Mission etc. Apart from this, initiatives like Composite Water Management Index of NITI Aayog, formation of Ministry of Jal Shakti, Jal Jeevan Mission, Jal Shakti Abhiyan and

National Water Award have also been taken by the government.

NOTES

INTERNATIONAL

1 Changing USA Policy Towards Taiwan

Why in News?

Recently, President Joe Biden said that the United States would intervene militarily if China invaded Taiwan.

What is One China Policy of the United States?

'One China' is a longstanding US policy that forms the bedrock of its relationship with Beijing. Under

the policy, the US snapped formal diplomatic ties with the Republic of China (ROC) in Taiwan, and established ties with the People's Republic of China (PRC) in Beijing in 1979. The contours of the policy were explained in the US-PRC joint communique of December, 1978, which said: "The People's Republic of China and the United States of America

have agreed to recognise each other and to establish diplomatic relations as of January 1, 1979. The United States of America recognises the Government of the People's Republic of China as the sole legal Government of China. Within this context, the people of the United States will maintain cultural, commercial, and other unofficial relations with the people of Taiwan."

The Government of the United States of America acknowledges the Chinese position that there is but one China and Taiwan is part of China.

How did the US preserve its Taiwan ties?

It began with the “ping-pong diplomacy” of 1971. In April that year, American table tennis players crossed into the mainland and became a medium for both sides to move towards a thaw in relations. In 1979, around the time PRC and the United States posted Ambassadors in each other’s capitals, the US Congress passed the Taiwan Relations Act (TRA). The Act made it clear that “the United States decision to establish diplomatic relations with the People’s Republic of China rests upon the expectation that the future of Taiwan will be determined by peaceful means”. It also committed to providing

Taiwan “with arms of a defensive character” and “to maintain the capacity of the United States to resist any resort to force or other forms of coercion that would jeopardize the security, or the social or economic system, of the people on Taiwan”.

History of “Two Chinas” situation- After the communist forces won the Chinese civil war in 1949 after over two decades, the Republic of China moved its capital to Taipei, Taiwan. The People’s Republic of China was established with Beijing as its capital. Both governments made competing claims to represent all of China, but only a few recognised the PRC at that time. It was much later in 1971 that the PRC managed to enter the UN through Resolution 2758, which unseated ROC as the official representative of “China”. The US did not recognise the PRC till 1979.

Conclusion

The One China Policy is a balancing act wherein the US maintains an official relationship with China, and an unofficial one with Taiwan. The recent speech by Joe Biden regarding military help to Taiwan in case of a Chinese invasion may disturb the balance between China & Taiwan.

NOTES

2 Finland and Sweden joining NATO

Context

- Finland and Sweden have expressed their desire to become part of NATO. These declarations are the biggest strategic setback for Russian President Vladimir Putin whose most important foreign policy focus has been on weakening NATO.

What are the benefits of joining NATO?

Military benefits

- Collective Security
 - Article 5 of the treaty states that if one ally gets attacked, then it is treated as an attack on everyone.
 - This offers a long-term collective defence of

strategically developed countries

- When the 9/11 terrorist attacks happened, all the other members contributed to counter-terrorism retaliation in Afghanistan.
- Cyber defence capabilities
 - It helps the allies to keep boosting their defences through information sharing, education investments, and ongoing training.
 - Cyber defence experts work with organizations that can mobilize at a moment’s notice to help any country in the network to survive an attack.
- Developing Counter-terrorism capabilities
 - A hub for allies has been established in Naples, Italy

to check terrorism.

- Cost-effective Defence
 - Every country must spend 2% of their GDP on defence (Wales summit, 2014).
 - The interests of every member are secured and the cost to maintain an effective army is distributed amongst countries.

Economic benefits

- Through Free Trade agreements amongst members, goods of a member’s nation enjoy a competitive advantage over that of the rest of the world.

Political benefits

- It doesn’t interfere with

the internal politics of the nations.

- It doesn't dilute the sovereignty of its constituent members.
- As decisions are taken unanimously, the voice of each nation is treated at par with others.

Response of NATO members and Russia

- Turkey has opposed the demand of Sweden and Finland to join NATO.
- The U.S. and the U.K. are in favour of NATO's expansion.
- Germany and France are pursuing a more cautious line.
- Hungary, which has deep ties with Russia and has already agreed to the EU's plan to ban Russian oil imports, has not made its views clear on NATO's expansion.

- Russia has been threatening military retaliation in response to any further expansion of NATO.

Way Forward

- NATO members should deliberate on whether the expansion of NATO will bring further peace and stability in Europe
 - The expansion would escalate the current crisis between nuclear-armed Russia and NATO to dangerous levels.
 - The several rounds of NATO expansion and Russia's territorial aggression have brought the world to its most dangerous moment since the 1962 Cuban missile crisis.
- Russia must halt the war and all stakeholders should resume dialogue and diplomacy to end this man-made crisis.

Conclusion

The focus must be to make Russia end the war and not on expanding NATO. Only then we can start rebuilding the post-COVID global order for the betterment of humanity and offset some of the damage done by the pandemic.

NOTES

ECONOMY

1 Unicorns : Opportunities and Challenges

The term 'Unicorn' - a privately held technology startup with a valuation equal to or over \$1 billion (around 7,500 crore) was coined by Aileen Lee, an American Angel investor in 2013, when India did not have a single unicorn. But in a short span of decade India host to 100 unicorns indigenously according to RBI report (2021). Towards the end of 20th century, India earned the reputation of being the software hub of world. It started a tech revolution resulting into spawning multiple Indian startups, who were involved in innovating cutting edge technologies. Soon, some of these startups evolved and became the Unicorns. India ranks third, just behind USA and

China when it comes to the number of Unicorns.

The following are the reasons which make India as red-hot Unicorn destinations

a. Favourable demographics:

Being the youngest Country in the world with a maiden age of just 29, the working population have a great potential in entrepreneurship.

As it provides:

- Skilled manpower and acceptability of technology improvements.
- Desire to have a better lifestyle.
- Availability of tech-savvy customer.
- But most of all, the younger age group causes aspiration to

rise.

b. Startup Ecosystem:

Technology has played a crucial role in India's rise as a startup destination. The rising necessary infrastructure with essential government efforts Bengaluru is the software capital of India and also a start-up capital. Mumbai and Delhi are also fast catching up.

c. Government initiatives:

When demonetisation came into 2016, it came as a blessing in disguise for startups, particularly the Fintechs. The rise of digital payment companies have changed the scenario for earlier insignificant market. On one initiatives like 'Make in India' and Atmanirbhar Bharat' encourage

aged local entrepreneurs for taking risks.

The big support during pandemic, provided by government and India's drastically improving 'Ease of doing Business' ranking' [India ascended 17 notches, ranked 63rd position] have added fuel to the fire.

d. Internet and other technologies:

Internet has changed the way businesses operate and customers lead their daily lives.

The lowest data tariffs, use of budget smartphones and availability of vernacular content opened a lot of avenues for India to innovate in technology.

The creation of e-commerce is the purely result of increasing internet connectivity across India.

e. Changing Customers Preference:

The startups have outgrown merce player. Similarly Paytm started as a digital wallet but is today aspiring to be Super App.

But there are some challenges in growing unicorn scenario which can pose threat

• **Lack of sustainable business model:**

To become a Unicorn was difficult but staying there is even their original category of business and aspiring to become giants.

As Flipkart started as a bookseller and today is a dominant e-com tougher. Most start-ups or even Unicorns are loss making enterprises. Eg. Zomato, Uber etc.

• **Dependence on VC money,** the start-ups which eventually become Unicorns are mostly funded by VC money. (Venture Capitalists).

The most of Ventures are in loss so if funding by VC stops then these startups face the Question of life and death.

• **Transformation of traditional companies:** The rising competition from traditional businesses would capitalise threats to their existence.

Phone-Pe and GPay together dominate the volume (86%) and value (80%) in the retail digital payments space but Jio super app and Tata Neo super app would challenge their existence.

• The male dominance over startup, as most of unicorns in India headed by male members. This would create a gap for half working population in startup sector. Therefore Unicorns or startup sphere in India have the potential to become the future MNCS and ace up India in Economic perspective. But there are few challenges that can hinder the positive outcomes.

2 Cold Chain Systems and India's Readiness

Healthcare supply chain logistics is series of processes, workforce involved across different teams and movements of medicines, surgical equipment and other products as needed by healthcare professionals to do their job.

The pandemic has taught us a great deal. We have all become familiar with terms such as variants, waves, vaccine supply chains and quarantine.

That has also evolved India's Universal Immunisation programme for re-assess and restructuring.

India's Universal Immunisation Programme (UIP): -

India's UIP launched in 1985 to deliver routine immunisation, showcased its strengths in managing large-scale vaccine delivery.

This programme targets close to 2.67 crore newborns and 2.9 crore pregnant women annually.

To strengthen the programme's outcomes in 2014, Mission Indradhanush was introduced to achieve full immunisation coverage of all children and pregnant women at a rapid pace a commendable initiative.

But the pandemic reminded us that vaccine alone do not save lives, vaccination does.

While we have, over the years setup a strong delivery network, the pandemic showed us that there were weak links in the chain, especially in the cold chain, which needs to be robust and seamless.

Cold Chain Management :

The success of any sustainable vaccination programme relies on many

factors:-

1. A key factor is cold chain management because when this fails the potency or effectiveness of the vaccine is vested.
2. Nearly half the vaccines distributed around the world go to waste, in large part due to a failure to properly control storage temperature's.
3. In India, close to 20% temperature sensitive healthcare products arrive damaged or degraded because of broken or insufficient cold chains, including a quarter of vaccines.
4. The COVID-19 vaccination efforts relied on the Cold chain infrastructure established under the UIP to cover 87 crore people with two doses of the vaccine and over 100 crores with at least single dose.

Digitizing the vaccine supply chain Network- Ministry of Health has been digitizing the vaccine Supply chain network in recent years through the use of cloud technology such as with the eVIN (Electronic vaccine Intelligence Network). Developed with support from Gavi, the Vaccine Alliance and implemented by UN Development Programme through a smart phone- based app, the platform digitizes information on vaccine stocks

and temp. across the country. In this regard, there is a need to improve electrification especially in the last mile, for which the potential of solar- technology must be explored to integrate sustainable development. Eg. For instance, in Chattisgarh ,72% of the functioning health centres have been solarized to tackle the issue of regular power outages.

As we reflect on the learnings from the pandemic, it is imperative that we look towards a future where the critical arteries that comprise the supply chain of immunisation facilities be strengthened. By taking steps towards actionable policies that improve the cold chain, we have an opportunity to lead the way in building back better and stronger.

SCIENCE AND TECHNOLOGY

1 Biomaterial from Fungal Extract helps Heal Wounds

Why in News?

- Scientists have developed a new biomaterial that can be used to disinfect wounds and hasten the process of healing.

About the New Biomaterial:

- The biomaterial is derived from the polymer pullulan which is secreted by the fungus Aureobasidium pullulans.
- It is an exopolysaccharide, that is, this polymer is secreted by the fungus itself into the medium in which it is growing.
- Pullulan as a biomaterial is already successful and widely used commercially.
- It is exploited in the food, cosmetics, and pharmaceutical industry because of its non-toxic, non-mutagenic, and non-immunogenic properties.
- Further, its ease of manufacture has also added to its appeal.
- In the biomedicine sector, it has been used for drug and gene delivery, but its use as an anti-

crobial biomaterial has not been explored.

How does the Biomaterial work?

- Pullulan is basically a polymeric chain of glucose. The biocompatible carbohydrate backbone of the polymer is kept intact and some quaternary ammonium groups are introduced into the polymer to make it positively charged.
- The polymer is processed to get a powder that is water-soluble. This solution is applied to the wound surface and then covered with sterile gauze. This can also be used in gel form.
- The best approach will be to design hydrogel-based wound dressings using this biomaterial.
- This is because hydrogels have an inherent ability to accelerate wound healing by providing a closed and moist environment to the wounds for easy exchange of oxygen and act as an absorbent pad to remove the pus and debris.

Efficacy of the Biomaterial:

- The efficacy of the material was tested by applying it directly to a full-thickness wound on mice.
- The wounds got disinfected and also the healing was faster.
- The material could cause a 100% closure of wounds within 12 days, while in the absence of application of the material, closure was only 60%.
- According to the researchers, within seven days, a thick neo-epithelial layer was formed well-connected to wound edges along with hair follicles.
- A completely healed skin with more hair follicles under the epithelial layer and densely packed collagen was observed by day 12.

Conclusion:

- Antibacterial coatings for medical implants are under development using this material.

- The best approach is to design hydrogel-based wound dressings using this biomaterial.

- Testing in animal models to test the efficacy of these coatings is

- The best approach is to design hydrogel-based wound

2 Monkeypox

Why in News?

Health authorities in the United Kingdom have confirmed a case of monkeypox, a rare viral infection similar to smallpox, in an individual who recently travelled to that country from Nigeria.

What is Monkeypox virus?

The monkeypox virus is an orthopox-virus, which is a genus of viruses that also includes the variola virus, which causes smallpox, and vaccine virus, which was used in the smallpox vaccine.

While vaccination eradicated smallpox worldwide in 1980, monkeypox continues to occur in a swathe of countries in Central and West Africa, and has on occasion showed up elsewhere.

According to the World Health Organisation (WHO), two distinct clade are identified: the West African clade and the Congo Basin clade, also known as the Central African clade.

How is it transmitted?

Monkeypox is a zoonotic disease, as it is transmitted from infected animals to humans. According to the WHO, cases occur close to tropical rainforests inhabited by animals that carry the virus.

Monkeypox virus infection has been detected in squirrels, Gambian poached rats, dormice and some species of monkeys.

Human-to-human transmission is limited — the longest documented chain of transmission is six generations,

meaning the last person to be infected in this chain was six links away from the original sick person.

Transmission can be through contact with bodily fluids, lesions on the skin or on internal mucosal surfaces, such as in the mouth or throat, respiratory droplets and contaminated objects.

Symptoms and treatment

Monkeypox causes symptoms similar to smallpox, although they are less severe.

It begins with a fever, headache, muscle aches, back ache, and exhaustion. It also causes the lymph nodes to swell (lymphadenopathy), which smallpox does not.

The incubation period for monkeypox is usually 7-14 days but can range from 5-21 days. Usually within a day to 3 days of the onset of fever, the patient develops a rash that begins on the face and spreads to other parts of the body. The skin eruption stage can last between 2 and 4 weeks, during which the lesions harden and become painful, fill up first with a clear fluid and then pus, and then develop scabs or crusts.

According to the WHO, the proportion of patients who die has varied between 0 and 11% in documented cases, and has been higher among young children.

There is no safe, proven treatment for monkeypox yet. The WHO recommends supportive treatment depending on the symptoms. Awareness is important for prevention and control of the infection.

History of Disease

The CDC's monkeypox overview says the infection was first discovered in 1958 following two outbreaks of a pox-like disease in colonies of monkeys kept for research — which led to the name 'monkeypox'.

The first human case was recorded in 1970 in the Democratic Republic of the Congo (DRC) during a period of intensified effort to eliminate smallpox.

NOTES

ENVIRONMENT

1 Environment Ministry's draft for e-waste recycling

Why in News?

Recently the Environment Ministry has prepared a draft in which consumer goods companies and manufacturers of electronics goods have to ensure that at least 60% of their electronic waste is collected by 2023 and recycle it.

The notification specifies a wide range of electronic goods including laptops, landline and mobile phones, cameras, recorders, music systems, microwaves, refrigerators and medical equipment.

Feedback from the public-

India is unique among South Asian countries because it has a formal set of rules for electronic waste management. India first announced these rules in 2016 and revised them in 2018.

The latest rules, which have been put up for public feedback, are expected to come into effect by August. Along with specifying targets, the rules create a system for companies to earn Extended Producer Responsibility (EPR) certificates.

These certificates certify the amount of e-waste collected and recycled by a company in a particular year and that an organization can sell the surplus quantity to another company to help it meet its obligations. The earlier rules emphasized collection goals. Now the government is emphasizing on EPR, recycling and trading.

This follows the government's objective of promoting circular economy. Companies will have to register on an online portal and specify their annual production and e-waste collection targets. The main entity that will coordinate the trading of EPR certificates and monitor whether the companies are meeting their targets or not.

Delay Handling

Specifically, a Steering Committee headed by the Chairman of the CPCB will oversee the overall implementation of these Regulations. Companies that don't meet their annual goals will have to pay fines or "environmental compensation," but the draft doesn't specify the amount of these fines. In fact, companies that fall short may still meet one-year targets after three years. Those who meet their target late by one year will get their 85% refund and there is also a provision of 60 percent and 30 percent penalty after the second and third year respectively.

It was 10% recycling rate in 2017-18 which increased to over 20% in 2018-19. EPR requires producers to set up e-waste exchange facilities to facilitate collection and recycling and assign specific responsibility to bulk consumers of electronic products for safe disposal.

State governments have been entrusted with the responsibility of

earmarking industrial locations for e-waste disposal and recycling facilities, developing industrial skills and establishing measures to safeguard the health and safety of workers engaged in e-waste disposal and recycling facilities.

As per the data provided by the government, the e-waste produced in India is less than the estimates of international agencies. According to the Global E-Waste Monitor 2017, India generates about 2 million tonnes (MT) of e-waste annually and ranks fifth among e-waste producing countries after the US, China, Japan and Germany.

Most of India's e-waste is recycled by the informal sector under hazardous conditions while the new e-waste rules emphasize management of the formal sector.

NOTES

2 Fuel Blending

Ethyl alcohol produced from biomass. It has an higher octane number than gasoline and thus compliments and increases the octane of the gasoline, therefore this increases the combustibility of the fuel and therefore reduced the emissions.

What is biofuel policy

The biofuel policy was introduced in the year 2018 and aimed at reducing import dependency on imports by encouraging fuel blending with ethanol as well. Focus on Bio CNG, Biodiesel as well.

Keys features

1. Ethanol blending programme.
2. Second generation ethanol production.
3. Capacity raising for fuel additives production
4. Research & development in feedstock.

Ethanol Obtained. from

Ethanol is mainly obtained from wheat and other grain residues and as well as from sugar factories.

What does it provides

The blending provides the following benefits

1. Enhanced combustion Carbon monoxide this reducing pollution are quality management
2. Fuel import reduction (\$4

billion reduce)

3. Provides farmers with extra income if they grow produce that help in ethanol production.

4. Would support ailing sugar industries Vehicle modification required?

Vehicles will be required to be produced with rubberised parts, plastic components elastomers compatible with E20 and engines optimally designed for use of E20 fuel

Currently blending status :- Currently blending in India is at 9.90%.

What are Issues?

Sugar industries appear upbeat but reports are of fund crisis. Banks are claimed to be reluctant to finance Sugar mills given weak balance sheets of sugar industries. Current provisions envisages a clearance within 21 days of purchase.

What blending percent does International community suggests

The Brazil stated the range to be around 18% to 27 %

EU on the other hand suggests 10% of transportation fuels member countries should come from renewable sources such as biofuels.

Conclusion

The Biofuel pause a bright future and therefore working over it and expanding our technology in this

regard could help us tap an untapped potential and thereby could help India grow as an exporter of biofuels.

Fodder for thought

Biofuel - Any fuel that is derived from biomass is known as biofuel.

NOTES

NEWS OF NATIONAL AND INTER-NATIONAL IMPORTANCE

1 QS World University Rankings released

Higher education think-tank QS Quacquarelli Symonds has released the 'QS World University Rankings by Subject 2022' for a total of 51 subjects grouped into five broad subject areas. Oxford University has topped in Arts and Humanities stream. Jawaharlal Nehru University has been ranked 188th in the field of arts and humanities. Massachusetts Institute of Technology has got the first position in the engineering and technology stream. Indian Institute of Technology Bombay and Indian Institute of Technology Delhi have been ranked 65th and 72nd respectively in this field. In Life Sciences and Medicine, All India Institute of Medical Sciences has been ranked 204th while Delhi University is ranked 330th. Harvard University has secured first position in Life Sciences and Medicine and Social Sciences and Management streams. Massachusetts Institute of Technology ranked first in 12 subjects.



2. O. Henry Award to Amar Mitra

Amar Mitra has received the prestigious O Henry Award for his short story, "The Old Man of Kusumpur". The book was originally written in Bengali with the title "Gamburo". His book, translated into English by senior journalist Anish Gupta, was published in the web magazine The Command last year. Amar Mitra has been given this award along with 20 winners. Gamburo was written in Bengali by Amar Mitra in 1977 and published in Amrita Patrika. Senior journalist Anish Gupta translated the story into English and published it in the web magazine 'The Common' last year. Prior to this, Amar Mitra has also received Bankim Award and Sahitya Akademi Award.

O. Henry Award at a Glance

This award is given for short stories. It is awarded only to authors whose short stories have been published in Canada and the US. Since 1919 this award being given in memory of O. Henry.

3. Ministry constitutes Consultative Committee for Semiconductor Mission

The Ministry of Electronics and Information Technology has constituted a 17-member committee for the Semiconductor Mission. The 17-member committee will be headed by Minister of Electronics and Information Technology Ashwini Vaishnav. On the other hand, Rajiv Chandrashekhkar will be the vice-chairman of this committee. NITI Aayog member VK Saraswat, Principal Scientific Adviser to the Government of India and Secretaries of various departments will be the members of this committee. The committee will give inputs to the government for creating a resilient supply chain, promoting investment and innovation as well as intellectual property creation. The committee will give suggestions for developing an ecosystem for startups and micro, small and medium industries. Last year, the Union Cabinet approved a Rs 76,000-crore scheme to boost semiconductor and display manufacturing



4. Global Wind Report 2022 released

The Global Wind Energy Council has released the Global Wind Report-2022. The report claims that the total wind power capacity has increased to 837 GW at present. The report also pointed out that the wind power installed in 2021 was less than the wind power installed in 2020. Wind capacity is 93.6 GW installed in 2021, down from 95.3 GW installed in 2020. The report also pointed out that wind installation capacity in China and the United States has decreased. The report clearly states that wind installation capacity should be quadrupled in a decade to achieve the 2050 goals. In the context of India, the report said that in 2021, India added 1.45 GW of wind capacity, which is 30% more than the previous year. India's wind capacity installation rate slowed down between April and mid-June 2021. According to this report, India can further increase wind capacity by retrofitting old KW-rated wind turbines through an appropriate repowering policy.



5. SFDR Booster successfully test fired by DRDO

The Solid Fuel Ducted Ramjet (SFDR) booster has been successfully flight tested at the Integrated Test Range, Chandipur, off the coast of Odisha. SFDR-based propulsion enables missiles to intercept air threats over very long distances at supersonic speeds (more than 1 Mach). The technology has been developed by the Defense Research and Development Laboratory, Hyderabad in association with other DRDO laboratories (such as Research Center Imarat, Hyderabad and High Energy Materials Research Laboratory, Pune.).

6. Distribution of fortified rice approved

The cabinet has approved the distribution of fortified rice through the Targeted Public Distribution System. The fortified rice will also be distributed through Integrated Child Development Services, Pradhan Mantri Poshan Shakti Nirman-PM Poshan and other welfare schemes. This initiative will be implemented in three phases. A pilot scheme on "Fortification of Rice and its Distribution under Public Distribution System" was implemented in 2019-20. Food Corporation of India and state agencies have already procured 88 LMT of fortified rice to ensure supply and distribution. The center will bear the total cost of fortification of rice. Fortified rice will provide benefits to poor people, women, children and lactating mothers to reduce malnutrition in the country. Fortification foods include iron, iodine, zinc, and key vitamins and minerals such as vitamins A and D.



7. 'Gitanjali Shree' received the International Booker Prize

Gitanjali Shree has been awarded the International Booker 2022 Prize for her book 'Ret Ka Maqbara'. This is the first time that an Indian language writer has received this award. This book has been translated into English by Daisy Rockwell as 'Tomb of Sand'. The story of the novel revolves around an 80-year-old woman who goes into depression after the death of her husband. Originally from Mainpuri in Uttar Pradesh, Gitanjali has composed three novels so far. In addition, he has translated many works into English, French, German, Serbian and Korean. This will be his first book to be published in the UK. David Diop has been awarded the International Booker Prize 2021 for his book "At Night All Blood is Black".

International Booker Prize at a Glance :-

Earlier this award was known as Man Booker International Prize. This award is given for a book translated into English. The special thing is that the prize money is divided equally between the writer and the translator.



8. DRDO and Indian Army successfully test fired two versions of Pinaka

DRDO successfully test-fired Pinaka Mk-I (Advanced) Rocket System and Pinaka Area Denial Munition Rocket System. The Pinaka rocket system has been developed by the Ordnance Research and Development Establishment of DRDO's Pune laboratory. The accuracy and stability required by the rockets have been achieved during the test. EPRS is an improved version of Pinaka variant which will meet the emerging requirements. The improved version of Pinaka Rocket System technology has been transferred to defense industries like Munition India Limited (MIL) and Economic Explosives Limited Nagpur. The Pinaka rocket system can fire 12 rockets in 44 seconds.



9. Sangeet Natak Akademi Fellowship and Sangeet Natak Awards were presented

Vice President M. Venkaiah Naidu presented the Sangeet Natak Akademi Fellowship and Sangeet Natak Puraskar for the year 2018 in New Delhi. He also honored eminent artists with the National Awards of Lalit Kala Akademi in the same ceremony. Four artists have been awarded the Sangeet Natak Akademi Fellowship and 40 have been awarded the Sangeet Natak Akademi Award. 23 celebrities including three artists received the Lalit Kala Akademi Awards. Tabla players Zakir Hussain, Jatin Goswami, Dr. Sonal Mansingh and Thiruvidaimarudur Kuppiya Kalyanasundaram were awarded the Sangeet Natak Akademi Fellowship. Himmat Shah, Jyoti Bhatt and Shyam Sharma have been awarded the prestigious Fellowship of Lalit Kala Akademi.

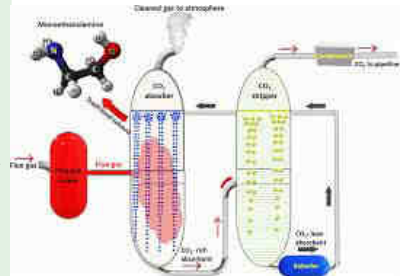
Sangeet Natak Akademi Awards at a Glance:

The Sangeet Natak Akademi Award is the highest national award given to a practicing artist. The first Sangeet Natak Akademi Award was presented in 1952. The Sangeet Natak Akademi also offers fellowships to eminent artists and scholars of music, dance and drama.



10. Hybrid material and process designed for carbon capture

A group of scientists from the Indian Institute of Chemical Technology (IICT), Hyderabad has designed a hybrid material that can absorb the greenhouse gas methane. Scientists have developed a mechanism to test such a material that will help in research related to carbon capture. In addition, scientists have devised a process to capture carbon dioxide and convert it into high-purity hydrogen. The research has been published in the Elsevier journal Chemical Engineering and Processing. Under Mission Innovation Project, Fluidized Bed Reactor System (FBR) facility has recently been commissioned at CSIR-IICT, Hyderabad. This will help in testing the performance of dual functional materials for SESMR in Fluidized Bed Reactor System (FBR).



11. India won gold medals in Thailand Open International Boxing Tournament

Three Indian boxers have won gold medals at the 2022 Thailand Open International tournament in Phuket, Thailand. The names of these three Indians are Govind Sahni, Anant Chopra and Sumit. The other four Indian boxers Monika, Amit Panghal, Varinder Singh and Ashish Kumar have won silver medals in the same competition. While Manisha, Pooja and Bhagyabati Kachari won bronze medals. In this boxing competition, a 15-member Indian contingent won a total of 10 medals. Given below is the list of players who have won medals.

2022 Thailand Open International Boxing Tournament		
Gold Medal	Silver Medal	Bronze Medal
Govind Sahni	Monika	Manisha
Anant Chopre	Amit Panghal	Pooja
Sumit	Varinder Singh	Bhagyawati Kachari
	Ashish Kumar	

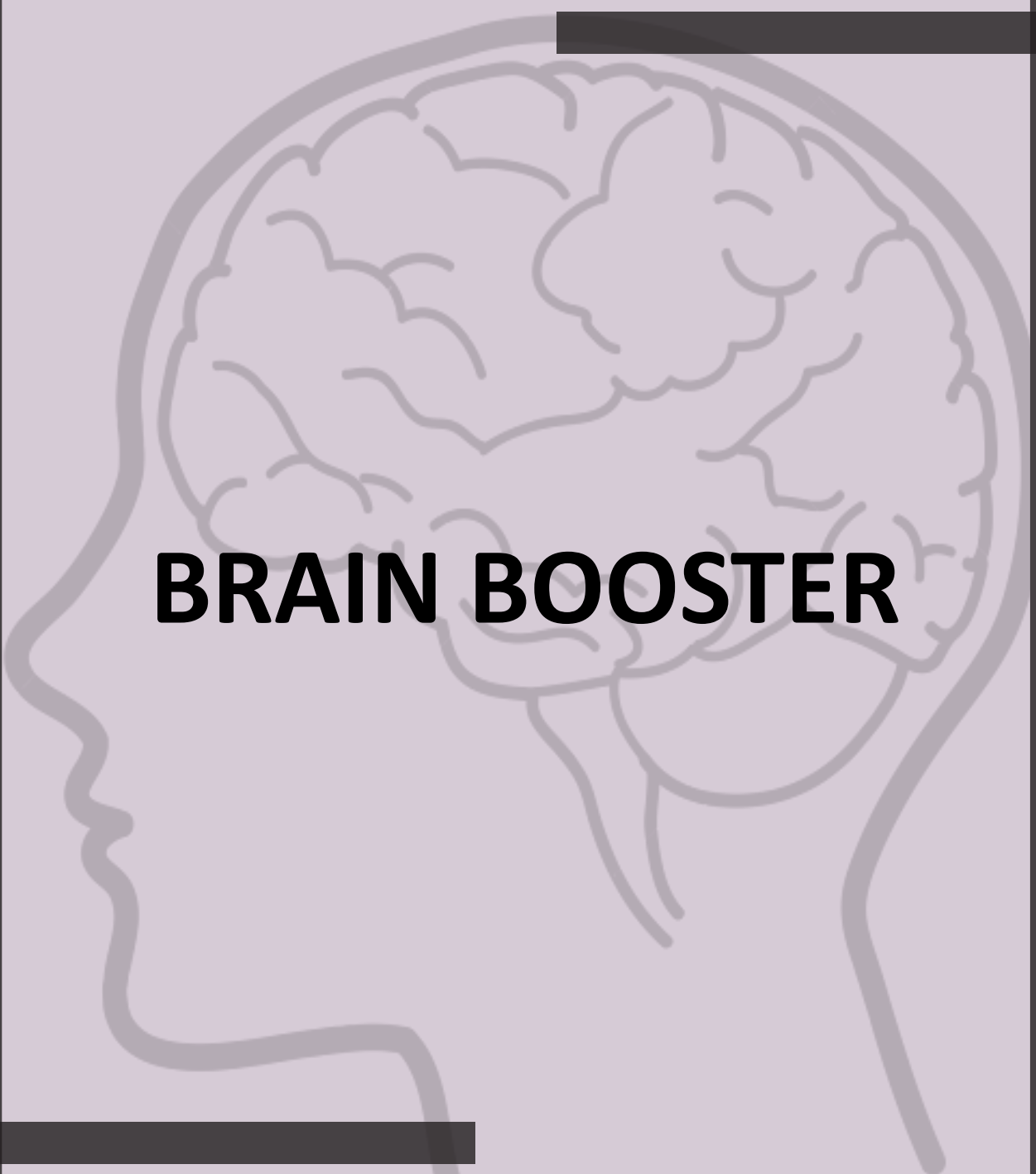
12 Instructions to implement one nation one ration card system

The Supreme Court directed all states and union territories to implement the One Nation, One Ration Card (ONORC) system, which allows intra- and inter-state portability, by July 31, 2021. ONORC scheme aims to enable migrant workers and their family members to buy subsidized ration from any concessional price shop anywhere in the country under the National Food Security Act, 2013.

ONORC is based on a technology that includes the details of the ration card, Aadhar number and electronic point of sale (ePoS) of the beneficiaries. The system identifies the beneficiary through biometric authentication on the ePoS devices at the fair price shops. The system is supported by two portals- Integrated Management of Public Distribution System, (IM-PDS) and Annavitran (annavitran.nic.in) which hosts all the relevant data.

Current Affairs at a Glance

- Katynji Brown Jackson became the first black woman judge of the US Supreme Court.
- Vinod Rai's book titled 'Not Just a Nightwatchman: My Innings with BCCI' was launched. Apart from this "Not Just an Accountant: The Diary of the Nation's Conscious Keeper" and "Rethinking Good Governance: Holding to Account India's Public Institutions" are some of his other famous books. Vinod Rai is a former Comptroller and Auditor General (CAG) of India.
- India won its first women's doubles and mixed doubles title at the World Doubles Squash Championship. Dipika Pallikal along with Saurav Ghoshal and Joshna Chinappa has won the mixed doubles and women's doubles titles at the World Doubles Squash Championships in Glasgow.
- Space-X launched the first private mission to the space station. A SpaceX Falcon 9 rocket carrying a four-person Crew Dragon capsule took off from Kennedy Space Center in Florida. Michael Lopez-Alegria, a retired NASA astronaut, is leading the crew.
- Ecuador became the first country to give legal rights to wild animals. The Supreme Court of Ecuador, hearing the case of the woolly monkey Estrelita, decided to recognize the rights. Bolivia, New Zealand, Panama, Chile, Mexico, Colombia and Bangladesh have also recognized the rights of nature.
- NITI Aayog released the State Energy and Climate Index (SECI)-Round I. Under this index, the states and union territories have been classified into three groups: Front Runners, Achievers and Aspirants. In the category of large states, Gujarat, Kerala and Punjab are the top three performers. Goa emerged as the top performing state in the small states category, followed by Tripura and Manipur. Among the Union Territories, Chandigarh, Delhi and Daman and Diu/ Dadra and Nagar Haveli are the top performers.
- India successfully test-fired the anti-tank guided missile HELINA. Anti-Tank Guided Missile 'Helina' was successfully flight tested in high altitude areas. The flight test was jointly conducted by DRDO, Indian Army and Indian Air Force (IAF). The Anti-Tank Guided Missile 'Helina' is one of the most advanced anti-tank weapons in the world.
- Jamshedpur hosted the first Khelo India National Ranking Women's Archery tournament. The first leg of the tournament started on 12 and 13 April in Jamshedpur, Jharkhand.
- India will host the National Delphic Games for Arts and Culture in 2023.
- Researchers from IIT Madras have launched India's first polycentric prosthetic knee 'Kadam'. The step has advantages over a hinge-joint because it has multiple axes of rotation, and it allows maximum knee flexion up to 160 degrees making it easier for the above knee amputee to sit in tight spaces. It is made of aluminum alloy and stainless steel. It is cheap and of high quality and performance.
- Indigenously built Dornier 228 aircraft made its first commercial flight from Assam to Arunachal Pradesh.



BRAIN BOOSTER

1. Kausar Nag

- Kausar Nag or Kausarnag, is a high-altitude oligotrophic lake located in the Pir Panjal Range in the Kulgam District of Jammu and Kashmir.
- Kausar Nag has an elevation of 4,000 metres (13,000 ft) above sea level.

2. Wular Lake

- Wular Lake is one of the largest fresh water lakes in Asia.
- It is situated in Bandipora/Bara-mulla district.
- The lake basin was formed as a result of tectonic activity and is fed by the Jhelum River.
- The lake is one of the Indian wetlands designated as a Ramsar site.
- Terrestrial birds observed around the lake include the black-eared kite, Eurasian sparrowhawk, short-toed eagle, Himalayan golden eagle, Himalayan monal, chukar partridge, koklass pheasant, rock dove, common cuckoo, alpine swift, Indian roller, Himalayan woodpecker, hoopoe, barn swallow, golden oriole and others.

3. Tarsar Lake

- The Tarsar Lake or Tar Sar, an oligotrophic alpine lake is situated in the Kashmir Valley, Anantnag district, Jammu and Kashmir, India.
- The Tarsar Lake is dominated by the peaks of the Kolahoi mountain some 20 km to the east.
- The lake is separated by a mountain from another lake of the same nature known as Marsar Lake, which is in the vicinity of Dachigam National Park.
- Together these two lakes are referred to as the twin sisters.
- The Tarsar Lake is drained by an outlet stream which falls into

4. Dal Lake

- Dal lake is in Srinagar (Dal Lake is a misnomer as Dal in Kashmiri means lake).
- The urban lake, is integral to tourism and recreation in Kashmir and is named the "Jewel in the crown of Kashmir" or "Srinagar's Jewel".
- The lake is also an important source for commercial operations in fishing and water plant harvesting.
- Scenic views of the lake can be witnessed from the shore

- line Mughal gardens, such as Shalimar Bagh and Nishat Bagh built during the reign of Mughal Emperor Jahangir and from the shikaras.
- During the winter season, the temperature reaches -11°C , freezing the lake.
- The lake covers an area of 18 square kilometres and is part of a natural wetland which covers 21.1 square kilometres.
- The floating gardens, known as "Raad" in Kashmiri, blossom with lotus flowers during July and August.
- The wetland is divided by causeways into four basins; Gagribal, Lokut Dal, Bod Dal and Nigeen.
- Lokut-dal and Bod-dal each have an island in the centre, known as Rup Lank (or Char Chinari) and Sona Lank respectively.

5. Gangbal

- The Gangbal Lake, is a lake situated at the foothills of Mount Harmukh in Ganderbal district, north of Srinagar city in the UT of Jammu and Kashmir, India.
- It is an alpine high altitude oligotrophic lake, home to many species of fish, including the brown trout.
- It is fed by precipitation, glaciers and springs.
- The lake water outflows to a nearby Nundkol Lake and then via Wangath nallah to Sindhu River.

Lakes of Jammu & Kashmir

the Lidder River at Lidderwat.

- During summer there are breeding colonies of migratory birds, including bar-headed geese, lammergeyers, high-flying choughs, Himalayan golden eagles, cinnamon sparrows and black bulbuls.
- The basin of Tarsar and the adjoining Dachigam National Park constitute one of the most important habitats of the Kashmir stag (hangul), ibex, musk deer, snow leopard, Himalayan brown bear and in the higher reaches, the golden marmot

Azadi Ka Amrit Mahotsav is an initiative of the Government of India to celebrate and commemorate 75 years of independence and the glorious history of its people, culture and achievements.

The official journey of Azadi Ka Amrit Mahotsav commenced on 12th March 2021 which started a 75-week countdown to our 75th anniversary of independence and will end post a year on 15th August 2023.

Themes

Five themes of Azadi Ka Amrit Mahotsav are :

1 Freedom Struggle

- Commemorating milestones in history, unsung heroes etc.
- This theme anchors our commemoration initiatives under Azadi Ka Amrit Mahotsav.
- It helps bring alive stories of unsung heroes whose sacrifices have made freedom a reality for us and also revisits the milestones, freedom movements etc. in the historical journey to 15 August, 1947.
- Programmes under this theme include Birsa Munda Jayanti (Janjatiya Gaurav Diwas), Declaration of Provisional Government of Free India by Netaji, Shaheed Diwas etc.

2. Ideas@75

- Celebrating ideas and ideals that have shaped India.
- This theme focuses on programmes and events inspired by ideas and ideals that have shaped us and will guide us as we navigate through this period of Amrit Kaal (25 years between India@75 and India@100).
- Events and programmes under this theme include popular, participatory initiatives that help bring alive India's unique contri-

3. Resolve@75

- Reinforcing commitments to specific goals and targets.
- This theme focuses on our collective resolve and determination to shape the destiny of our motherland.
- The journey to 2047 requires each one of us to rise up and play our part as individuals, groups, civil society, institutions of governance etc.
- Only through our collective resolve, well laid out action plans and determined efforts will

ideas translate into actions.

- Events and programmes under this theme include initiatives such as Constitution Day, Good Governance Week etc. that help bring alive our commitment towards the 'PLANET AND PEOPLE' while being driven by a deep sense of PURPOSE.

4. Actions@75

- Highlighting steps being taken to implement policies and actualise commitments.
- This theme focuses on all the efforts that are being undertaken to help India take its rightful position in the new world order emerging in a post covid world by highlighting the steps being taken to implement policies and actualise commitments.
- It is driven by Prime Minister Modi's clarion call of SABKA SAATH, SABKA VIKAS, SABKA VISHWAS, SABKA PRAYAS.
- It encompasses Government policies, schemes, action plans along with commitments from businesses, NGOs, civil society that helps actualise our ideas and help us collectively create a better tomorrow.
- Programmes under this theme include initiatives such as Gati Shakti-National Master Plan for Multi-modal Connectivity.

5. Achievements@75

- Showcasing evolution and progress across different sectors.
- This theme focuses on marking the passage of time and all our milestones along the way.
- It is intended to grow into a public account of our collective achievements as a 75-year-old independent country with a legacy of 5000+ years of ancient history.
- Events and programmes under this theme include initiatives such as Swarnim Vijay Varsh dedicated to the victory of 1971, launch of Shreshtha Yojana during Mahaparinirvan Diwas etc.

Azadi Ka Amrit Mahotsav

tribution to the world.

- These include events and initiatives such as Kashi Utsav dedicated to Hindi literary luminaries from the land of Kashi, Post Cards to Prime Minister wherein more than 75 lakh children are writing their vision of India in 2047.



DigiLocker is a flagship initiative of Ministry of Electronics & IT (MeitY) under Digital India programme. DigiLocker aims at 'Digital Empowerment' of citizen by providing access to authentic digital documents to citizen's digital document wallet. The issued documents in DigiLocker system are deemed to be at par with original physical documents as per Rule 9A of the Information Technology (Preservation and Retention of Information by Intermediaries providing Digital Locker facilities) Rules, 2016 notified on February 8, 2017 vide G.S.R. 711(E).

1 Benefits to Citizens

- Important Documents Anytime, Anywhere.
- Authentic Documents, Legally at Par with Originals.
- Digital Document Exchange with the consent of the citizen.
- Faster service Delivery- Government Benefits, Employment, Financial Inclusion, Education, Health

2 Benefits to Agencies

- Reduced Administrative Overhead: Aimed at the concept of paperless governance. It reduces the administrative overhead by minimizing the use of paper and curtailing the verification process.
- Digital Transformation: Provides trusted issued documents. Issued Documents available via DigiLocker are fetched in real-time directly from the issuing agency.
- Secure Document Gateway: Acts as a secure document exchange platform like payment gateway between trusted issuer and trusted Requester/Verifier with the consent of the citizen.
- Real Time Verification:

3 Sections in DigiLocker account

- Home – This is the home screen of your DigiLocker account, from where you can navigate to other sections of DigiLocker. This also shows summary of issued documents and a link to get documents from partners integrated with DigiLocker.
- Issued Documents – This section shows list of URIs (links) of digital documents or certificates issued by the Govt. departments or agencies integrated with DigiLocker.

- DigiLocker Drive – This section shows all the documents which are uploaded by you. You can update the document type and share these uploaded documents.
- Activity – This section keeps log of all the activities performed by you in DigiLocker account. The log includes the details about activities such as file upload, download, share, etc.
- Browse Documents – This section provides the lists of departments and agencies that are registered with DigiLocker as Issuers. If these departments have issued any document/certificate to you, it will appear in the form of a URI (link) in your Issued Documents section.



DigiLocker

Provides a verification module enabling government agencies to verify data directly from issuers after obtaining user consent.

- Timed Log Out: To protect citizen's account from unauthorized access, our system is designed to terminate session automatically if extended inactivity is detected.
- Security Audit: DigiLocker audited by recognized audit agencies and the application security audit certificate are obtained at regular intervals.
- User Consent Based System: The data from DigiLocker is shared only with the citizen's explicit consent. Organizations that need access to citizens' certificates need to register on DigiLocker and seek explicit consent from the citizen.

4 Security features implemented in DigiLocker

DigiLocker is completely safe and secure to use. For data protection following practices are adopted :

- Standard Practices: DigiLocker follows standard software development practices of uniform coding standards, guidelines and reviews. Every release is reviewed and tested internally for security and penetration vulnerabilities before getting deployed on our servers.
- 256 Bit SSL Encryption: DigiLocker uses 256 bit secure socket layer (SSL) Encryption for information transmitted during any activity.
- Mobile Authentication based Sign Up: DigiLocker uses mobile authentication based signup via OTP (one time password) for authenticating users and allowing access to the platform.
- ISO 27001 certified Data Centre: The application is hosted on ISO 27001 security certified data centre.
- Data Redundancy: Data is backed up in secure environment with proper redundancy.

1. Why in News

In an order recognising sex work as a “profession” whose practitioners are entitled to dignity and equal protection under law, the Supreme Court has directed that police should neither interfere nor take criminal action against adult and consenting sex workers.

2. About sex worker

Sex workers are adults who receive money or goods in exchange for consensual sexual services or erotic performances, either regularly or occasionally

3. Difference between Sex work & Human Trafficking

- Human trafficking is an egregious human rights violation involving the threat or use of force, abduction, deception, or other forms of coercion for the purpose of exploitation. This may include forced labor, sexual exploitation, slavery, and more.
- Sex work, on the other hand, is a consensual transaction between adults, where the act of selling or buying sexual services is not a violation of human rights.

4. The Judgement

- “It need not be gainsaid that notwithstanding the profession, every individual in this country has a right to a dignified life under Article 21 of the Constitution,” the court observed.
- Sex workers are entitled to equal protection of the law. Criminal law must apply equally in all cases, on the basis of ‘age’ and ‘consent’. When it is clear that the sex worker is an adult and is participating with consent, the police must refrain from interfering or taking any criminal action.
- The Bench ordered that sex

5. About Children & minor

- “In case the sex worker claims that child/minor is her son/daughter, tests can be done to determine if the claim is correct and if so, the minor should not be forcibly separated,” .
- A child of a sex worker should not be separated from the mother merely on the ground that she is in the sex trade.
- “Basic protection of human decency and dignity extends to sex workers and their children,” the

court noted.

- If a minor is found living in a brothel or with sex workers, it should not be presumed that the child was trafficked.

6. Constitution at play

- The Bench invoked special powers under Article 142 of the Constitution.
- The bench also invoked Article 21 in its judgement.

7. Medico-legal care

- The court ordered the police to not discriminate against sex workers who lodge a criminal complaint, especially if the offence committed against them is of a sexual nature.
- Sex workers who are victims of sexual assault should be provided every facility including immediate medico-legal care.
- The court ordered the police to be sensitive towards the sex workers.

8. Word of caution for Media

- Media should take “utmost care not to reveal the identities of sex workers, during arrest, raid and rescue operations, whether as victims or accused and not to publish or telecast any photos that would result in disclosure of such identities.
- Court reminded voyeurism being a criminal offence.

Sex work as a Profession

workers should not be “arrested or penalised or harassed or victimised” whenever there is a raid on any brothel, “since voluntary sex work is not illegal and only running the brothel is unlawful”.

- Measures taken by sex workers, like the use of condom, should not be construed by the police as evidence of their “offence”.

The NITI Aayog released a report on 'Roadmap for Ethanol Blending in India 2020-25' in June 2021. The report suggests:

(i) An annual roadmap for production and supply of ethanol till 2025-26.

(ii) Systems for country wide marketing of ethanol.

National Policy on Biofuels, 2018 was notified in June 2018, which aimed at achieving 20% blending of ethanol in petrol by 2030. In December 2020, the deadline to achieve the ethanol blending target was revised to 2025.

Key observations and recommendations:

1 Fuel ethanol demand projection:

- The report estimates that India's requirement of ethanol for petrol blending will increase from 173 crore litres in 2019-20 to 1,016 crore litres in 2025-26.

- To meet this demand, the ethanol production capacity will have to be increased from 684 crore litres in 2019-20 to 1,500 crore litres in 2025-26.

- This includes production capacity of:

- o 740 crore litres of grain-based ethanol.

- o 760 crore sugar-based ethanol.

- To enable roll out across India, ethanol may be supplied from surplus to deficit states based on the requirements.

2 Ethanol blending roadmap:

- The report recommends that the Ministry of Petroleum and Natural Gas should notify a plan for availability of E10 fuel (blend of 10% ethanol and 90% petrol) by April 2022.

- The Ministry should notify a plan for continued availability of the fuel for older vehicles.

3 Expediting regulatory clearances:

- Ethanol production plants need environmental clearances for new projects and expansion of existing projects.

- The report recommends certain measures to expedite regulatory clearances for ethanol production such as expediting the issuing of consent to establish distilleries by state governments.

- A single window system may be formulated by the DPIIT to accord speedy clearances.

- This would facilitate speedy clearances for new projects and expansion of current projects for ethanol production.

4 Ethanol pricing and environmental impact:

- In 2018-19, the government introduced a differential pricing policy wherein higher rates were offered to sugar mills for ethanol production from B-heavy molasses and sugarcane juice.

- This incentivizes sugar-cane-based ethanol production.

- One litre of ethanol from sugar requires about 2,860 litres of water.

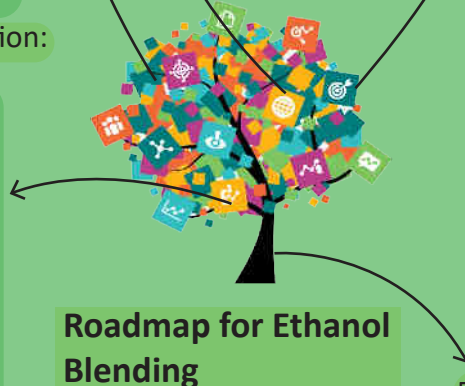
- For water conservation, the report recommended that suitable incentives should be used to
 - o Source ethanol from less water intensive crops.
 - o Promote production from maize and second-generation sources.

5 Ethanol compatible vehicles:

- In order to use higher ethanol blends, vehicles need to be designed holistically to prevent engine failure and low fuel economy.

- Flex Fuel vehicles would cost more than normal petrol vehicles.

- To ensure production of ethanol blended petrol compatible vehicles in the future, the Committee recommended :
 - o E20 material compliant and E10 engine tuned vehicles may be rolled out across the country from April 2023.
 - o Vehicles with E20 tuned engines can be rolled out from April 2025.



Around Midnight India time on May 5, NASA's space thermometer ECOSTRESS captured an image covering 12.350 sq km northwest of Delhi. It showed a stark difference in night-time temperatures in urban and rural pockets with a temperature difference of around 20°C.

1. About Urban Heat Island :

- An urban heat island (UHI) occurs when a city experiences much warmer temperatures than nearby rural areas.
- The difference in temperature is noticed usually during the night and when winds are weak. The UHI is noticed when both the summer and winter seasons are at their peak.
- Usually urban heat islands have a mean temperature 8 to 10 degrees more than the surrounding rural areas.

2. Reasons behind UHI

- Construction material: Asphalt and concrete, needed for the expansion of cities, absorb huge amounts of heat, increasing the mean surface temperatures of urban areas.
- Urban Architecture: Tall buildings often situated in narrow streets, hinder the circulation of air, reduce the wind speed, and thus reduce any natural cooling effects. This is called the Urban Canyon Effect.
- Dark surfaces: Many buildings found in urban areas have dark surfaces, thereby decreasing albedo and increased absorption of heat.
- Air conditioning: Buildings with dark surfaces heat up more rapidly and require more cooling from air conditioning, which requires more energy from power plants, which causes more pollu-

3. Impact of UHI

- Energy costs: Urban Heat Island effect increases energy costs, air pollution levels, and heat-related illness and mortality.
- Global Warming: Increased consumption of air-conditioning for cooling contribute to global warming, which further contributes to climate change.
- Poor air quality: UHIs often have lower air quality because there are more pollutants being pumped into the air. These pollutants are blocked from scattering and becoming

ing less toxic by the urban landscape: buildings, roads, sidewalks, and parking lots.

- Poor water quality: Water quality also suffers. When warm water from the UHI ends up flowing into local streams, it stresses the native species that have adapted to life in a cooler aquatic environment.
- Colonization by heat-loving species: Due to higher temperatures in urban areas, the UHI increases the colonization of species that like warm temperatures, such as lizards and geckos.
- Heatwaves: Cities tend to experience heat waves that affect human and animal health, leading to heat cramps, sleep deprivation, and increased mortality rates.



4. How to reduce the urban heat island effect:

- Plant trees and other vegetation—Space in urban areas might be limited, but small green infrastructure practices can easily be integrated.
- Transforming the community by planting native, drought-tolerant shade trees and smaller plants such as shrubs, grasses, and groundcover wherever possible.
- Build green roofs—Green roofs are an ideal heat island reduction strategy, providing both direct and ambient cooling effects.
- In addition, green roofs improve air quality by reducing the heat island effect and absorbing pollutants.

Urban Heat Island

tion. Air conditioners also causes further local heating.

- Need for public transportation system: Transportation systems and the unimpeded use of fossil fuels also add warmth to urban areas.
- Cutting of Trees and reducing green areas: This impedes evapotranspiration, shade and removal of carbon dioxide, all the processes that help to cool the surrounding air.

Prime Minister Shri Narendra Modi participated in the second in-person Quad Leaders' Summit in Tokyo, Japan on 24 May 2022, along with Prime Minister Fumio Kishida of Japan, President Joseph Biden of the United States of America and Prime Minister Anthony Albanese of Australia.

Principles of Quad:

- The motive behind the Quad is to keep the strategic sea routes in the Indo-Pacific free of any military or political influence.
 - The core objective of the Quad is to secure a rules-based global order, freedom of navigation, and a liberal trading system.
 - The coalition also aims to offer alternative debt financing for nations in the Indo-Pacific region.
 - Views exchanged on contemporary global issues such as critical and emerging technologies, connectivity and infrastructure, cyber security, maritime security, humanitarian assistance, disaster relief, climate change, pandemic, and education.
- The four leaders made the following announcements:-

1. Peace and Stability

- The ongoing war & humanitarian crisis in Ukraine was discussed.
- The Quad is committed to a free and open Indo-Pacific.
- Support for ASEAN unity and centrality was also shown.
- Support for international law, particularly the UN Convention on the Law of the Sea (UNCLOS), and the maintenance of freedom of navigation and overflight.
- Terrorism and violent extremism in all its forms and manifestations was condemned.

2. COVID-19 and Global Health Security

- The Quad countries committed to adapt collective approaches to get ahead of the virus with a focus on preparing for new variants, and getting vaccines, tests, treatments, and other medical products to those at highest risk.
- For the development of new vaccines \$524 million was committed collectively.

3. Infrastructure

- Leaders committed to deepen cooperation on infrastructure, which is critical to driving productivity and prosperity in the Indo-Pacific region.
- The leaders committed to addressing debt issues, which have been exacerbated by the pandemic in many countries.
- "Quad Debt Management Resource Portal," was also announced which will provide capacity building assistance.
- Focus was put on regional and digital connectivity, clean energy, and climate resilience including disaster resilience in energy related facilities.

4. Climate

- "Quad Climate Change Adaptation and Mitigation Package (Q-CHAMP)" with "mitigation" and "adaptation" as its two themes was also launched.
- Q-CHAMP includes
 - a) Green shipping and ports aimed at a shared green corridor framework.
 - b) Clean energy cooperation in clean hydrogen and methane emissions from the natural gas sector.
 - c) Strengthening clean energy supply chains.
 - d) Climate information services aimed at Pacific island countries.

5. Cybersecurity

- Capacity building programs in the Indo-Pacific region under the Quad Cybersecurity Partnership.
- First-ever Quad Cybersecurity Day to help individual internet to better protect themselves from cyber threats.

6. Critical & Emerging Technologies

- Close working on 5G and beyond 5G, quantum technologies.
- Establishing global semiconductor supply chain.

7. Quad Fellowship

- The Quad Fellowship for 100 students to study in the United States each year to pursue graduate degrees in STEM fields.

QUAD

8. Space

- Space-related applications and technologies for challenges such as climate change, disaster preparedness and response, and sustainable uses of oceans and marine resources.
- Improving public access to Earth observation satellite data and applications.
- Creating an Earth observation-based monitoring and sustainable development framework.

9. Maritime Domain Awareness and HADR

- Indo-Pacific Partnership for Maritime Domain Awareness (IPMDA)
- It'll work with regional partners to respond to humanitarian and natural disasters, and combat illegal fishing.
- Enhanced shared maritime domain awareness to promote stability and prosperity in our seas and oceans.
- IPMDA embodies what the Quad stands for: catalyzing our joint efforts towards concrete results that help to make the region more stable and prosperous.

MCQs Based on Environment and Ecology

1. Match the following pairs :
States Rainwater harvesting techniques

- | | |
|------------------|-------------|
| A. Central India | 1. Johads |
| B. Western Ghats | 2. Surangam |
| C. Eastern Ghats | 3. Korambu |
| D. Laddakh | 4. Zing |

Code :

- | | A | B | C | D |
|-----|---|---|---|---|
| (a) | 2 | 1 | 3 | 4 |
| (b) | 1 | 2 | 3 | 4 |
| (c) | 3 | 4 | 1 | 2 |
| (d) | 1 | 4 | 2 | 3 |

2. Presentation of trophic interactions exhibiting both structural as well as functional attributes of an ecosystem are known as-

- Food chain
- Food web
- Food pyramid
- Trophic level

3. Consider the following elements about macro-nutrients-

- Calcium
- Sodium
- Magnesium
- Iron
- Phosphorus
- Sulphur

Select the correct answer using the code given below :

- 1, 2, 3 and 4 only
- 2, 5, and 6 only
- 2, 3 and 4 only
- 1, 2, 3, 5 and 6

4. Match the following pairs :

- | | Grasslands | Location |
|-------------|------------------|----------|
| A. Veldts | 1. South Africa | |
| B. Puszta | 2. Hungary | |
| C. Pampas | 3. Soviet Union | |
| D. Steppes | 4. Argentina | |
| E. Prairies | 5. North America | |

Code :

- | | A | B | C | D | E |
|-----|---|---|---|---|---|
| (a) | 2 | 3 | 5 | 1 | 4 |
| (b) | 1 | 2 | 5 | 3 | 4 |
| (c) | 2 | 5 | 1 | 3 | 4 |
| (d) | 1 | 2 | 4 | 3 | 5 |

5. The species, which are already lost in a particular area called-

- Endangered Species
- Extinct Species
- Vulnerable Species
- Rare Species

6. Consider the following laws which helps to prevent noise pollution :

- The factories Act, 1948
- The industries Act, 1951
- The motor vehicle Act, 1939
- The Environment protection Act, 1986

Select the correct answer using code given below :

- 1, 2 and 3
- 3 and 4
- 2 and 3
- 1, 2, 3 and 4

7. Which one of the following gases is not a toxic gas:

- Nitrous oxide
- Sulphur dioxide
- Hydrogen dioxide
- Carbon mono oxide

8. Consider the following statements about 'Tidal energy':

- It is an inexhaustible and cheap source of power.
- India has started a wave energy project at the vizhinjam fishing harbour (Thiruvananthapuram).
- This project is developed with the help of Netherlands.

Which of the statements given above are correct ?

- 1 and 2 only
- 2 and 3 only
- 1, 2 and 3
- 1 and 3 only

9. Consider the following statements:

- Madhya Pradesh Government has launched International Festival on Birds, recently.
- The first of its kind festival was inaugurated at the National Chambal Sanctuary (NCS).

Which of the statements given above is/are correct?

- 1 only
- 2 only
- 1 and 2 both
- Neither 1 nor 2

10. Which of the following state was first state in India to achieve the states of plastic bag free status?

- (a) Arunachal Pradesh
- (b) Madhya Pradesh
- (c) Sikkim
- (d) Rajasthan

11. Consider the following statements in regard with Zika fever which is caused by Zika virus:

- 1. Zika virus is spread by daytime-active Aedes mosquitoes.
- 2. Zika fever, often causes no or only mild symptoms, similar to a mild form of dengue fever.
- 3. It's name comes from the Zika river of Uganda, where the virus was first identified.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 2 only
- (d) 1, 2 and 3

12. Consider the following statements-

- 1. Forest survey of Indian succeeded the 'Pre Investment survey of forest resources (PISFR)'.
- 2. It was sponsored by FAO & UNDP.
- 3. A report of National Commission on Agriculture recommended the creation of a National Forest Survey Organisation.

Which of the statements given above is/are correct ?

- (a) 1 and 2 Only
- (b) 2 and 3 Only
- (c) 1 and 3 Only
- (d) All of the above

13. Which of the following conditions are suitable for the growth of mangroves.

- 1. High salinity
- 2. Tidal Region
- 3. Strong wind velocity
- 4. High Temperature
- 5. Muddy anaerobic soil

Select the correct answer using the code given below :

- (a) 1, 3 and 5 Only
- (b) 2, 3 and 4 Only
- (c) 2, 4 and 5 Only
- (d) All of the above

14. Which of the following conventions is/are related to Hazardous Substances Management?

- 1. Basel Convention
- 2. Rottordam Convention

3. Stockholm Convention

4. Minamata Convention

Select the correct answer using the code given below :

- (a) 1 and 2 Only
- (b) 3 and 4 Only
- (c) 1, 3 and 4 Only
- (d) All of the above

15. Ramsar convention includes the management of which of the following-

- 1. Rivers
- 2. Lakes
- 3. Lagoons
- 4. Mangroves
- 5. Peatland
- 6. Coral Reefs

Select the correct answer using the code given below :

- (a) 1, 2 and 3 Only
- (b) 4, 5 and 6 Only
- (c) 1 and 2 Only
- (d) All of the above

16. Ecosystem Research Program is applicable to which among the following-

- 1. Eastern Ghat
- 2. Western Ghat
- 3. Mangrooves
- 4. Coral Reef
- 5. Biosphere Reserve

Select the correct answer using the code given below :

- (a) 1 and 2 Only
- (b) 3 and 4 Only
- (c) 5 Only
- (d) All of the above

17. The Inception of the Ministry of Environment & Forest as a scientific ministry took place in-

- (a) 1985
- (b) 1986
- (c) 1987
- (d) 1988

18. Who among the following is/are the sponsor/s of National Green Corp ?

- 1. Central Government
- 2. State Government
- 3. Private Sector

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) All of them

19. Natinoal Environment Awareness Campaign was launched in-

- (a) 1986
- (b) 1996
- (c) 2006(d) 2015

20. National Mueseum of Natural History is located-

- (a) Jabalpur
- (b) Kuchch
- (c) Delhi
- (d) Kolkata

21. Biodiversity is richer in :

- (a) Tropical Regions
- (b) Polar Regions
- (c) Temperate Regions
- (d) Oceans

22. Different types of ecosystems exist with varying ranges of environmental conditions where various plants and animal species have got adapted through evolution. This phenomenon is known as

- (a) Ecological succession
- (b) Ecological adaptation
- (c) Ecological evolution
- (d) Biogeochemical adaptation

23. 'Ecological balance'

- (a) is a state of dynamic equilibrium within a community of organisms in a habitat
- (b) may be disturbed due to the introduction of new species, natural hazards or human causes
- (c) occurs through competition and cooperation between different organisms where population remains stable
- (d) All of the above

24. Which one of the following is included in biosphere?

- (a) only plants
- (b) all living and non-living organisms
- (c) Only animals
- (d) All living organisms

25. Which of the following is/are Sub-tropical desert?

- 1. Great Sandy Desert
- 2. Patagonian Desert
- 3. Gobi Desert

4. Kalahari Desert

Select the correct answer using the code given below:

- (a) 1 and 3
- (b) 2 and 4
- (c) 1 and 4
- (d) 1,2,3 and 4

1	B	11	C	21	C
2	C	12	D	22	A
3	D	13	D	23	B
4	D	14	D	24	D
5	B	15	D	25	D
6	D	16	D		
7	C	17	D		
8	A	18	A		
9	B	19	A		
10	C	20	A		

MCQs Based on Current Affairs

- Q.1** Recently higher education think-tank QS Quacquarelli Symonds has released the 'QS World University Rankings by Subject 2022'. With reference to this ranking, consider the following statements.
1. Jawaharlal Nehru University has been ranked 188th in the field of arts and humanities.
 2. Massachusetts Institute of Technology has got the first position in the engineering and technology stream.
 3. Indian Institute of Bombay has been ranked 56th in Engineering and Technology stream.
- Which of the above statements are correct? Select the correct option using the codes.
- a) Statements 1 and 3
 - b) Statements 1 and 2
 - c) Statements 2 and 3
 - d) All three are correct
- Answer: a**
- Q.2** The book "The Old Man of Kusumpur", is written by?
- a) Shashi Tharoor
 - b) Ruskin Bond
 - c) immortal friend
 - d) Jumpa Lahiri
- Answer: c**
- Q.3** O.Henry Award is given for outstanding contribution in which field?
- a) For his tireless contribution in the social sector
 - b) Outstanding short story
 - c) For work done in the field of mathematics
 - d) For contribution made in the field of science
- Answer: b**
- Q.4** The Ministry of Electronics and Information Technology has constituted a 17-member committee for the Semiconductor Mission, who has been appointed as its chairman?
- a) Rajeev Chandrasekhar
 - b) Gajendra Singh Shekhawat
 - c) Amitabh Kant
 - d) Ashwini Vaishnav
- Answer: d**
- Q.5** Which statement is incorrect regarding the Global Wind Report 2022?
- a) This report is brought out by the Global Wind Energy Council.
 - b) The report claims that the total wind power capacity has increased to 1000 GW at present.
 - c) The report also pointed out that wind installation capacity has decreased in China and the United States.
 - d) India added 1.45 GW of wind capacity in 2021, which is 30% more than the previous year.
- Answer: b**
- Q.6** With reference to fortified rice, consider the following statements.
1. The cabinet has approved the distribution of fortified rice through the Targeted Public Distribution System.
 2. Fortified rice will also be distributed through Integrated Child Development Services, Pradhan Mantri Poshan Shakti Nirman-PM Poshan and other welfare schemes.
 3. The center will bear the total cost of fortification of rice.
- Which of the above statements are correct? Select the correct option using the codes.
- a) Statements 1 and 3
 - b) Statements 1 and 2
 - c) Statements 2 and 3
 - d) All three are correct
- Answer: d**
- Q.7** Recently which Indian woman has been given the International Booker 2022?
- a) Geetanjali Shree
 - b) Shashi Deshpande
 - c) Anita Desai
 - d) Jumpa Lahiri
- Answer: a**
- Q.8** With reference to the semiconductor mission, consider the following statement
1. It is being implemented under the Ministry of Electronics and Information Technology.
 2. The committee constituted in this regard will be headed by the Deputy Chairman of NITI Aayog.
 3. The committee will give suggestions for developing an ecosystem for startups and micro, small and medium industries.
- Which statement(s) is/are true? Select the correct option using the code.
- a) 1 and 2 only
 - b) 1 and 3 only

- c) 2 and 3 only
- d) 1,2 and 3

Answer – b

- Q.9** With reference to the testing of Solid Fuel Ducted Ramjet (SFDR) boosters, consider the following statements
- 1-It has been tested at the Integrated Test Range, Chandipur, off the coast of Odisha.
 - 2- This technology has been developed by the Defense Research and Development Institute.
- Which statement(s) is/are false? Select the correct option using the code.
- a) only 1
 - b) only 2
 - c) 1 and 2
 - d) neither 1 nor 2

Answer – d

- Q.10** Pinaka Mk-I (Advanced) Rocket System and Pinaka Area Denial Munition Rocket System have been successfully test-fired by which organization?
- a) DRDO
 - b) Economic Explosives Ltd.
 - c) ISRO
 - d) Munition India Limited

Answer – a

- Q.11** Hybrid material and process designing for carbon capture has been done recently. Consider the following statements in this context
- 1. This research has been done by Mission Innovation.
 - 2. This research has been done by the Indian Institute of Chemical Technology (IICT), Hyderabad.
- Which statement(s) is/are true? Select the correct option using the code.
- a) only 1
 - b) only 2
 - c) 1 and 2
 - d) neither 1 nor 2

Answer – c

- Q.12** With reference to Thailand Open International Boxing Tournament, consider the following statements
- 1. India has got 3 gold medals in this.
 - 2. India has received a total of 10 medals.
- Which statement(s) is/are true? Select the correct option using the code.
- a) only 1
 - b) only 2
 - c) 1 and 2
 - d) neither 1 nor 2

Answer - c

- Q.13** Which of the following books is/are written by Vinod Rai

- 1. "Not Just a Nightwatchman: My Innings with BCCI"
 - 2. "Not Just an Accountant: The Diary of the Nation's Conscious Keeper"
 - 3. "Rethinking Good Governance: Holding to Account India's Public Institutions"
- Select the correct option using the code.

- a) only 1 and 2
- b) only 1 and 3
- c) only 2 and 3
- d) 1,2 and 3

Answer – d

- Q.14** With reference to QS World University Rankings, consider the following statements
- 1. Oxford University has topped in Arts and Humanities stream.
 - 2. Indian Institute of Bombay has been the best institute in India in Engineering and Technology stream.
- Which statement(s) is/are true? Select the correct option using the code.
- a) only 1
 - b) only 2
 - c) 1 and 2
 - d) neither 1 nor 2

Answer: c

- Q.15** Consider the following statements regarding NATO
- 1) It was formed during the 2nd world war to protect the interest of Europe against Nazi Germany.
 - 2) Its membership has remained constant since its formation.
- 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

Answer: D

- Q.16** Consider the following statements about the bio-material pullulan:
- 1. The biomaterial can be used to disinfect wounds and hasten the process of healing.
 - 2. The material is secreted by a virus and is an exopolysaccharide.
 - 3. The material has seen no commercial use yet because of its toxic and immuno-genetic properties.

Which of the above statements are Not correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Answer: b

Case Study

You are a Medical Officer posted at the critical care unit of a hospital. A girl has been admitted to the emergency ward. The patient is a victim of a serious accident and needs an immediate blood transfusion to save her life. You are a dedicated doctor, recognised for your commitment to your duty.

However, the patient belongs to a religious community that forbids her from taking blood into her body from outside her community.

She is accompanied by her family, relatives, and community leaders from her community, all of whom are strongly against any blood transfusion. They have threatened you, not to provide girl, blood from outside. Any such attempt by you and your hospital have to face retaliation. What would you do in such a situation?

Some of the options are given below. Evaluate the merits and demerits of each of these options and finally suggest what course of action you would like to take, giving reasons.

- (i) Agree with the family members and relatives and act according to them.
- (ii) You will provide blood to the girl but not inform family members.
- (iii) You will consult your head of the department and follow his instructions.
- (iv) You will arrange security for the hospital before providing blood.

Ans. In the given case study, I am a doctor and I have to treat a girl patient who needs an immediate blood transfusion but her community members are against it. The values involved are integrity, responsibility, compassion, empathy and spirit of service.

Evaluation of the given options-

- Complying with the demand of family members can risk the life of the patient and we cannot compromise with treatment.
- In this option, the patient will get proper treatment but hiding this fact is not ethical and may create problems in near future.
- Consulting a senior doctor is a good option as he has more experience but acting according to his advice depends on the advice given and the situation.
- Taking security may be a good step but here priority is saving the life of the patient. Waiting for security can endanger her life.

My course of action:

After giving her first aid I will immediately arrange for a blood transfusion. As she is accompanied by her family members, relatives and community leaders so I will motivate them to donate blood as they belong to the same community. After matching their blood group I will choose the appropriate person as the donor and provide her blood. In any case, if I am not able to match blood in her community members then I will arrange it from the blood bank and save the life of the patient. After that, I will convince her relatives about the need and make them understand the value of life and my duty. Even if they will not cooperate I will ask security to manage them and call the police.

NOTES

Vinayak Damodar Savarkar



Vinayak Damodar Savarkar was born on May 20, 1883 in Bhagur village (Nashik district) of Maharashtra. He is also known as Veer Savarkar. Savarkar was educated both in India and London. In 1904 Savarkar founded Abhinav Bharat Sabha in Poona. Apart from this, he also founded the Free India Society. Savarkar was also associated with a nationalist organization called India House. Sir William Curzon Wyllie was assassinated in London in 1909 by Madan Lal Dhingra. The strings of this murder were linked to Savarkar because the British said that the pistol used in the murder was provided by Savarkar. Therefore, Vinayak Damodar Savarkar was sentenced to life imprisonment and sent to the Cellular Jail located in the Andaman and Nicobar Islands for the murder of Nashik Collector Jackson, being associated with the India House institution, etc. However, in 1921, the British government released Savarkar under an agreement. In this agreement, he would remain under political arrest till 1937 and would not engage in any kind of nationalist activity. Savarkar died in independent India on 26 February 1966 in Mumbai.

Savarkar's contribution

Vinayak Damodar Savarkar was greatly influenced by Ambedkar's upliftment of the lower strata and his

other contributions to the society. In many of his speeches and articles, he used to give the example of Dr. Bhimrao Ambedkar. Many historians say that both (Ambedkar Mehr community) and Savarkar (Brahmin) came from the extreme section of casteism but both the nationalist leaders had a lot of similarities in terms of ideology.

Savarkar wanted reforms in the then Indian society. That is why in 1920, he wrote a letter to his brother Narayan Rao and said in it that as much struggle is needed against the colonial power, as much struggle is needed against caste discrimination and untouchability.

Savarkar was against the 'White Man's Burdenship Theory' of the British. He scripted history in an authentic manner and tried to instill confidence in Indians, that is, he exposed Indian history so that people would know their past and awaken in their consciousness. He believed that once the public awakening would come, the people would be able to easily face the lies being spread by the British and would pave the way for their own freedom.

Veer Savarkar was in favor of science in religious rituals. He believed that religious practices must be viewed with scientific thinking and rationality. Savarkar was the first nationalist who first spoke of Swaraj in the first decade of the twentieth century (around 1904-05). While the Congress talked about Swaraj after a long time in the Lahore session of 1929. Savarkar was in favor of a united India. He wanted people of different cultures to live together and create an India that is inclusive and dynamic. Savarkar had also emphasized that we should learn from European society and emphasize on technology like them. Apart from this, Savarkar also supported exploration and innovative ideas. Savarkar's futuristic approach to Indian cinema was commendable.

In 1907, Savarkar celebrated the golden jubilee of the 1857 revolution in London. Savarkar established through his book 'India Freedom Struggle, 1857' that the revolt of 1857 was India's first freedom struggle. The British government considered the revolt of 1857 as a rebellion by the Indian Army. Savarkar was an early revolutionary among those who aroused the revolution of nationalism in India. Savarkar's book (Indian Freedom Struggle) was an inspiration for the revolutionaries.

Savarkar was a freedom fighter, social reformer, politician, writer, sharp thinker, brilliant orator and visionary politician who made an incomparable contribution in getting Indians out of inferiority complex.

Key Terminology of Medieval History

Masnad-i-Hakumat- State authority or royal authority.

Mawas- fortified village.

Mawaji- Village.

Mihtar- Nayak or (governor) Subedar, Nazim, etc.

Milk-property, but in medieval times it meant land allotted or granted by the state, earning revenue.

Misal- subordinate or order.

Miskal- the weight or weight of a dram and three-seven (3/7) parts.

Meezan- balance or pair of measures (scales).

Meezaan-i-Ahan- Iron scales.

Mohalla- any part or area of the city.

Mufliki maal wa khidmat- The total amount of money and equipment required for any work or service.

Muhsillan- Person collecting taxes and offerings.

Muhassil- Tax collected or collected.

Muhtsib- The officer who supervises the moral values and public morality, law and order.

Mulukut tawaif- Tribal monarchy or disorderly administration.

Munshi- Officer to enforce orders related to prohibited things and works.

Mukkaddam- village head (head).

Mukta- the governor or the person in charge of the big iqta.

Murttab-equipped horseman

Musadarat- fine.

Mushrif- Accounts Officer.

Mushrif-e-Gumalik- Accountant of all provinces.

Mushrif-e-Mughalqat- Accountant General

(Accountant General) of the entire Salanat.

Mustabil- (government) royal servant.

Mustafi-i-Mamalik- Auditor of the entire Sultanate.

Yarling- royal decree, order, or approval.

Rabi- Winter crops of India.

Rai- Hindu chief who generally had his own land and army.

Rai Rayaana- Rai of Rayas (The title of Rai was given to important Hindu rulers and kings.)

Raiyat- Subjects or people who pay taxes or revenue.

Raiyat Parvaar- care of the subjects.

RaqaabKhana- a place to keep the reins and saddles of horses.

Rana- a category of Hindu rulers or subordinate rulers.

Ratibi- Giving food to humans and animals.

Ratabi factory- royal factory producing the food requirements of humans and animals.

Rawat-e-Arz- The title or title given to Imad-ul-Mulk, the war minister of Balban.

Rait-e-Ala- the royal norm.

Risman Faroshi – Sales tax on thread and ropes.

Rustai- Rural.

Langarkhana – A place providing langar or a kitchen providing free food.

Lakh Bakhsh- The one who gives millions in charity.

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AN INTRODUCTION



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Dhyeya IAS, two decades old institution, was founded by Mr. Vinay Singh and Mr. Q. H. Khan. Ever since its emergence it has unparalleled track record of success. Today, it stands tall among the reputed institutes providing coaching for Civil Services Examination (CSE). The institute has been very successful in making potential aspirants realize their dreams which is evident from the success stories of the previous years.

As the nation progresses, the young generations become more conscious and aware about their career options. There is plethora of jobs and one among them is civil services, the most prestigious service in the country, which needs no introduction. It attracts many young minds hailing from almost all spectra of academic disciplines. The popular belief that the examination for this service is only meant for the brilliant lots has become a taboo as it also attracts the hardworking, sincere and disciplined minds. The saying- "In the end passion and hard work can substitute natural talent" holds true. It gives immense power and opportunity for young folks to bring about the positive changes in the society which would bring harmony and development. It inculcates values, moral, ethos and feeling of national integrity.

Quite a large number of students desirous of building a career for themselves are absolutely less equipped for the fairly tough competitive tests they have to appear in. Several others, who have a brilliant academic career, do not know that competitive exams are vastly different from academic examination and call for a systematic and scientifically planned guidance by a team of experts. Here one single move may invariably put one ahead of many others who lag behind. Dhyeya IAS is manned with qualified & experienced faculties besides especially designed study material that helps the students in achieving the desired goal.

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Considering the toughness of Civil Services Exam, where success rate is a meager 0.1 percent, Dhyeya IAS has continuously produced phenomenal results over the years. Year after Year Dhyeya IAS is being recognized for imparting guidance to civil services aspirants using benchmarked quality practices. On the basis of scalability, innovation, achievements, impact potential our efforts and contribution have been acknowledged and rewarded with Education Excellence Awards by ET NOW, Brands Academy, Times of India, etc. This has enhanced motivation, pride and self-esteem of entire Dhyeya family.

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