

WEEKLY CURRENT AFFAIRS MAGAZINE for



U.P.S.C - C.S.E.

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Success is born of action...

Topic 1. RIGHT TO PROTEST IN INDIA: IS IT A FUNDAMENTAL RIGHT?

Importance for Prelims: Polity

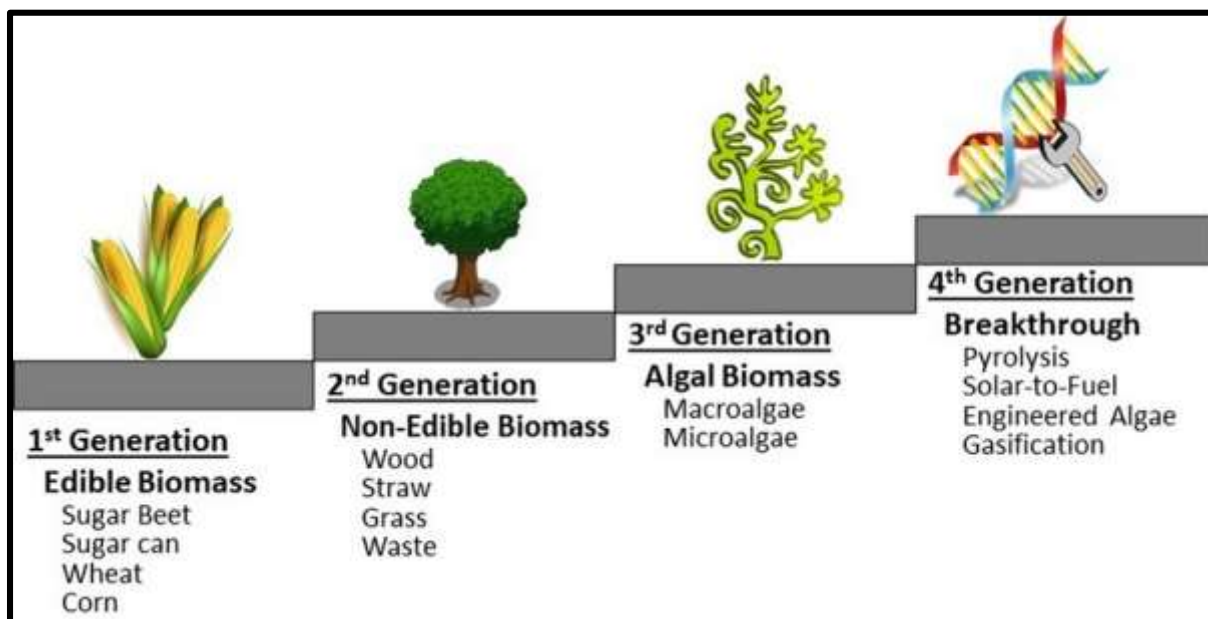
Delhi supreme court rebuked the delhi Police for “casually” invoking provisions of the anti-terror law against the 3 accused, who had protested against the enactment of the Citizenship modification Act (CAA), noting that the line between the constitutionally warranted “right to protest” and “terrorist activity” had been blurred.

Right to Protest

- The right to protest is that the manifestation of the correct to freedom of assembly, the proper to freedom of association, and therefore the right to freedom of speech.
- The Constitution of india provides the proper of freedom, given in Article nineteen with the read of guaranteeing individual rights that were thought of very important by the framers of the constitution.
- The Right to protest peacefully is enshrined in Article 19(1) (a) guarantees the liberty of speech and expression; Article 19(1) (b) assures citizens the correct to assemble pacifically and while not arms.
- Article 19(2) imposes affordable restrictions on the correct to assemble pacifically and while not arms.
- Article 19(2) confers the correct on the State to impose affordable restrictions on the exercise of the liberty of speech and expression on the grounds of, Sovereignty and integrity of india, Security of the state, Friendly relations with foreign states, Public order, decency or morality, Contempt of court, defamation, and incitement to an offence.

Topic 2. FCI RICE TO BE USED FOR ETHANOL PRODUCTION

Importance for Prelims: Economy



The Central government has allotted 78,000 tonnes of rice procured for food security functions to be reroute to ethanol production instead this year, at a subsidized rate of ₹20 a kilogram, Food Secretary Sudhanshu Pandey said.

- This is part of the government's plan to double distilling capacities by 2025, partially by encouraging a rise within the share of grain-based ethanol production from the present target on molasses-based production.
- Earlier this month, Prime Minister Narendra Modi presented a road map advancing the target date for achieving twenty per cent mixing of ethanol in petrol by 5 years to 2025.
- The last 2 years have seen mixing levels of around five percent, that is probably to jump to 8.5% within the current year, consistent with a Ministry statement.

Bioethanol

- It is derived from corn and sugarcane using fermentation method.
- A litre of ethanol contains about 2 thirds of the energy provided by a l of petrol.

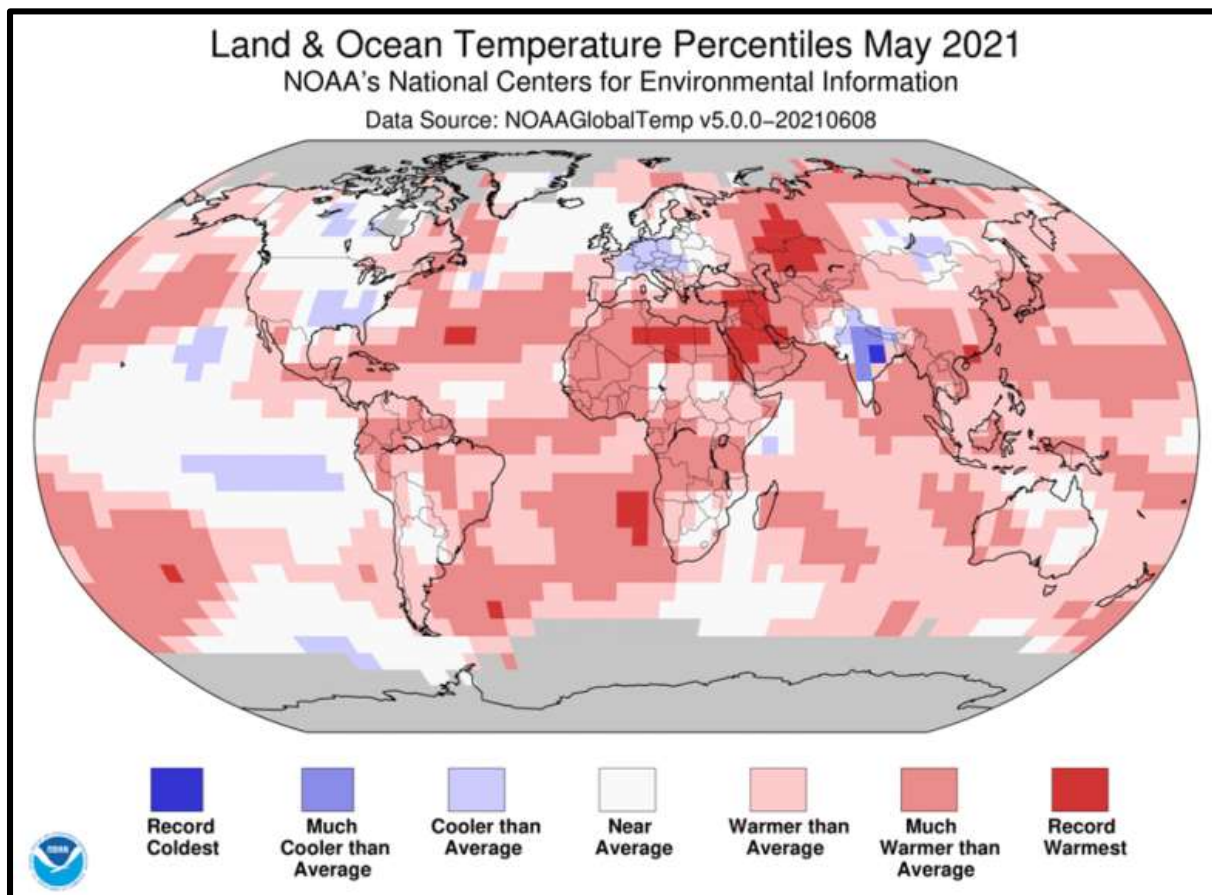
- When mixed with petrol, it improves the combustion performance and lowers the emissions of carbon monoxide gas and sulphur oxide.

Ethanol Blending Programme (EBP):

- It aims at mixing ethanol with petrol, thereby starting it under the class of biofuels and saving millions of dollars by cutting fuel imports and decreasing carbon emissions.
- The target is to achieve twenty per cent mixing of ethanol by 2025.
- In 2018, the Central Government extended the ambit of the EBP programme to extract the fuel from surplus quantities of food grains like maize, jawar, bajrafruit and vegetable waste.
- Earlier, solely excess sugarcane production was allowed to be regenerate into ethanol for acquisition under the programme.
- **First generation bioethanol:** These are made of food sources like sugar, starch, vegetable oil, or animal fats using conventional technology.

Topic 3. MAY 2021 WAS THE SIXTH WARMEST MAY ON RECORD ,SAYS NOAA

Importance for Prelims: Environment



The upward trend of warming is global and unambiguous: could 2021 has tied with 2018 because the world's sixth-warmest could on record, consistent with National Oceanic and atmospheric Administration's (NOAA).

- The average world temperature in could 2021 was 1.46 degrees fahrenheit (0.81 degrees Celsius) above than the 20th-century average, consistent with the report by scientists at NOAA's National Centers for Environmental data.
- The US National aeronautics and space Administration rated could 2021 the seventh-warmest could on record.
- The average international temperature for March through could was 1.48 degrees F (0.82 degree Celsius) above than average. it was the eighth-

warmest such season for the international on record.

About NOAA

- The National Oceanic and atmospheric Administration is an american scientific agency inside the US Department of Commerce that focuses on the conditions of the oceans, major waterways, and therefore the atmosphere.
- NOAA warns of dangerous weather, charts seas, guides the utilization and protection of ocean and coastal resources and conducts analysis to produce the understanding and improve management of the atmosphere.


Topic 4. GENERALIZED SYSTEM OF PREFERENCES (GSPS)

Importance for Prelims: International Relations

WHAT IS GSP?

Non-reciprocal, non-discriminatory benefits by developed countries to developing ones	Under GSP, exports allowed at zero or low duties	India gained duty concessions of \$190 million in 2017 from the US under GSP
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WHY US WITHDREW GSP



- ▶ **Trade imbalance** with India
- ▶ **Washington** has cited lack of reciprocity
- ▶ **No access** to Indian market for US dairy, medical device industry
- ▶ **Market access sought** for US dairy, medical device industry
- ▶ **Tariff reduction** on information and communications technology products
- ▶ **Easier telecom testing**, conformity requirements for ICT products
- ▶ **Robust** intellectual property rights regime sought
- ▶ **Issues** with proposed e-commerce policy, data localisation norms

Recently, the European Union (EU) Parliament has adopted a resolution that has urged the EU Commission to consider temporary withdrawal of the GSP+ standing given to Sri Lanka.

About Generalized System of Preferences (GSPs)

- It was instituted in 1971 under the aegis of United Nations Conference on Trade and Development (UNCTAD).
- It is aimed toward making an enabling trading atmosphere for developing countries.
- The countries that grant GSP preferences are Australia, Belarus, Canada, the European Union, Iceland, Japan, Kazakhstan, New Zealand, Norway, the Russian Federation, Switzerland, Turkey and therefore the US of

America.

- The provision and utilization of trade preferences could be a key goal the Istanbul Program of Actions adopted at the United Nations LDC IV in 2013, as additionally reaffirmed in SDGs Goal seventeen.
- The objective of UNCTAD's support on GSP and different advantageous arrangements is to assist developing countries to extend utilization of GSP and different trade preferences.

European Union's Generalized System of Preferences (GSPs)

- It may be a set of EU rules permitting exporters from developing countries to pay less or no duties on their exports to the European Union.
- The EU adopted a brand new Generalized scheme of Preferences in 2012.
- The Generalised scheme of Preferences (GSP) has three strands:

GSP general arrangement: for all beneficiary countries

- **GSP+:** A special scheme with entire removal of tariffs on basically a similar product classes as those covered by the general arrangement.
- The countries need to ratify and implement international conventions relating to human and labour rights, atmosphere and good governance.
- **Everything but Arms:** A special arrangement for least developed countries (as recognised and classified by the UN) giving them duty- and quota-free access for all product, except arms and ammunitions.

About UNCTAD

- It may be a permanent intergovernmental body established by the UN General Assembly in 1964.
- Its headquarters are placed in Geneva, Switzerland.
- It is an element of the United Nations Secretariat.
- Its goals are to maximise the trade, investment and development opportunities of developing countries and assist them in their efforts to integrate into the global economy on an equitable basis.

- Its objective is to formulate policies with reference to all aspects of development together with trade, aid, transport, finance and technology.

Topic 5. ALUMINIUM – THE EV MANUFACTURER’S DREAM METAL

Importance for Prelims: Science & tech

Electric vehicles are set to push the demand for aluminium exponentially, with innovation in product being the main focus of the downstream aluminium sector.

- Aluminium may be a soft, silvery-white, ductile, nonmagnetic metal within the boron cluster.
- It is that the third most abounding part within the Earth’s crust. depending on the surface reference, aluminium seems within the range from silvery to dull gray.
- Aluminium has a density less than those of alternative common metals, at approximately one third that of steel.
- It features a great affinity towards oxygen, and forms a protecting layer of oxide on the surface once exposed to air.
- Aluminium visually resembles silver, each in its color and in its great ability to replicate light.

Uses of aluminium

- It is utilize within the transportation of railway, trucks, and automobiles as castings.
- It is used in packaging.
- Al (II) compounds are notice within the reactions of Al metal with oxidants.
- Using aluminum the presence of aluminium will be detected in qualitative analysis.

Properties of aluminium

- The part is extremely reactive. it's regarding one-third of stiffness and density of steel.

- Aluminium has sensible corrosion resistivity.
- It is capable of superconductivity.

Topic 6. JALGAON FARMERS SHIP GI CERTIFIED BANANA TO DUBAI

Importance for Prelims: Economy

Recently, the Ministry of Commerce & trade has declared that it had started the export of Jalgaon Banana to dubai.

Jalgaon is considered Banana town of india

- In 2016, Jalgaon Banana got GI certification that was registered with Nisargraja Krishi Vigyan Kendra (KVK) Jalgaon.
- It is located over three hundred kilometer from the west coast and on the northern edge of the Deccan plateau.
- It receives an average rainfall of just 750 millimeter yearly and also the bananas are wholly manufactured by freelance growers.
- It contributes regarding half of Maharashtra's banana production and over than Sixteen per cent of that of india.
- Its average yields at seventy tonnes per hectare are method above international levels. The district is found close to the Bhusaval railway station enabling access to the North Indian market.

As per the report, the main advantage with tissue-cultured banana plants is that it's supported the disease-free and genetically pure material. The spread of drip irrigation has created efficient use of scarce water possible.

Significance of Geographical Indication (GI) Tag

- A GI may be a name or sign used on certain merchandise under Geographical Indications of products (Registration and Protection) Act, 1999 that corresponds to a particular geographical location or origin.
- It indicates a community's belongings connected to its intellectual property product.
- It implies that the product's uniqueness has been verified by a professional committee of the govt. of india.

- It helps the community get a premium worth for the merchandise.
- It creates a definite identity, assures the consumers of quality, brings name to the merchandise and creates a global marketplace for it.

Topic 7. MANDATORY HALLMARKING ROILS JEWELLERY

INDUSTRY

Importance for Prelims: Economy

Recently, the govt. has declared the phased implementation of mandatory hallmarking of gold jewelry. within the 1st phase, gold hallmarking are out there in only in 256 districts and jewellers having annual turnover higher than Rs forty lakh can come under its purview.

Hallmarking of gold

- The Bureau of Indian standard (BIS) operates gold and silver hallmarking scheme in India.
- It defines hallmarking because the correct determination and official recording of the proportionate content of precious metal in valuable metal articles.
- The government has notified 2 classes i.e. gold jewelry and gold artefacts and silver jewelry and silver artefacts under the purview of hallmarking.
- The hallmarking in india is accessible for jewelry of solely 2 metals i.e. gold and silver.

Exemptions under mandatory hallmarking

- A certain class of jewellery and things will be exempted from the necessary demand of hallmarking.
- The export and re-import of jewelry as per national trading policy of government of india i.e. jewellery for international exhibitions, jewelry for government-approved B2B domestic exhibitions will be exempted from necessary Hallmarking.
- The fountain pens and special kinds of jewelry like Kundan, Polki and Jadau will be exempted from hallmarking.

Provisions under necessary hallmarking

- The government has declared that no penalty will be imposed until

August 2021 for non-compliance with the hallmarking norm.

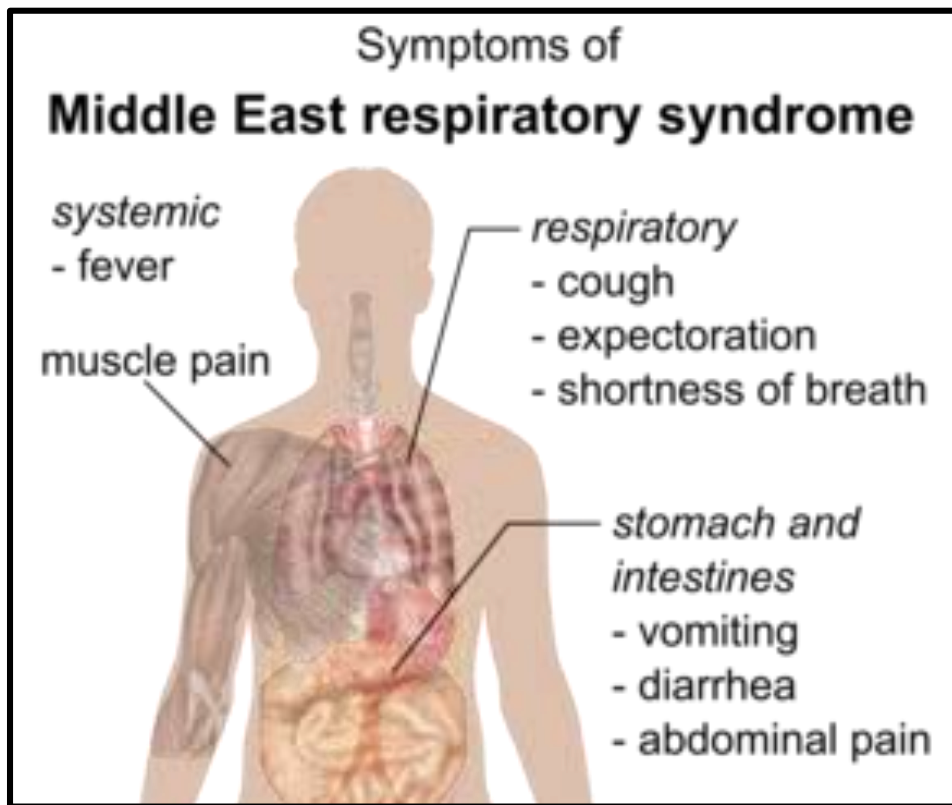
- The jewellers with annual turnover up to Rs forty lakh will be exempted from necessary hallmarking.

Purity standards for gold and silver under the hallmarking scheme

- As per BIS standards, there are 3 classes of hallmarking based on purity of gold i.e. 22 carat, eighteen carat and fourteen carat.
- The ministry has declared that the gold of further carats twenty, twenty three and twenty four can also be allowed for Hallmarking.
- The ministry more said that jewellers will still repurchase old gold jewellery while not an indicator from customers.

Topic 8. MIDDLE EAST RESPIRATORY SYNDROME

Importance for Prelims: Science & tech



Women's rights activists say feminism within the South Korea had been simmering under the surface, however it became additional prominent someday in 2015 following the outbreak of Mid-east respiratory Syndrome, or MERS, within the country connected to a Korean man getting back from the center East.

- Middle East respiratory syndrome (MERS) could be a viral respiratory disease caused by a novel coronavirus (Middle East respiratory syndrome coronavirus, or MERS-CoV) that was 1st recognize in saudi arabia in 2012.
- Coronaviruses are a huge family of viruses which will cause diseases starting from the common cold to Severe Acute respiratory Syndrome (SARS).
- Typical MERS symptoms added a fever, cough and shortness of breath.

pneumonia is common, however not continuously present. gastrointestinal symptoms, together with diarrhea have also been reportable.

- Some laboratory-confirmed cases of MERS-CoV infection are reportable as well, that means that they do not have any clinical symptoms, yet they're positive for MERS-CoV infection following a laboratory test.
- Most of those asymptomatic cases have been detected following aggressive contact tracing of a laboratory-confirmed case.
- Although most of human cases of MERS-CoV infections are attributed to human-to-human infections in health care settings, current scientific proof suggests that camels are a serious reservoir host for MERS-CoV and an animal source of MERS infection in humans.
- However, the exact role of dromedaries in transmission of the virus and also the exact route(s) of transmission are unknown.
- The virus doesn't appear to pass simply from person to person unless there's close contact, like occurs once providing unprotected care to a patient.
- Health care associated outbreaks have occurred in many countries, with the biggest outbreaks seen in Saudi Arabia, United Arab Emirates, and also the Republic of Korea.

Topic 9. MINISTER OF TRIBAL AFFAIRS HAS LAUNCHED ‘ADI PRASHIKSHAN PORTAL’

Importance for Prelims: Government Schemes

Recently, the Minister of tribal Affairs has launched ‘Adi Prashikshan Portal’ and inaugurated a coaching programme on “Capacity Building coaching of Master Trainers for ST PRI Members” as a part of Azadi ka Amrit Mahotsav.

About Adi Prashikshan Portal

- It would be a repository of all coaching programmes conducted by the Ministry, TRIs, COEs and EMRS, upcoming NTRI and TRIFED.
- It can have information base of trainees, trainers and resource persons.
- The trainees can have access to course material even once completion of coaching.
- The portal has been developed by Ministry of tribal Affairs together with UNDP and TRI-Odisha.

Significance of Adi Prashikshan Portal

- It ought to be interactive and will conjointly include feedback within the sort of actual experiences of the PRIs in implementation which can conjointly facilitate to enhance the programme.
- It is intended to reach remotest areas with ‘knowledge packets’ using information technology (IT).
- It is an effort to bring coaching Institutions/ Organizations, specialists and Trainers together for addressing thematic information gaps among tribal PRIs, Communities, Officials and varied alternative stakeholders involved in tribal area development.
- It can transform the varied current coaching initiatives under totally different units of the Ministry like TRIs, COEs and converge the initiatives for better ability and information building.
- It will catalyze and improve the processes of conducting coaching by

creating it on-line and accessible to all.

Topic 10. NOD FOR ADDITIONAL FERTILIZER SUBSIDY

Importance for Prelims: Governance



The Cabinet Committee on Economic Affairs has approved the proposal to hike subsidy rates for phosphorus and potassium-based fertilizers by one hundred and forty percent during a bid to produce relief to farmers because the kharif sowing season begins.

- Unlike urea, wherever the Centre sets a set maximum retail worth, non-urea fertiliser costs are decontrolled, with the Centre fixing nutrient-based subsidy rates every year.
- So far, a fifty kilogram bag of di-ammonium phosphate (DAP), the fertiliser most well-liked with Indian farmers when urea, was sold-out at

₹1,200, together with a subsidy of regarding five hundred.

Nutrient based subsidy scheme

- Nutrient based subsidy (NBS) Programme for Fertilizers was initiated within the year 2010.
- Under the theme, a fixedd fast a set quantity of subsidy selected an annual basis is provided on every grade of subsidized Phosphatic and Potassic (P&K) fertilizers,except for urea, supported the nutrient content present in them.
- The theme is administered by the Department of Fertilizers under the Ministry of Chemicals & Fertilizers.
- In a recent development, the cabinet Committee on Economic Affairs has approved the proposal of the Department of Fertilizers for the continuation of the Nutrient based subsidy (NBS) until 2019-20.
- The continuation of the Nutrient primarily based subsidy scheme can make sure that an adequate quantity of P&K is created accessible to the farmers at a statutory controlled worth.

Union Budget 2021 and Nutrient based mostly subsidy scheme

- There are no reforms within the Nutrient based mostly grant scheme in UnionBudget 2021. tho' Nirmala Sitharaman created an announcement to release a further Rs 65,000 crore towards fertilisers subsidy over and higher than Rs 71,000crore allotted within the budget for financial year (FY) twenty one and for FY22, she has allotted about to Rs 80,000 crore.

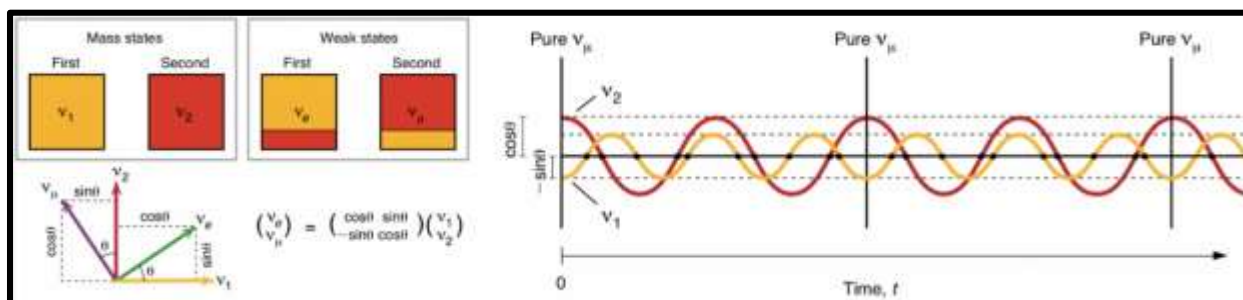
Nutrient based mostly subsidy scheme (NBS) Provisions

- In India, urea is that the solely controlled fertiliser and is sold-out at a statutory notified uniform sale worth.
- Nutrient based subsidy scheme (NBS) permits the makers, marketers, and importers to fix the MRP of the Phosphatic and Potassic (P&K) fertilizers at affordable levels.

- The domestic and international value of P&K fertilisers is considered at the side of the country's inventory levels and also the currency rate of exchange so as to make a decision the MRP.

Topic 11. SPACE-TIME INDUCES NEUTRINO OSCILLATIONS

Importance for Prelims: Science & tech



Professor Amitabha Lahiri of S N Bose National Centre for Basic Sciences (SNBNCBS) an autonomous institute under the DST, showed in a very paper revealed along side Subhasish Chakrabarty, his student, that the geometry of space-time will cause neutrino oscillations through quantum effects even though neutrinos are massless.

- Neutrinos are mysterious particles, created copiously in nuclear reactions within the Sun, stars, and elsewhere.
- They additionally “oscillate”– that means that differing types of neutrinos change into each other – as has been found in several experiments.
- Probing of oscillations of neutrinos and their relations with mass are crucial in learning the origin of the universe.
- Neutrinos interact very weakly with eachthing else – trillions of them pass through each human being every second while not anyone noticing; a neutrino’s spin always points within the other way of its motion, and till a couple of years ago, neutrinos were believed to be massless.
- It is currently usually believed that the phenomenon of lepton oscillations need neutrinos to have little lots.

Neutrino

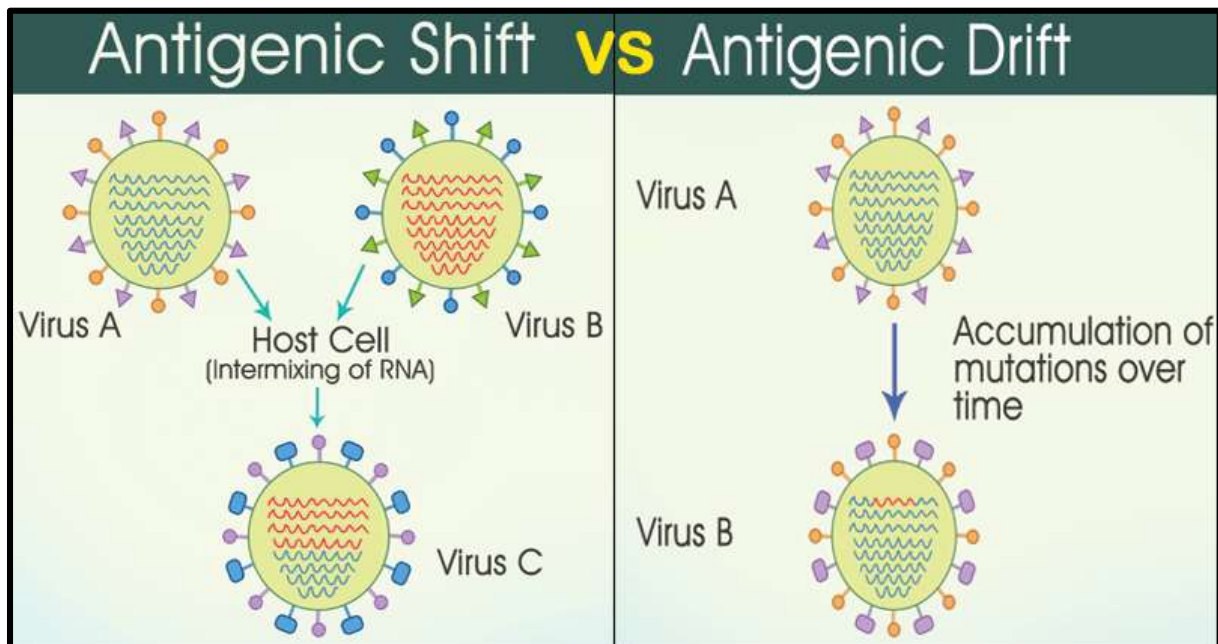
- Proton, neutron, and electron square measure small particles that compose atoms. The neutrino is additionally a little elementary particle, however it's not a part of the atom. Such particles also are found to exist

in nature

- Neutrino features a terribly small mass and no charge. It interacts terribly weakly with different matter particles. thus weakly that each second trillions of neutrinos fall on us and have our bodies unnoticed .
- Neutrinos come back from the sun (solar neutrinos) and different stars, cosmic rays that come from beyond the solar system, and from the large Bang from that our Universe originated.
- They may also be created within the lab.

Topic 12. ANTIGENIC DRIFT

Importance for Prelims: Science & tech



Background

- In India, it had been called the bombay Fever that broke get in town in june 1918, with one amongst the possible entry points being ships carrying troops coming back from the 1st world war in Europe.
- It hit completely different parts of the country in 3 waves, with the second recording the very best fatality rate.
- The pandemic is believed to possess killed 17-18 million individuals within the country. By early 1919, it had largest disappeared.
- It is argued that since the entire world had been exposed to the virus, and had thus developed natural immunity against it, the 1918 strain began to mutate and evolve during a method known as “antigenic drift”.

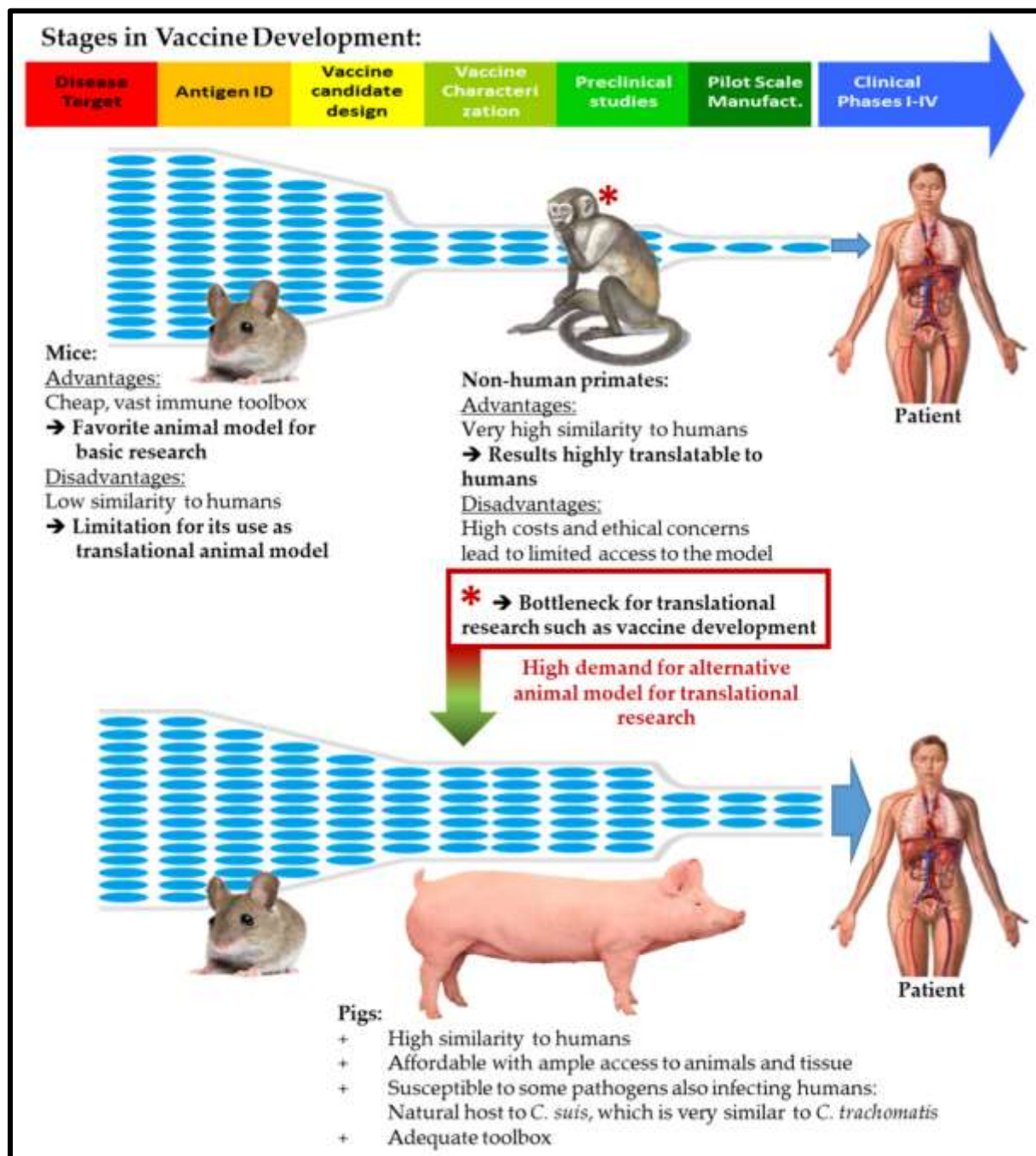
Antigenic Drift

- Antigenic drift could be a kind of genetic variation in viruses, arising by the accumulation of mutations within the virus genes that code for virus-surface proteins that host antibodies acknowledge.

- This results in a new strain of virus particles that's not effectively inhibited by the antibodies that prevented infection by previous strains.
- This makes it easier for the modified virus to spread throughout a partly immune population. antigenic drift happens in each influenza A and influenza B viruses.
- Antigenic shift could be a closely connected process; it refers to a lot of dramatic changes within the virus's surface proteins. Genetic drift is extremely completely different and far a lot of broadly applicable; it refers to the gradual accumulation in any deoxyribonucleic acid sequence of random mutational changes that don't interfere with the DNA's function and so that don't seem to be seen by natural selection.

Topic 13. ROLE OF ANIMAL SERUM IN MAKING OF VACCINES

Importance for Prelims: Science & tech



The government on wednesday issued a clarification stating that Covaxin, the Covid-19 vaccine developed by Hyderabad-based Bharat Biotech, didn't contain the serum of a newborn calf.

- The virus is killed, or inactivated, before getting used within the vaccine, and injected into the human body, however it's still able to trigger an

immune response.

- To be utilized in the vaccine, the virus must be grown, or cultured, within the laboratory.
- Scientists try to produce conditions causative for the growth of those viruses by recreating the type of atmosphere that exists in an infected person's tissues.
- Therefore, solutions containing 'nutrients' act due to growth medium for the virus.
- These nutrients, like specific sugar and salt molecules, are extracted from tissues of appropriate animals like horses, cow, goat or sheep.
- The virus grows in these nutrient-rich solutions. After that, it goes through many stages of purification that create it appropriate to be utilized in a vaccine. there's no trace of the expansion medium when the whole method is over.

Why calf serum

- According to the web site of the Food and Drug Administration of the US, cow components are used mainly due to cows are massive animals, simply accessible, and wealthy in some of the helpful chemicals and enzymes.

Topic 14. INDIA MAINTAINS 43RD RANK ON IMD'S WORLD COMPETITIVENESS INDEX

Importance for Prelims: International Reports



Recently, the Institute for Management Development (IMD) has discharged the World competitiveness Index 2021.

- It is led by Switzerland, whereas Sweden has moved up to the second position (from sixth last year).
- Denmark has lost one place to rank third, the Netherlands has maintained its fourth place and Singapore has slipped to the fifth place (from 1st in 2020).

Performance of India under World competitiveness Index 2021

- India has maintained forty-third rank on an annual World competitiveness Index.
- Among the BRICS nations, India is ranked second when China (16), followed by Russia (45th), Brazil (57th) and South Africa (62th).
- India has maintained its position for the past 3 years however this year, it had important enhancements in government potency.

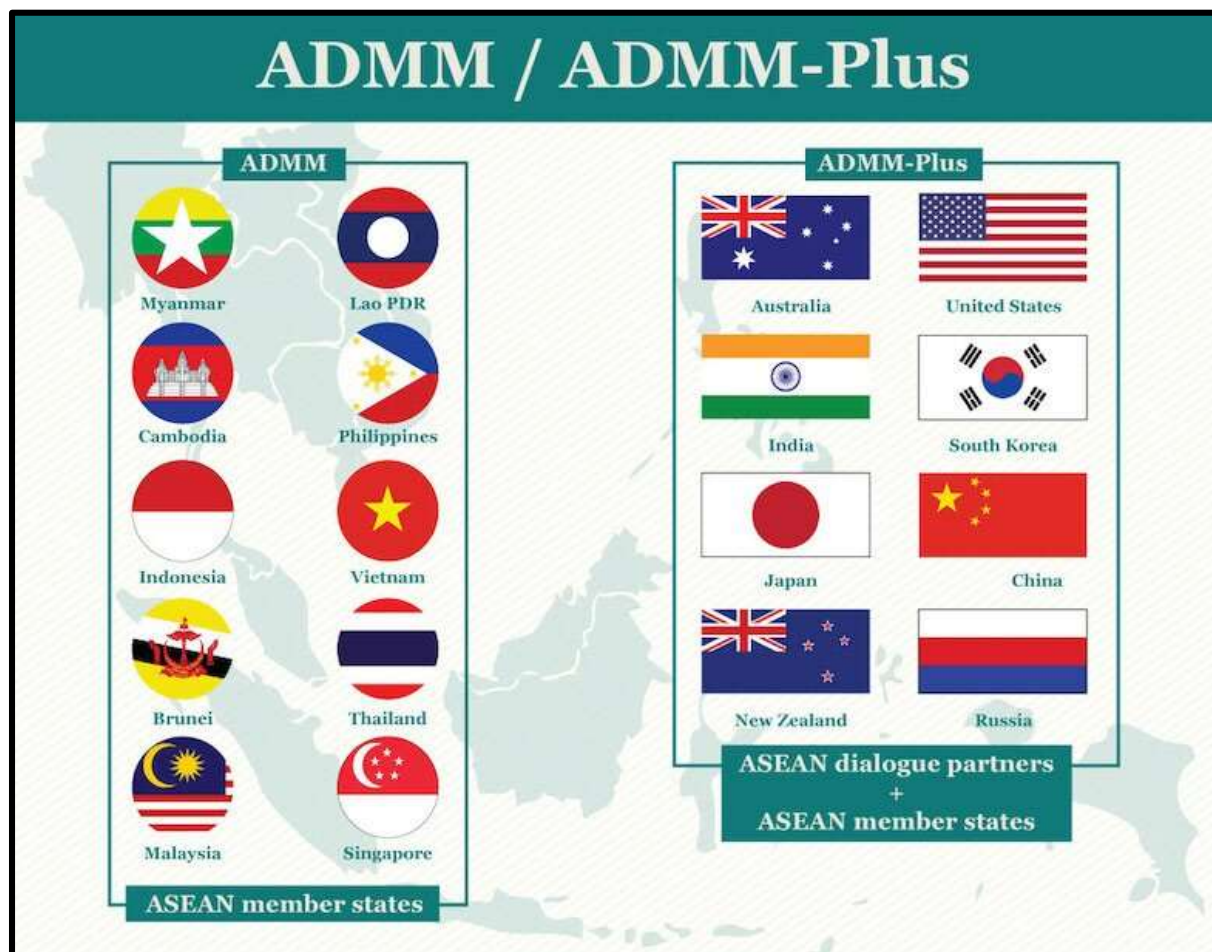
- India's enhancements within the government potency factor are principally due to: Relatively stable public finances; and Support and subsidies provided by the govt. to the non-public corporations

About World Competitiveness Index

- It ranks sixty four economies and assesses the extent to that a country promotes the prosperity of its individuals by measuring economic well-being.
- It calculate the profitability and competitive by examining four factors i.e. economic performance, government efficiency, business potency, and infrastructure.
- It is an annual ranking that was 1st revealed in 1989.
- It analyzes and ranks countries consistent with however they manage their competencies to attain long-run worth creation.
- It is based on 334 competitiveness criteria selected as a results of comprehensive analysis using economic literature, international, national and regional sources and feedback from the business community, government agencies and academics.

Topic 15. 8TH ASEAN DEFENCE MINISTERS MEETING PLUS

Importance for Prelims: International Relations



Recently, the eighth edition of Association of Southeast Asian Nations Defence Ministers Meeting plus (ADMM+) was held.

ASEAN Defence Ministers Meeting plus (ADMM+)

- It is an annual meeting of Defence Ministers of ten ASEAN (Association of Southeast Asian Nations) countries and eight dialogue partner countries.
- The eight dialogue partner countries are Australia, China, India, Japan, New Zealand, Republic of Korea, Russia and therefore the US.
- Brunei is that the Chair of the ADMM and forum for 2021.
- The objectives of the ADMM-Plus, are: To provide Association of Southeast Asian Nations Member States in building capability to address

shared security challenges, whereas cognizant of the differing capacities of varied Association of Southeast Asian Nations Member States;

- To promote mutual trust and confidence between defence institutions through greater dialogue and transparency;
- To enhance regional peace and stability through cooperation in defence and security, seeable of the international security challenges the region faces;
- To contribute to the realisation of an Association of Southeast Asian Nations Security Community that, as stipulated within the Bali Concord II, embodies ASEAN's aspiration to achieve peace, stability, democracy and prosperity within the region wherever Association of Southeast Asian Nations Member States live at peace with each other and with the planet at large;
- To facilitate the implementation of the Vientiane Action Programme because it calls for Association of Southeast Asian Nations to create a peaceful, secure and prosperous Association of Southeast Asian Nations.

Topic 16. ASSAM SEEKS REALIGNMENT OF RAIL TRACK THROUGH SANCTUARY

Importance for Prelims: Environment / Geography

Trains have run over many elephants on the track between the Rani Reserve Forest and Deepor Beel.

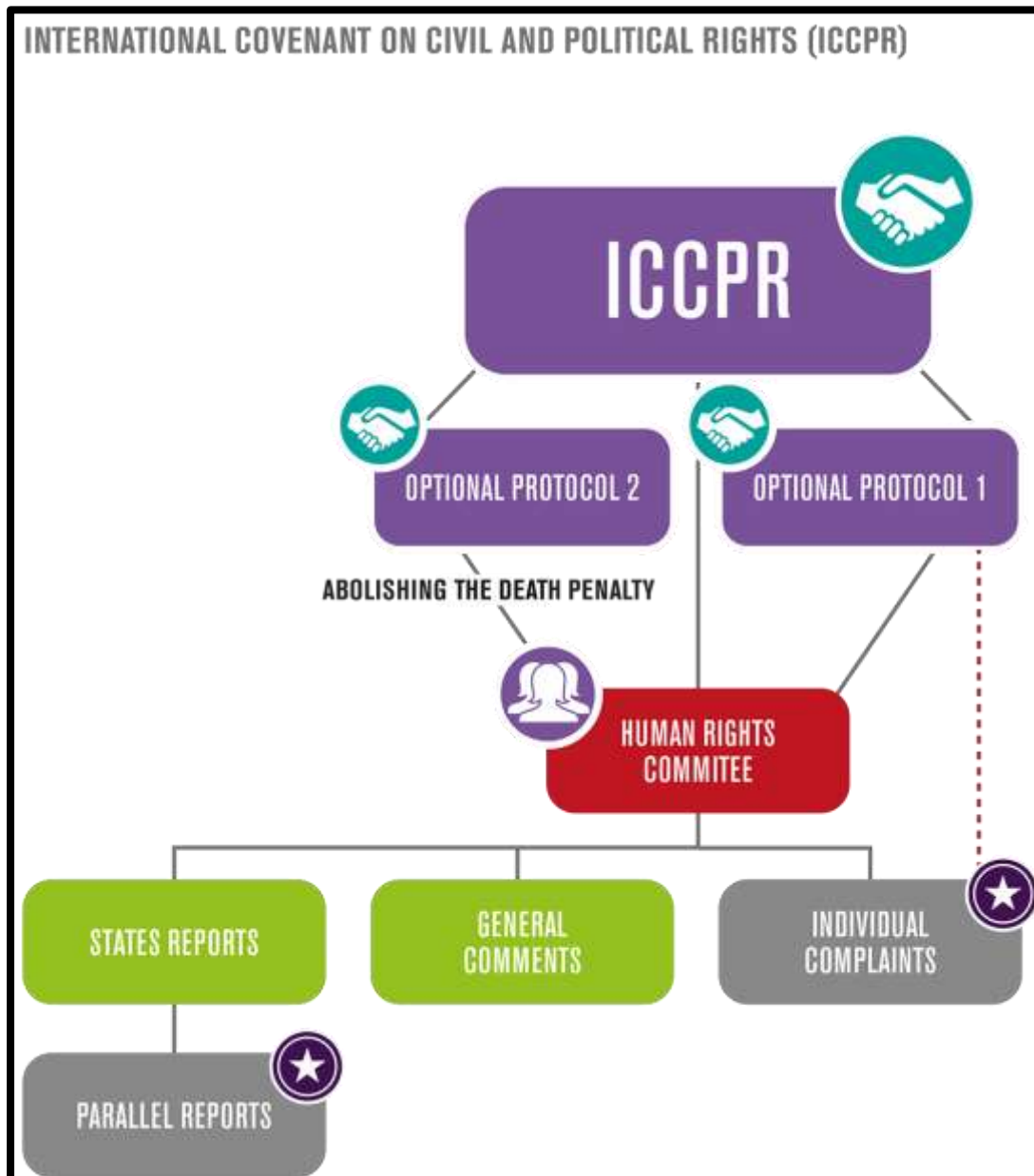
- The Assam government has planned the realignment of a broad gauge railway line through the Deepor Beel.
- Several elephants have been run over on the railway track between the elevated Rani Reserve Forest and also the sanctuary. The elephants use four corridors crossing the track to usually bathe and feed on the aquatic plants within the wetland.

Deepor Beel

- Deepor Beel is found to the south-west of Guwahati town, in Kamrup district of Assam, India.
- It could be a permanent freshwater lake, during a former channel of the Brahmaputra river, to the south of the most watercourse.
- It could be a wetland under the Ramsar Convention that has listed since November 2002, for undertaking conservation measures on the basis of its biological and environmental importance.
- Considered as one of the biggest beels within the Brahmaputra valley of Lower Assam, it's categorized as a representative of the wetland kind under the Burma monsoon forest biogeographical region.
- It is also an important bird sanctuary habituating several migrant species.
- Freshwater fish could be an important protein and source of financial gain for these communities; the health of those individuals is stated to be directly dependent on the health of this wetland ecosystem.

Topic 17. INTERNATIONAL COVENANT ON CIVIL AND POLITICAL RIGHTS

Importance for Prelims: International Conventions



India's new data technology (IT) rules don't conform with international human rights norms, specialists from the UN have said

- The letter says that India's new IT Rules are in violation of rules laid down within the International Covenant on Civil and Political Rights (ICCPR), a key international human rights treaty.

International Covenant on Civil and Political Rights

- The ICCPR could be a key international human rights treaty, providing a variety of protections for civil and political rights.
- The ICCPR, along with the Universal Declaration of Human Rights and the International Covenant on Economic Social and Cultural Rights, are considered the International Bill of Human Rights.
- The Bill influences the decisions and actions of government, State and Non-State actors to create economic, social and cultural rights a top-priority within the formation and implementation of national, regional and international policy and law.
- The ICCPR obligates countries that have approve the treaty to guard and preserve basic human rights, such as: the right to life and human dignity; equality before the law; freedom of speech, assembly, and association; spiritual freedom and privacy; freedom from torture, ill-treatment, and arbitrary detention; gender equality; the correct to a fair trial; right family life and family unity; and minority rights.
- The Covenant compels governments to require administrative, judicial, and legislative measures so as to protect the rights enshrined within the treaty and to produce an efficient remedy.
- The Covenant was adopted by the United Nations General Assembly in 1966 and came into force in 1976. 173 countries as well as india have approve the Covenant.

Topic 18. UN RE-ELECTS ANTONIO GUTERRES AS SECRETARY - GENERAL

Importance for Prelims: International Organisations

UN Secretary General Antonio Guterres is all prepared to be re-elected as chief of the globe physique once the highly effective Safety Council adopted by acclamation a choice recommending his title to the basic Meeting for a second five-year period of time beginning Jan one, 2022.

- The United Nations Secretary-General is appointed by the United Nations General Assembly on therecommendation of the UN security council.
- To be selected as a United Nations Secretary-General, a candidate should receive the votes of a minimum of nine members of the UN security council, with no vetoes from permanent members.
- Therefore, the Secretary-General's selection is subject to the veto of any of the 5 permanent members (France, Russia, the uk, and also the United States) of the United Nations Security Council.
- The United States used this power to deny Egypt's Boutros-Ghali a second term in 1997 and China did a similar in 1981 for denying Austria's Waldheim a 3rd term.
- The different ten elected non-permanent members of the United Nations Security Council don't have veto powers. however their backing is crucial, as a candidate needs a minimum of nine out of fifteen votes to be suggested for the highest job.
- Moreover, for any candidate to possess a true chance at being thought of for the highest post, a recommendation by any United Nations member state is essential.
- In the present race, Guterres was endorsed by Portugal for a second term, and none of his seven different challengers received backing from a member state.

Functions of UN Secretary-General:

- The United Nations Charter refers to the Secretary-General because the United Nations chief administrative officer.
- Mandate: United Nations Secretary-General shall act and perform such functions as given to him by the United Nations Security Council, General Assembly, Economic and Social Council and different UN organs.

Functions:

- ❖ attendance at sessions of UN bodies;
- ❖ consultations with world leaders, government officials and
- ❖ worldwide travel intended to stay the Secretary-General in touch with the peoples of the United Nations member states.

Topic 19. IN-EUNAVFOR Exercise

Importance for Prelims: Defence



Recently, the 1st edition of IN-EUNAVFOR Exercise was commenced in Gulf of Aden.

About IN-EUNAVFOR Exercise

- It may be a joint naval exercise between Indian Navy and EU naval Force (EUNAVFOR).
- The participants of IN-EUNAVFOR Exercise are Indian naval Ship Trikanth, Italian Navy Ship ITS Carabiniere, Spanish Navy Ship ESPS Navarra, and 2 French Navy Ship FS Tonnerre and FS Surcouf.

It will see high tempo-naval operations at ocean, including:

- Advanced air defence and anti-submarine exercises; Cross deck helicopter operations; Tactical manoeuvres, boarding operations and underway replenishment; Search & Rescue Operations; Man Overboard drills and different maritime security operations
- It can endeavour to enhance and hone their war-fighting skills and their

ability as an integrated force to market, peace, security and stability within the maritime domain.

- It showcases increased levels of synergism, coordination and interoperability between IN and EUNAVFOR.
- It underscores the shared values as partner navies, in making certain freedom of seas and commitment to an open, inclusive and a rules-based international order.

Gulf of aden

- It may be a deep-water basin that forms a natural ocean link between the red sea and therefore the arabian sea.
- It is located between the coasts of arabia and therefore the Horn of africa.
- It connects to the red sea within the West and therefore the arabian sea within the East.
- The Gulf of aden and red sea also are connected through Bab-al-Mandeb Strait.
- It is majorly shared between three neighboring nations i.e. Djibouti to the East, Somalia to the South, and yemen to the North.

Topic 20. SURGE IN ILLEGAL HTBT COTTON ACREAGE WORRIES SEED INDUSTRY

Importance for Prelims: Science / Agriculture

The unlawful cultivation of herbicide tolerant (HT) Bt cotton has seen a large jump this year, with seed makers claiming that the sale of unlawful seed packets has over doubled from thirty lakh last year to seventy five lakh this year.

- Bt cotton remains the sole GM crop allowed to be cultivated within the country.
- It was developed by United States giant Bayer-Monsanto.
- It involves insertion of 2 genes viz 'Cry1Ab' and 'Cry2Bc' from the soil bacteria bacillus thuringiensis into cotton seeds.
- This modification codes the plant to provide protein toxic to heliothis bollworm (pink bollworm) therefore creating it resistant to their attack.
- The industrial release of this hybrid was sanctioned by the govt. in 2002.

About HT Bt Cotton

- The farmers planted an herbicide-tolerant kind of Bt cotton.
- This variety (HtBt) involves the addition of another gene, 'Cp4-Epsps' from another soil bacteria, agrobacterium tumefaciens.
- It isn't cleared by GEAC.
- The farmers claim that the HtBt variety will withstand the spray of glyphosate, an herbicide that's wont to take away weeds, and therefore it well saves them deweeding prices.

What is the procedure involved?

- In India, it's the responsibility of the genetic engineering Appraisal Committee(GEAC) under the atmosphere Ministry to assess the security of a genetically changed plant, and decide whether it's fit for cultivation.
- The GEAC comprises specialists and government representatives, and a choice it takes needs to be approved by the atmosphere Minister before

any crop is allowed for cultivation.

- Besides Bt cotton, the GEAC has cleared 2 alternative genetically changed crops, brinjal and mustard.
- But these haven't received the consent of the atmosphere Minister.
- Legally, sale, storage, transportation and usage of unapproved GM seeds may be a punishable offence below the principles of Environmental Protection Act 1986.
- Also, sale of unapproved seeds will attract action under the Seed Act of 1966 and therefore the Cotton Act of 1957.
- The Environmental Protection Act provides for a jail term of 5 years and a fine of Rs one lakh for violation of its provisions, and cases will be filed under the other 2 Acts.
- The culprit may be charged under varied sections of the Essential
- Commodities Act and therefore the Indian penal code.

Topic 21. INLAND VESSEL BILL 2021

Importance for Prelims: Economy / Legislations

Setting Sail

Inland Vessels Bill gets a go ahead

To be presented in the Parliament

Bill to regulate vessels plying on rivers

DIVING DEEP

₹4,077 cr for Deep Ocean Mission

To be implemented over 5 years

Part of Blue Economy initiative

FARM FORWARDS

Nutrient-based Subsidy for Phosphatic & Pottasic fertilizers

Subsidy applicable for FY 22

Decision in response to Increasing cost of raw materials for fertilizers

The Union cabinet has given the incline to the inland Vessels Bill, 2021, which is able to return the inland Vessels Act, 1917. The Bill can regulate safety, security and authorizing of inland vessels.

Key options of the Bill:

- It provides for a unified law for the whole country, rather than separate rules framed by the States.
- The certificate of registration granted under the proposed law are deemed to be valid in all States and Union Territories, and there'll be no got to seek separate permissions from the States.
- The Bill provides for a central information base for recording the details of vessel, vessel registration, crew on an electronic portal.
- It needs all mechanically propelled vessels to be compulsorily registered.
- All nonmechanically propelled vessels also will need to be registered at district, taluk or panchayat or village level.

Inland Water Transport (IWT) in India:

- India has regarding 14,500 kilometer of navigable waterways that comprise of stream, canals, backwaters, creeks, etc.
- IWT may be a fuel-efficient and environment-friendly mode.
- As per the National Waterways Act 2016, 111 waterways are announce as National Waterways (NWs).
- The inland Waterways Authority of india (IWAI) is implementing the Jal Marg VikasProject (JMVP) at an calculable price of ₹5369.18 crores for capability augmentation of navigation on the Haldia-Varanasi stretch of Ganga (part of NW-1) with thetechnical and monetary assistance of the globe Bank.

Topic 22. UDYOG AADHAAR MEMORANDUM (UAM)

Importance for Prelims: Governance

Ministry of micro, little and Medium Enterprises Extends Validity of Udyog Aadhaar memorandum from thirty first March, 2021 to thirty first Dec, 2021.

- The Ministry for MSME in Sept 2015 notified Udyog Aadhaar to make sure easy registration and wider coverage of MSMEs to avail the advantages below varied Schemes of Central/ State governments.
- Udyog Aadhaar memorandum (UAM) may be filled on-line on the portal created by Ministry of MSME.
- UAM may be a one-page registration kind that constitutes a self-declaration format under that the MSME can self-certify its existence, bank account details, promoter/owner's Aadhaar details and alternative minimum info needed.
- There shall be no fee for filing the Udyog Aadhaar memoranda.
- On submission of the shape, Udyog Aadhaar Acknowledgement shall be generated and mailed to the e-mail address provided within the Udyog Aadhaar memorandum that shall contain distinctive Udyog Aadhaar number (UAN).

Topic 23. INDIAN CERTIFICATION OF MEDICAL DEVICES (ICMED) PLUS SCHEME

Importance for Prelims: Governance



Recently, the quality Council of india (QCI), and also the Association of Indian makers of Medical Devices (AiMeD) have added more options to the ICMED.

Indian Certification of Medical Devices (ICMED) and scheme

- It had been launched for verification of Medical Devices in 2016.
- It can undertake verification of the standard, safety and efficacy of medical devices.
- It has been designed to integrate the standard Management System components and merchandise} connected quality validation processes through witness testing of products

The eligibility under ICMED scheme:

- Indian medical device manufactures/ exporters; and Local approved representatives of medical device manufactures/ distributors

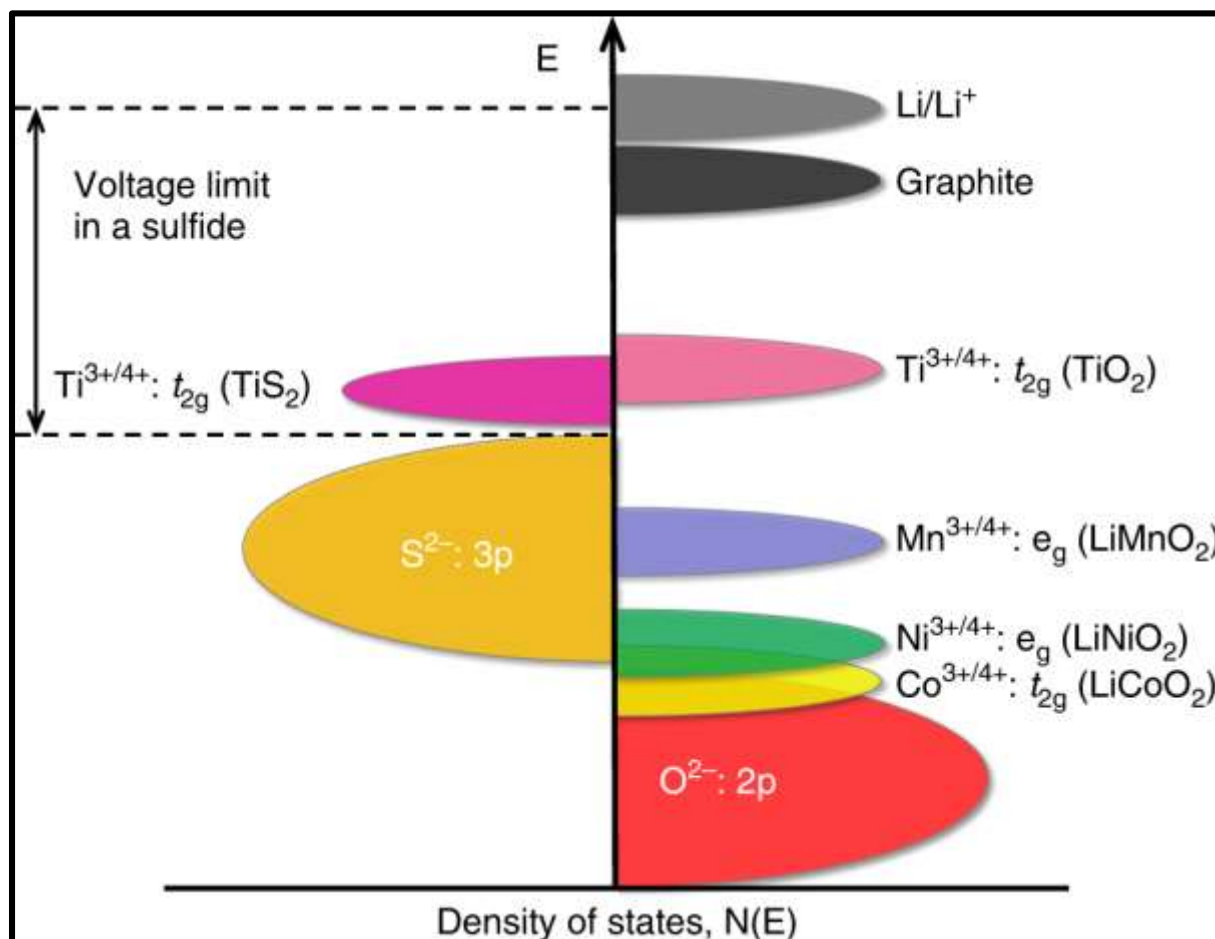
Importance of Indian Certification of Medical Devices (ICMED) and scheme

- It is that the 1st scheme around the world throughout which quality administration systems along side product certification standards are integrated with regulative needs.
- It is going to be a finish to finish quality assurance scheme for the medical devices sector in India.
- It provides the much-needed institutional mechanism for assuring the merchandise quality and safety.
- It can go a long method in helping the procurement agencies to tackle the challenges about the menace of counterfeit product and fake certification.
- It will facilitate in eliminating the circulation and use of sub-standard medical product or devices of uncertain origin that would prove to be serious health hazards.

Topic 24. COATING CARBON ON LITHIUM METAL OXIDE

ELECTRODE CAN DOUBLE BATTERY LIFE

Importance for Prelims: Science & tech



Researchers have developed a non-expensive way to coat carbon on lithium metal oxide electrodes for lithium-ion batteries. The life of the lithium-ion cells ready using these electrode materials is expected to be doubled because of protecting carboncoating.

About lithium ion Battery

- Lithium-ion batteries are the foremost normally used power supply for electrical vehicles. However, its penetration to the daily usage against gasoline-based vehicles need drastic improvement within the lifetime and value yet as mileage per charge.
- The active components of lithium-ion batteries are cathode, anode, and

electrolyte.

- While business graphite is used as anode, lithium metal oxides or lithium metal phosphates are used as a cathode in Li ion battery.
- The electrolyte could be a lithium salt dissolved in organic solvents. The capability of the lithium-ion battery determines the mileage of the electrical vehicle.
- Before the capability reduces to Eighty per cent, the number of charging cycles determines the life of the battery.

Carbon Coating Technique

- Carbon being inert to most chemicals and stable under the operating window is that the best choice of coating material to improve the cyclic stability of the active materials.
- Carbon coating on the active materials will double the lifetime of the lithium-ion cells.
- However, coating carbon on lithium metal oxide is very difficult, due to the problem involved in coating carbon throughout the synthesis of lithium metal oxide material during a single step.
- The electrochemical performance of the lithium-ion cells made using carboncoatedNMC111 is at par with that of the business lithium-layered oxide cathodes.
- Superior cyclic stability of the carbon coated product with capability retention of morethan Eighty per cent once one thousand cycles of charging/discharging is demonstrated with an optimum carbon thickness matching business samples

Topic 25. AFTER 45 YEARS ODISHA WELCOMES GHARIAL HATCHLINGS

Importance for Prelims: Environment



Recently, Odisha has seen natural nesting of gharials for the 1st time since they were introduced in its rivers back in 1975.

- Odisha had become the only state to own all the 3 species of the reptilian i.e. freshwater gharials, muggers and saltwater crocodiles with the introduction of gharials in 1975.
- All the original gharials introduced over the years in Odisha are dead currently and Odisha has introduced thirteen additional gharials over the past 3 years within the Mahanadi.
- The Odisha Forest Department declared Rs 1,000 for anyone rescuing a gharial, and compensation for those whose fishing nets are destroyed by the reptiles.

Freshwater gharials

- They are a kind of Asian crocodilian reptile distinguished by their long, thin snouts.

- They were granted full protection within the Seventies and later listed in Schedule one of the wildlife (Protection) Act, 1972.
- It is listed as Critically endangered under the IUCN Red List of threatened Species.
- They live in clear freshwater stream systems, congregation at stream bends wherever the water is deeper.
- Their vary has shrunk to 2 countries i.e. India, along the Chambal, Girwa, and Son Rivers and nepal, along the Narayani watercourse.

Muggers

- It may be a medium to massive crocodilian reptile species.
- It is found in india, Sri Lanka, Pakistan, nepal and in bangladesh and conjointly its range extends westward into eastern iran.
- It may be a hole-nesting species, with egg-laying taking place throughout the annual dry season.
- It is listed as 'Vulnerable' below the IUCN Red List of vulnerable Species.
- It is protected under Schedule I of the wildlife (Protection) Act, 1972.

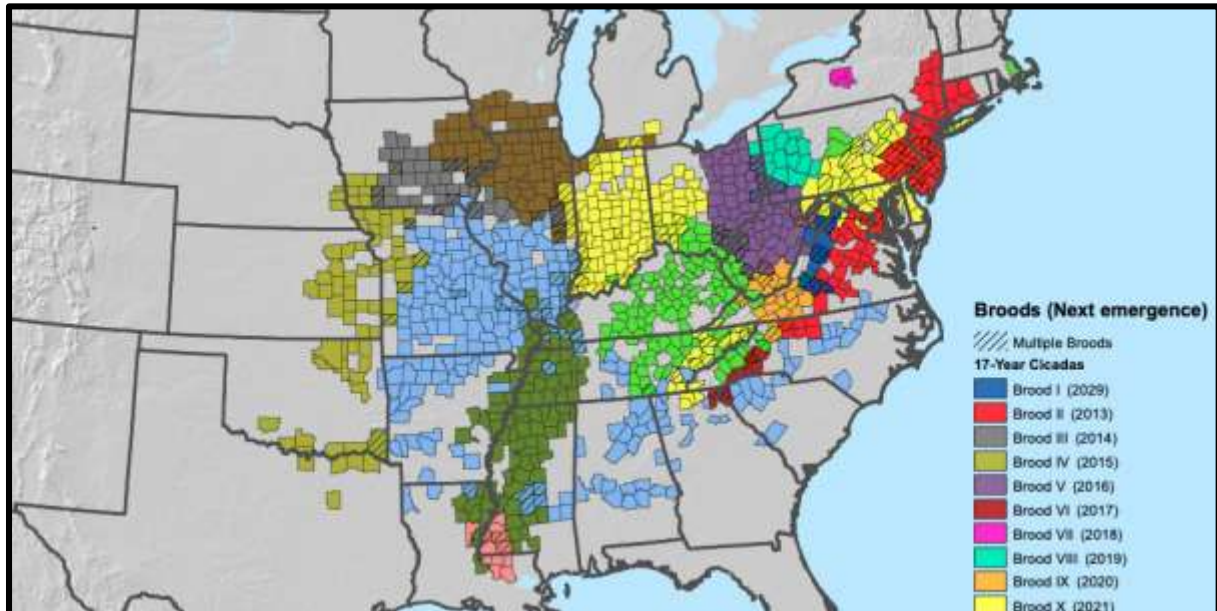
Saltwater Crocodiles

- It is that the largest of all crocodilians, and therefore the largest reptilian within the world.
- Saltwater crocs have an enormous range, populating the brackish and freshwater regions of eastern india, southeast asia, and northern Australia.
- Apart from the eastern coast of india, the saltwater crocodilian reptile is extraordinarily rare on the Indian landmass.
- A massive population is present within the Bhitarkanika wildlife Sanctuary of Odisha whereas smaller populations occur throughout the Sundarbans.
- It is listed as 'Least Concern' under the IUCN Red List of vulnerable

Species.

Topic 26. BILLIONS OF CICADAS HAVE EMERGED ACROSS EASTERN PARTS OF THE UNITED STATES

Importance for Prelims: Science & tech



Periodical cicadas, therefore known as due to their 13- or 17-year life cycle, most of that is spent underground, emerge from their earthy digs to romance, reproduce and retire. This year is that the year of the Brood X periodical cicadas. Here, X stands for the roman numeral and refers to the sequence of emergence

Cicadas

- Cicadas are insects that spend most of their lives underground and emerge from the soil primarily to mate.
- Once out of the bottom, their life span is fairly short, somewhere between two-four weeks.
- At present, there are regarding fifteen active broods of those cicadas as some have gone extinct.
- The insects are found in America's also as New Zealand and Australia.
- The name thirteen and seventeen year refers to the number of years that cicada nymphs take to reach adulthood.
- It isn't clear why their development period is so long, researchers suspect that it should be connected to avoiding predators higher than the soil.

How are they fed?

- During this time underground the nymphs live on sap from plant roots.
- After this developmental period, the cicada nymphs construct a "cicada hut" and burrow their way out from the soil and climb onto any near tree or vegetation.

Topic 27. GOVERNOR V/S CHIEF MINISTER OF STATE

Importance for Prelims: Polity

Currently, the west bengal Chief Minister has banged the west bengal Governor over his letter on post-poll brutality.

- The Home Department of the west bengal government said the Governor's act of creating the letter public was violative of all established norms, and disrupts sanctity of such communications.
- The government of west bengal has notice with dismay and distress that the Governor of west bengal has suddenly created public with contents that aren't according to real facts.

Provisions associated with Appointment of Governor

- The governor is neither directly elective by the individuals nor indirectly elective by a specially established electoral college as is that the case with the president.
- The governor is appointed by the president by warrant under his hand and seal.
- In 1979, the Supreme Court control that the workplace of governor isn't an employment under the Central government.
- It is an independent constitutional workplace and isn't under the management of or subordinate to the Central government.
- The yankee model, wherever the Governor of a state is directly elective, was dropped and therefore the Canadian model, wherever the governor of a province (state) is appointed by the Governor-General (Centre), was accepted within the Constituent Assembly.

The Constitution lays down solely 2 qualifications for the appointment of an individual as a governor that are:

- He ought to be a citizen of india.
- He ought to have completed the age of thirty five years.

Term of Governor's office

- A governor holds workplace for a term of 5 years from the date on that he enters upon his workplace.
- The Constitution doesn't lay down any grounds upon that a governor is also removed by the President.
- The Supreme Court control that the pleasure of the President isn't excusable and therefore the governor has no security of tenure and no fixed term of workplace.
- The President could transfer a Governor appointed to 1 state to a different state for the rest of the term.

Constitutional Position of Governor

- The government power of the state shall be vested within the governor and shall be exercised by him either directly or through officers subordinate to him in accordance with this Constitution (Article 154).
- There shall be a council of ministers with the chief minister because the head to aid and advise the governor within the exercise of his functions, except in thus far as he's needed to exercise his functions in his discretion (Article 163).
- The council of ministers shall be conjointly accountable to the legislative assembly of the state (Article 164).

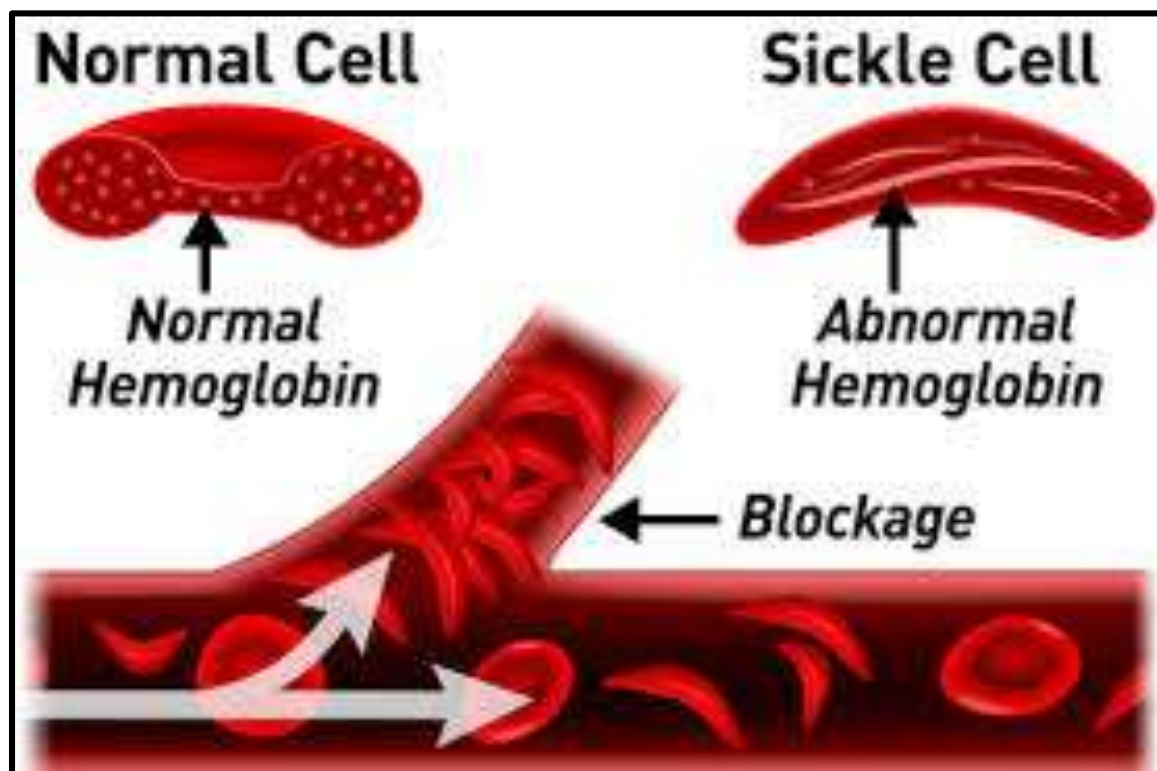
Power of Governor to act against the need of Chief Minister

- It has been discovered in few instances wherever the Governor will summon the House despite the refusal of the Chief Minister who heads the cabinet.
- When the Chief Minister appears to possess lost the majority and therefore the legislative members of the House propose a no-confidence motion against the Chief Minister, then the Governor will choose his or her own on summoning the House.

- The actions of the Governor accomplished with the utilization of his discretionary powers may be challenged within the court.

Topic 28. NATIONAL SICKLE CELL CONCLAVE ON 'SICKLE CELL DISEASE'

Importance for Prelims: Science & tech



The Minister of tribal Affairs inaugurated the Second National sickle cell conclave on 'Sickle Cell Disease'. The conclave is being control to mark the globe sickle cell Day ascertained on 19thJune 2021 each year.

- It is characterised by a modification within the form of the red blood cell from a smooth, donut-shape into a crescent or half-moon form.
- These cells lack plasticity and might block little blood vessels, impairing blood flow.
- This condition leads to shortened red blood cell survival, and subsequent anaemia, usually referred to as sickle-cell anaemia.
- This leads to chronic acute pain syndromes, severe microorganism infections, and necrosis (tissue death).
- Anaemia may be a medical condition during which the red blood cell count or haemoglobin is less than ordinary. Symptoms of anemia

incorporate Fatigue, Shortness of breath, Hair loss etc.

Treatment: It will be managed by easy procedures including:

- High fluid intake
- Healthy diet
- Folic acid/Iron supplementation
- Pain medication
- Vaccination and antibiotics for the prevention and treatment of infections
- A number of different therapeutic measures.

Indian scenario:

- Sickle cell disease (SCD), that is that the most prevailing inherited blood disease, is widespread amongst several tribal population teams in india
- The disease in india is prevailing preponderantly in Jharkhand, maharashtra, Madhya Pradesh, Chhattisgarh, western Odisha, eastern Gujarat and in pockets of the nilgiri hills in north tamil nadu and Kerala.

Topic 29. ARE YOUR STAPLE RICE AND WHEAT LOSING THEIR NUTRIENTS?

Importance for Prelims: Science & tech

Researchers from numerous institutes underneath the Indian Council of Agricultural Research (ICAR) and Bidhan Chandra Krishi Viswavidyalaya found depleting trends in grain density of zinc and iron in rice and wheat cultivated in India.

- The team collected seeds of rice (16 varieties) and wheat (18 varieties) from the gene bank maintained at the ICAR-National Rice Research Institute, Chinsurah Rice Research Station and ICAR-Indian Institute of Wheat and Barley Research.
- Cultivar repositories are nodal institutes that preserve and archive the previous cultivars or varieties from our country. These organizations are depositories of genetic materials.
- The team noted that zinc and iron concentrations in grains of rice cultivars discharged within the Nineteen Sixties were 27.1 mg/kg and 59.8 mg/kg. This depleted to 20.6 mg/kg and 43.1 mg/kg, severally within the 2000s.
- In wheat, the concentrations of zinc and iron — 33.3 mg/kg and 57.6 mg/kg in cultivars of the Nineteen Sixties, born to 23.5 mg/kg and 46.4 mg/kg, severally in cultivars discharged throughout the 2010s.
- Zinc and iron deficiency affects billions of individuals globally and also the countries with this deficiency have diets composed primarily of rice, wheat, corn, and barley.

Micronutrients

- Micronutrients are nutrients that are needed by the body in lesser amounts for its growth and development.
- They play a significant role within the metabolic activities of the body.

These include vitamins and minerals.

- Since our body cannot produce vitamins and minerals, they're taken externally from totally different food merchandise.
- The micronutrient content for each food is different; thus, it's advisable to eat types of food for enough vitamin and mineral consumption.
- These micronutrients facilitate in preventing and fighting bound diseases. However, they ought to be taken in adequate quantities: excess intake or inadequate intake ends up in many disorders like visual impairment, mental retardation, etc.

About ICAR

- The Indian Council of Agricultural analysis (ICAR) was established on sixteen July 1929 as a registered society under the Societies Registration Act, 1860.
- It is an autonomous organisation under the Department of Agricultural analysis and Education (DARE), Ministry of Agriculture and Farmers Welfare, Government of India.
- It is headquartered at New Delhi. With 102 ICAR institutes and seventy one agricultural universities spread across the country this is often one among the biggest national agricultural systems within the world.
- It is that the apex body for coordinative, guiding and managing analysis and education in agriculture together with gardening, fisheries and animal sciences within the entire country.

Topic 30. ROAD TO SAINTHOOD FOR ROBERT SCHUMAN- THE 'FATHER OF EUROPE'

Importance for Prelims: History

Pope Francis on Sat approved a decree declaring the “heroic virtues” of Schuman, a devout Catholic throughout his life. He will currently be known as “venerable” by Catholics, one among the various steps within the long method to be recognised as a saint by the Rome-based church.

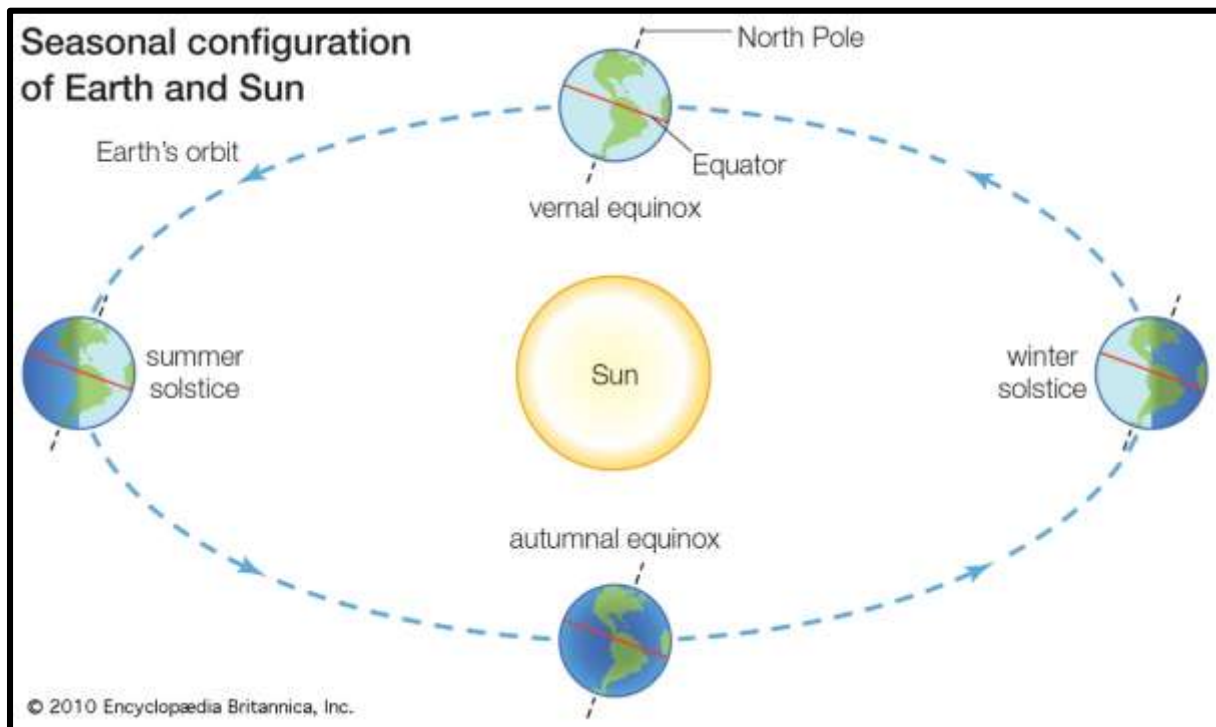
- Robert Schuman, Luxembourgian-born French statesman who supported the
- European Coal and Steel Community and worked for economic and political unity designed to guide to the institution of a “United States of Europe.”
- Schuman, a member of the French National Assembly from 1919, was inactive by the German gestapo in Sep 1940 once the German occupation of France.
- He escaped in 1942 and worked within the Résistance till France was liberated(1944).
- As founding father of the popular Republican Movement, he served as minister of finance (July–November 1946), premier (November 1947–July 1948 and August– Sept 1948), foreign minister (July 1948–December 1952), and minister of justice (1955–56).
- While foreign minister he developed the Schuman set up (1950) to market European economic and military unity and a Franco-German rapprochement to prevent another war between the 2 nations.
- The economic aspects of his plan were realised in 1952 within the European Coal and Steel Community, a six-nation western European economic union, the primary during a series of economic agreements resulting in the formation of the European Economic Community

(Common Market) in 1958.

- He served as president of the Common Assembly, the consulting arm of the Common Market, from 1958 to 1960 and was an Assembly member till Feb 1963.

Topic 31. SUMMER SOLSTICE

Importance for Prelims: Geography



The summer solstice happened nowadays around 9:02 am on Mon (Indian standard Time).

Summer solstice

- Solstice means that “sun stands still” in Latin.
- The longest day of 2021 for those living north of the Equator is June 21.
- This day is characterised by a greater amount of energy received from the sun.
- In technical terms, this present day is mentioned because the summer solstice, the longest day of the summer season. It occurs once the sun is directly over the Tropic of Cancer or a lot of specifically right over 23.5-degree north latitude.
- The southern hemisphere receives most daylight on Dec twenty one, twenty two or twenty three once the northern hemisphere has its longest nights– or the solstice.

Why will we have summer solstice?

- Since Earth rotates on its axis, the northern hemisphere gets a lot of direct daylight between March and Sept over the course of each day.
- This conjointly means that individuals living within the northern hemisphere experience summer throughout this time.
- The remainder of the year, the southern hemisphere gets a lot of daylight.
- During the solstice, the Earth's axis — around that the world spins, finishing one turn every day — is tilted during a method that the north pole is tipped towards the sun and therefore the south pole is far from it.

Some other facts

- Summer solstice doesn't mean the earliest sunrise or latest sunset.
- Although June twenty one are going to be the longest day in 2021, it doesn't essentially mean that it brings the earliest sunrise or latest sunset.
- It depends on the flexibility location of the country.

Topic 32. RETREATING MONSOON RAINS A GLOBAL PHENOMENON CAN HELP STUDY CLIMATE CHANGE

Importance for Prelims: Geography

Rainfall throughout retreating monsoon, that parts of south india experiences each year, isn't a local anomaly and is international in nature and scale, consistent with a recent study by the University of sydney.

Retreating Monsoon Season

- The retreating southwest monsoon season is marked by clear skies and rise in temperature.
- The land remains moist. because of the conditions of hot temperature and humidness, the weather becomes rather oppressive. this is often normally called the 'October heat'.
- In the second half of Oct, the mercury begins to fall rapidly, significantly in northern india.
- The weather within the retreating monsoon is dry in north india however it's related to rain within the eastern a part of the peninsula. Here, Oct and Nov are the rainiest months of the year.
- The widespread rain during this season is related to the passage of cyclonic depressions that originate over the andaman ocean and manage to cross the eastern coast of the southern peninsula. These tropical cyclones are terribly harmful.
- A bulk of the rainfall of the Coromandel Coast comes from these depressions and cyclones.
- Unlike the rest of the country, that receives rain within the southwest monsoon season between june and Sept, the northeast monsoon is crucial for farming and water security within the south.

Topic 33. BIOTECH KISAN PROGRAMME

Importance for Prelims: Governance



Recently, a Department of Biotechnology (DBT) has issued a Special call for North East Region as a part of its Biotech KISAN Programme.

- It aims appreciate the native issues of the NER farmers and supply scientific solutions to those issues.
- It can target on the North East Region because it is preponderantly agricultural with seventieth of its work force engaged in agriculture and allied sector for livelihood.
- The NER produces just one.5 per cent of country's food grain and continues to be a internet businessperson of food grains even for its domestic consumption.
- The NER has untapped potential to enhance the financial gain of the farming population by promotion of location specific crops, agriculture and plantation crops, fisheries and livestock production.

About Biotech KISAN Programme

- It is Biotech-Krishi Innovation Science Application Network (Biotech-KISAN).
- It may be a scientist-farmer partnership scheme launched in 2017 for agriculture innovation.
- It may be a Department of Biotechnology, Ministry of Science and Technology initiative that empowers farmers, particularly ladies farmers.
- It may be a Pan-India program, following a hub-and spoke model and stimulates entrepreneurship and innovation in farmers and empowers ladies.
- It has been established at Foundation for Agricultural Resources Management and Environmental remediation (FARMER), Ghaziabad.

Significance of Biotech KISAN Programme

- Under this theme, thus far 146 Biotech-KISAN Hubs are established covering all fifteen agro-climatic zones and one hundred ten Aspirational Districts within the country.
- It has benefitted over 2 lakhs farmers thus far by increasing their agriculture output and financial gain.
- It aims to know the issues of water, soil, seed and market faced by the farmers and supply easy solutions to them.
- It is expected to fulfil the technology demand to get agriculture and bio resource connected jobs and higher livelihood guaranteeing biotechnological benefits to little and marginal farmers.

Topic 34. NATIONAL INTERNET EXCHANGE OF INDIA (NIXI)

Importance for Prelims: Economy /National Organisations



Recently, the National net Exchange of india (NIXI) had celebrated its 18th Foundation Day.

About National net Exchange of india (NIXI)

- It may be a not for profit Organization under section eight of the businesses Act 2013.
- It is under Ministry of electronics & info Technology (MeitY).
- It was set up for peering of ISPs among themselves for the aim of routing the domestic traffic within the country.
- It is functioning since 2003 for spreading the net technology to the citizens of india through the subsequent activities:
- Internet Exchanges through that the net information is changed amongst ISPs and between ISPs and CDNs
- IN register, managing and operation of IN country code domain.
- IRINN, managing and operational net protocol (IPv4/IPv6)

Indian register for net Names and Numbers (IRINN)

- It provides allocation and registration services of information processing addresses and AS numbers.
- It contributes to the society by providing Internet-related data as a non-profit, affiliation-based organization, and performing analysis, education

and enlightenment activities.

Topic 35. KEEL OF ADDITIONAL KRIVAK CLASS SECOND

FRIGATE LAID

Importance for Prelims: Defence

The keel of the second frigate, of additional Krivak category stealth ships, being designed with technology transfer from Russia by the Goa Shipyard Limited (GSL) was laid by Vice Chief of naval operations Vice Adm G Ashok Kumar on Friday.

- The Krivak category, Soviet designation Project 1135 Burevestnik (storm petrel), were a series of frigates and guard ships (patrol boats) built in the Soviet Union primarily for the Soviet Navy since 1970.
- Later some sub-branches, just like the Nerey (Nereus) were designed for coastal patrol by the KGB Border Troops. Until 1977, the ships within the category were thought-about to be large anti-submarine warfare vessels.
- These ships are normally known by their North Atlantic Treaty Organization coverage category name of Krivak and are divided into Krivak I, Krivak II, Krivak IV (navy), and Krivak III (coast guard) categories.
- They were designed as a successor to the Riga category. The look started within the late Nineteen Fifties and matured as an anti-submarine ship within the Nineteen Sixties.
- The Indian Navy ordered six frigates of upgraded Krivak III category because the Talwar class.
- The Talwar-class frigates or Project 11356 are a category of stealth guided missile frigates designed and built by Russia for the Indian Navy.
- The Talwar-class guided missile frigates are the improved versions of the Krivak III class (Project 1135) frigates utilized by the Russian Coast Guard.

Topic 36. PACT SIGNED TO CONSERVE RARE TURTLE IN ASSAM

Importance for Prelims: Environment



A major temple in assam has signed a memoranda of understanding with 2 green NGOs, the state State Zoo-cum-Botanical Garden and also the Kamrup district administration for the long-run conservation of the rare freshwater black softshell turtle or the Nilssonianigricans.

About Black Softshell Turtle (Nilssonianigricans)

- Until sightings along the Brahmaputra's drainage in assam, the black softshell turtle was thought to be "extinct within the wild" and confined solely to ponds of temples in northeastern india and bangladesh.
- The International Union for Conservation of Nature had in 2021 listed the turtle as "critically endangered".
- But it doesn't enjoy legal protection below the Indian wildlife (Protection) Act of 1972, though it's historically been searched for its meat and cartilage, listed in regional and international markets.
- The black softshell turtle is being bred within the pond of Hayagriva

Madhab Temple at Hajo in Guwahati, Assam.

- Locals regard the turtles within the pond as Kurma avatar of Lord Vishnu to whom the Hajo temple is devoted.
- India hosts twenty eight species of turtles, of that twenty are found in Assam.
- Threats to turtles embody trying to find meat and eggs silt mining, encroachment of wetlands and changes in flooding pattern have had a unfortunate impact on the turtle population.

Topic 37. ANOTHER ILLEGAL BT COTTON GAINS ROOT IN GUJARAT

Importance for Prelims: Agriculture

An indigenously developed genetically changed cotton is being cultivated in Gujarat's Saurashtra region unlawful, adding to the Centre woes arising from the planting of unauthorised HTBt cotton in varied elements of the country.

- Regarded by varied names these as 4Bt, Bt4 and 4G, the new cotton, additionally a Bt range, has been designed by crossing cotton grown regionally within the Saurashtra location with cotton cultivated in Australia and also the United States.
- According to cotton traders in Rajkot, the fibre length of the new Bt cotton is longer than alternative varieties grown within the state as nicely because the yield. it's additionally brighter white than different cotton.
- In its to begin with year of introduction, it had been whole free of the pink bollworm menace that practised affected the cotton crop in many parts of Gujarat and maharashtra previous year.
- In the circumstance of HTBt cotton, whose cultivation is unlawful because it has not been authorised by the essential Engineering Appraisal Committee (GEAC), its planting gained round the very last 2 many years with growers defying indicate authorities.
- Previous year, HTBt cotton created up fifteen for each cent of the entire 129.fiftyseven lakh hectares expanse below the crop, in line with the seed marketplace.
- The new cotton is additionally not authorised by the GEAC, that clears Bt seeds for cultivation.
- Seed marketplace resources mentioned it's risky for farmers to improveunauthorised seeds as a result of they're unlikely to get any payment within the function of crop failure.

Pink Bollworm (PBW)

- The pink bollworm (*Pectinophora gossypiella*), is an insect well-known for being a pest in cotton farming.
- The pink bollworm is native to Asia, however has become an invasive species in most of the world's cotton-growing regions.
- In elements of india, the pink bollworm is currently resistant to 1st generation transgenic Bt cotton (Bollgard cotton) that expresses one Bt gene (Cry1Ac).

Genetic Engineering Appraisal Committee (GEAC)

- GEAC is apex body under Ministry of atmosphere, Forests and global climate change for regulation producing, use, import, export and storage of hazardous microorganisms or genetically engineered organisms (GMOs) and cells within the country.
- It is additionally chargeable for giving technical approval of proposals concerning release of GMOs and merchandise together with experimental field trials.
- However, atmosphere Minister provides final approval for GMOs.

Topic 38. LAUREL HUBBARD HAS BECOME THE FIRST OPENLY TRANSGENDER ATHLETE SELECTED FOR THE OLYMPICS

Importance for Prelims: Science & tech / Sports



New zealand athlete Laurel Hubbard has become the 1st openly transgender athlete selected for the olympics. Hubbard, 43, had participated within the men's category as Gavin before she will in 2013. she is going to vie within the women's 87- kg category in tokyo.

- The International Olympic Committee's guidelines on transgender athletes permit those like Hubbard, who have created the transition from male to feminine, to compete if bound conditions are consummated.
- Such athletes, to be eligible to compete within the women's class, should keep their testosterone levels within the serum to below ten nanomoles per litre for the preceding twelve months before a contest.

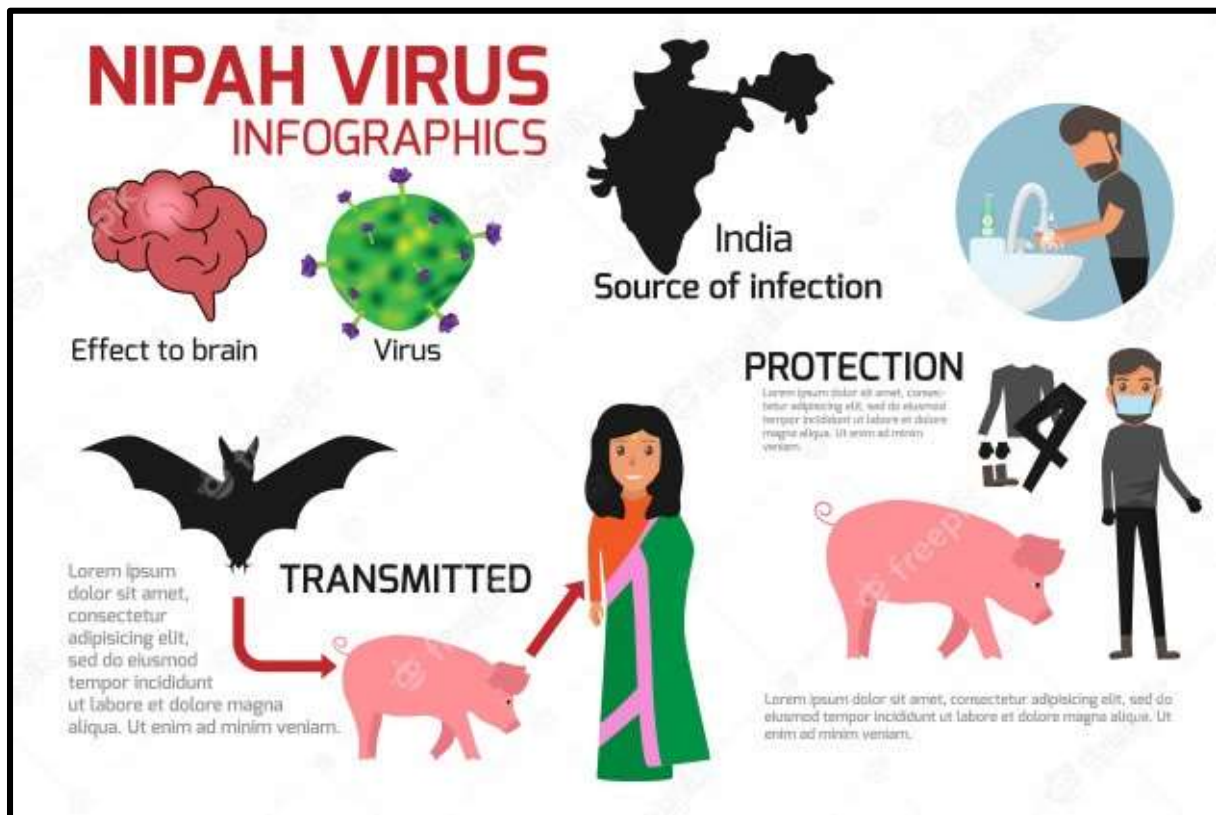
- The athlete are going to be monitored regularly and non-compliance may lead to ineligibility.

Testosterone

- Testosterone is that the primary sex hormone and anabolic steroid in males.
- In male humans, testosterone plays a key role within the development of male generative tissues like testes and prostate, also as promoting secondary sexual characteristics like increased muscle and bone mass, and therefore the growth of hair.
- In addition, testosterone in each sexes is concerned in health and well-being and within the interference of osteoporosis.
- Insufficient levels of testosterone in men could result in abnormalities as well as frailty and bone loss.

Topic 39. NIPAH VIRUS (NIV)

Importance for Prelims: Science & tech



Recently, a cross-sectional survey by ICMR- National Institute of virology has picked up samples with the presence of antibodies against the Nipah virus in some bat species from a cave in Mahabaleshwar.

- The new study focussed on detection of possible Nipah viral infection in *Rousettus leschenaultii* and *Pipistrellus pipistrellus* bats in maharashtra.
- Blood, throat and rectal swab samples were collected onsite from anaesthetized bats and also the throat and rectal swab specimens were collected from all the bats.
- The RNA was extracted from samples and Anti-NiV IgG antibodies were detected during a number of the samples.
- The cross-sectional survey was initiated to check the prevalence of NiV in bats of india by random sampling of *P. medius*, *R. leschenaultii* and *P. pipistrellus* bats that have wide prevalence in india.

- The exposure of *R. leschenaultii* bats to NiV warrants any investigation as roosting and breeding habitats of the *Rousettus* and *pteropus* vary greatly.
- The NiV detection in *P. pipistrellus* bats, an insectivorous species, and their role in virus spill-over to humans seems remote.

What is Nipah Virus?

- The *Pteropus medius* bats, that are massive fruit-eating bats, are the incriminated reservoir for NiV in India.
- It could be a zoonotic virus which suggests that it will spread between animals and other people.
- The NiV could be a member of the family *Paramyxoviridae*, genus *Henipavirus*.
- It is on the top-10 priority list pathogens recognized by the World Health Organization.
- The infection with NiV is related to encephalitis (swelling of the brain) and might cause mild to severe illness and even death.
- It was first discovered in 1999 following an outbreak of a virulent disease, a pestilence of disease in pigs and other people in Malaysia and Singapore.

Transmission of Nipah Virus

- The Nipah virus (NiV) will spread to individuals from: Direct contact with infected animals, like cows or pigs, or their body fluids (such as blood, pee or saliva);
- Consuming food merchandise that are contaminated by body fluids of infected animals (such as palm sap or fruit contaminated by an infected bat); and close contact with someone infected with NiV or their body fluids (including nasal or inhaling droplets, urine, or blood)
- The person-to-person spread of NiV is often reportable in Bangladesh and India that is most ordinarily seen within the families and caregivers of

NiV-infected patients, and in health care settings.

Diagnosis of Nipah Virus

- The laboratory testing is conducted using real time polymerase chain reaction (RT-PCR) from throat and nasal swabs, cerebrospinal fluid, urine, and blood.
- The testing for antibodies is conducted victimization an enzyme-linked immunosorbent assay (ELISA).

Topic 40. NATIONAL POPULATION REGISTER (NPR)

Importance for Prelims: Governance



Migrants belonging to 6 non-Muslim minority communities from afghanistan, pakistan and bangladesh, whereas applying for long-run visas (LTVs), also can manufacture National Population Register (NPR) registration slips as proof of the period of their keep in Asian nation, consistent with a Union Home Ministry manual.

- The NPR number is part element} of an illustrative list of over ten documents that could be provided to use for an LTV, that may be a precursor to acquiring Indian citizenship either by naturalisation or registration under Section five and six of the Citizenship Act,1955, for the six communities — Hindus, Sikhs, Jains, Parsis, Christians and Buddhists — from the 3 countries.
- The special provision of LTVs for Hindus and Sikhs from pakistan and afghanistan was 1st created in 2011.
- Ministry officials assert that the consciousness drive isn't associated with the Citizenship(Amendment) Act, 2019 (CAA), that is intended to profit undocumented migrants from the six teams who entered india before the 2014 cut-off date.
- The CAA is yet too execute.

National Population Register

- It could be a list of “usual residents of the country”.
- A “usual resident of the country” is one who has been residing during a native area for a minimum of the last six months, or intends to remain during a specific location for the next six months.
- The NPR is being ready beneath provisions of the citizenship Act 1955 and also the Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003.
- It is obligatory for each “usual resident of India” to register within the NPR.

Background:

- The information for the NPR was 1st collected in 2010 along side the house listing part of Census 2011.
- In 2015, this information was additional updated by conducting a door-to-door survey.
- However, with the utilization of Aadhaar because the key vehicle for transfer of government advantages within the previous few years, the NPR has taken a backseat.

Scope:

- The NPR exercise is conducted at the native, sub-district, district, state and national levels.
- The NPR can collect each demographic information and biometric information. Biometric data are going to be updated through Aadhar details.
- In the 2010 exercise, the RGI had collected only demographic details.
- In 2015, it updated the information more with the mobile, Aadhaar and ration cardnumbers of residents.
- For the 2020 exercise, it's dropped the ration card number however

additional different classes.

Topic 41. INDIAN NAVY – BLUE WATER OPERATIONS WITH A GREEN FOOTPRINT

Importance for Prelims: Environment / Current Events

Indian Navy has adopted a comprehensive ‘Indian Navy atmosphere Conservation Roadmap (INECR)’ for synergising the aim of ‘Blue Water Operations with a green Footprint’.

- Indian Navy commissioned one among its largest solar plant with a capability of 3MW at Indian naval academy (INA), Ezhimala in July 2020.
- Another 2MW solar energy plant was put in at naval Station Karanja, Mumbai in July 2020.
- With this, the installed solar plant capability at naval Stations is eleven MW.
- The installation of SPVs are in line with Navy’s objective of fulfilling Govt of India’s ‘Jawaharlal Nehru National Solar Mission (JNNSM)’ mission.
- Further, viability of setting up urban forests ideas like Miyawaki forests is being emphasized to match the theme of World Atmosphere Day 2021- ‘Ecosystem Restoration’

Miyawaki method of forest creation

- Miyawaki may be a technique pioneered by Japanese botanist Akira Miyawaki (born 1928), that helps build dense, native forests.
- The approach is supposed to confirm that plant growth is ten times quicker and also the resulting plantation is thirty times denser than usual.
- It involves planting dozens of native species within the same area, and creating them maintenance-free after the 1st 3 years.
- In July 2020, Union Atmosphere Minister inaugurated a novel urban forest at the workplace of the accountant and Auditor General of India (CAG) in

new delhi.

- This would be a dense urban forest with multiple tree layers together with 12000 saplings of fifty nine autochthonous species in another year or so. The Miyawaki technique of forest creation is employed.

Topic 42. NATIONAL FINANCIAL REPORTING AUTHORITY (NFRA)

Importance for Prelims: National Organizations

NFRA has invited recommendation from public on consultation paper on NFRA's engagement with its stakeholders.

- NFRA is an independent regulative body set up beneath Section 132 of the

Companies Act.

- It was established by the Central Government in Oct 2018.
- After the Satyam scandal happened in 2009, the standing committee on Finance projected the conception of the National financial reportage Authority (NFRA) for the 1st time in its twenty first report.
- It supervise compliance with Accounting and Auditing Standards by firms that may be described as Public Interest Entities (PIEs).
- This cluster includes all listed corporations, and huge unlisted corporations.
- To discharge this mandate, NFRA is within the method of making a verified and correct info of corporations and auditors that come beneath the regulative ambit of NFRA.
- **HQ:** new delhi
- NFRA consists of 1 chairman, 3 full-time members and one secretary.
- Former IAS officer RangachariSridharan was appointed because the 1st chairman of the body in Oct 2018.

Topic 43. CHANGES TO THE CONSUMER PROTECTION (E-COMMERCE) RULES 2020

Importance for Prelims: Governance



Recently, the Department of shopper Affairs, Government of india has sought-after comments / recommendation on projected modification the buyer Protection (ECommerce) Rules, 2020.

Proposed modification to client Protection (E-commerce) Rules, 2020

- It projected that each e-commerce entity that intends to control in india should register itself with the Department for Promotion of trade and Internal Trade(DPIIT).
- The new draft projected the appointment of chief compliance officer and resident grievance officer.
- The e-commerce entities also are needed to produce info not later than seventy two hours of the receipt of an order from a government agency for interference, detection and investigation and prosecution of offences beneath any law.
- The government has projected a ban on 'mis-selling' of products and

services offered on such platforms.

- The proposed modification defines 'flash sale' as that organized by an e-commerce entity at significantly reduced costs, high discounts or the other such promotional offers for a predetermined period of time.
- The e-commerce entities ought to make sure that such identification number and invoice of orders are displayed prominently to their users in a very clear and accessible manner on their platform.
- The E-commerce entities providing foreign goods/services will need to mention the name and details of the importers and therefore the country of origin.

Present position of e-commerce entities in india

- The e-commerce entities are registered under the businesses Act, Indian Partnership Act or limited liability Partnership Act and not individually with DPIIT.
- An e-commerce entity means that any individual who owns, operates or manages digital or electronic facility or platform for electronic commerce, however doesn't include a seller providing his merchandise or services for sale on a marketplace e-commerce entity.