



IAS PARLIAMENT

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A Shankar IAS Academy Initiative

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01-04-2021

1) Consider the following statements with respect to *PRISM Scheme*

1. It is an initiative to promote and support science-based deep-tech startups & ventures across India.
2. It was launched by the Department of Scientific and Industrial Research (DSIR), Ministry of Science and Technology.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

2) Consider the following statements with respect to *AIM-PRIME Programme*

1. It aims to transform an individual innovator into a successful technopreneur by supporting implementable innovations created for the society.
2. It was launched by the Atal Innovation Mission (AIM), in partnership with World Bank.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

3) Consider the following statements with respect to *Coronal Mass Ejections (CMEs)*

1. They are large expulsions of plasma and magnetic field from the Sun's corona.
2. They expand in size as they propagate away from the Sun and can interfere with satellites and power grids on Earth.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

4) Global Gender Gap Report, 2021 was released by?

- a. UNESCO
- b. World Bank
- c. World Economic Forum
- d. UN Development Programme

5) *Ingenuity*, often seen in the news recently, refers to?

- a. A Robotic helicopter located on Mars
- b. World's largest solar powered warship
- c. World's first retail quantum computer
- d. A Substance used to improve the effectiveness of a vaccine

6) Consider the following statements with respect to *Giant Metre wave Radio Telescope (GMRT)*

1. It is an indigenous project operated by the National Centre for Radio Astrophysics of the Tata Institute of Fundamental Research.
2. It is the first Indian facility to receive Institute of Electrical and Electronics Engineers (IEEE) milestone recognition.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

7) Which of the following statements are correct with respect to *Giga Mesh*

1. It is based on patented millimetre wave wireless technology for Mesh Architecture.
2. It could enable telecom operators deploy quality, high-speed rural telecom infrastructure at five times lower cost.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

8) Article 244 (A) of Indian Constitution deals with which of the following functions?

- a. Grant of Special Funds to Tribal Areas
- b. Functioning of Panchayats in Tribal Areas
- c. Autonomous powers to Tribal Areas
- d. Regulations for certain Union Territories

9) Which of the following statements are correct with respect to *International Fund for Agricultural Development (IFAD)*

1. IFAD is a specialized agency of the United Nations and was one of the major outcomes of the 1974 World Food Conference.
2. It supports Lavender and Saffron cultivation in India through financial aid.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

10) Consider the following statements with respect to *Harichand Thakur*

1. He served as court poet under Alivardi Khan nawab of Bengal.
2. He founded a sect of Vaishnava Hinduism called Matua with members of namasudras.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answers

1. b

- Union Minister for Science & Technology Dr. Harsh Vardhan virtually inaugurated the Alignment and Awareness Event for Publicity of the Department of Scientific and Industrial Research - Promoting Innovations in Individuals, Startups and MSMEs (DSIR-PRISM) scheme at IIT Delhi recently.

PRISM Scheme

- Promoting Innovations in Individuals, Startups and MSMEs (PRISM) is an initiative of the Department of Scientific and Industrial Research (DSIR), Ministry of Science and Technology.
- It aimed at transforming an individual innovator into a successful technopreneur by promoting, supporting, and funding implementable and commercially viable innovations created for the society.
- Under the initiative, an innovator of Indian nationality - student, professional and common citizen - is provided technical, strategic, and financial assistance by DSIR-PRISM for idea development, prototype development and pilot scaling, and patenting.
- The programme is implemented across various sectors from energy to healthcare to waste management and others.
- The grant is given in two phases: Phase I and Phase II, catering to both the initial innovation stage and the advanced enterprise setup phase

through DSIR outreach-cum-cluster innovation centres available throughout India.

- The grant amount in Phase I is around Rs. 2.0 lakhs to Rs. 20.00 lakhs and in Phase II maximum of Rs. 50.00 lakhs.

2. d

- *In a major push towards deep technology and driving the country to become a digitally transformed nation, Atal Innovation Mission (AIM), NITI Aayog has recently launched AIM-PRIME (Program for Researchers on Innovations, Market-Readiness & Entrepreneurship) programme.*

AIM-PRIME Programme

- It is an initiative to promote and support science-based deep-tech startups & ventures across India.
- It was launched by Atal Innovation Mission (AIM), in cooperation with Bill & Melinda Gates Foundation (BMGF).
- The programme will be implemented by Venture Center - a non-profit technology business incubator.
- The program is specifically tailored for the rapid scaling up of deep-tech science ventures in India, providing not just the necessary intellect and support but also the exposure they rightly deserve.
- The program aimed at promoting science based, deep technology ideas to market through training and guidance over a period of 12 months.
- **Deep technology** is an outcome of very intense research and development (R&D) with high knowledge content.

3. c

- Research led by scientists from Aryabhata Research Institute of observational sciences (ARIES), Nainital, an autonomous institute under DST, along with their collaborators from Royal Observatory of Belgium, have led to the development of an algorithm, **CMEs Identification in Inner Solar Corona (CIISCO)** to detect and track the accelerating solar eruption in the lower corona.
- Software named Computer Aided CME Tracking Software (CACTus) was so far used to

detect and characterise such eruptions automatically in the outer corona.

- However, this algorithm could not be applied to the inner corona observations due to the vast acceleration experienced by these eruptions.
- This severely limited the capability to track the eruptions as CMEs accelerate in the lower corona.
- The parameters determined by CIISCO are useful to characterise these eruption in the lower corona, a region where the properties of such eruptions are less known.
- An implementation of CIISCO on the large volume of data available from space observatories mentioned above will be helpful to improve our understanding of eruptions in the inner corona.
- As India's first solar mission, Aditya-L1, will be observing this region of the solar corona, implementation of CIISCO on the Aditya-L1 data will provide new insight into the CME properties in this less explored region.

Coronal Mass Ejections (CMEs)

- They are large expulsions of plasma and magnetic field from the Sun's corona.
- They can eject billions of tons of coronal material and carry an embedded magnetic field (frozen in flux) that is stronger than the background solar wind interplanetary magnetic field (IMF) strength.
- CMEs travel outward from the Sun at speeds ranging from slower than 250 kilometers per second (km/s) to as fast as near 3000 km/s.
- The fastest Earth-directed CMEs can reach our planet in as little as 15-18 hours. Slower CMEs can take several days to arrive.
- They expand in size as they propagate away from the Sun and larger CMEs can reach a size comprising nearly a quarter of the space between Earth and the Sun by the time it reaches our planet.

4. c

- India has slipped 28 places to rank 140th among 156 countries in the **World Economic Forum's** Global Gender Gap Report 2021.

- Through this, India became the third-worst performer in South Asia.
- According to the report, India has closed 62.5 per cent of its gender gap till date.
- The country had ranked 112th among 153 countries in the Global Gender Gap Index 2020.

5. a

- Ingenuity is a small robotic helicopter located on Mars since February 18, 2021 that is intended to make the first powered atmospheric flight on a planet beyond Earth.
- Part of NASA's Mars 2020 mission, the small coaxial, drone rotorcraft will serve as a technology demonstrator for the potential use of flying probes on other worlds, with the potential to scout locations of interest and support the future planning of driving routes for Mars rovers.

6. a

Giant Metre wave Radio Telescope (GMRT)

- GMRT is an array of thirty fully steerable parabolic radio telescopes of 45 metre diameter.
- Its design is based on the 'SMART' concept - for Stretch Mesh Attached to Rope Trusses.
- It functions at the metre wavelength part of the radio spectrum because man-made radio interference is considerably lower in this part of the spectrum in India and there are many outstanding astrophysics problems which are best studied at metre wavelengths.
- The location for GMRT, Pune meets several important criteria such as
 1. Low man-made radio noise,
 2. Availability of good communication,
 3. Vicinity of industrial, educational and other infrastructure
 4. Geographical latitude sufficiently north of the geomagnetic equator in order to have a reasonably quiet ionosphere and yet be able to observe a good part of the southern sky as well.
- The city-based Giant Metrewave Radio Telescope (GMRT) was on Tuesday bestowed with the Institute of Electrical and Electronics

Engineers (IEEE) milestone recognition. GMRT is one of the largest radio telescopes in the world that has been operating in low frequencies for over two decades and has made significant contributions to astrophysics.

- This is only the third time an Indian facility has received this milestone, after J C Bose's demonstration of generation and reception of radio waves in 1895 and the discovery of the Raman Effect by C V Raman in 1928, However, IEEE recognitions to these had come in 2012.
- The IEEE milestone for GMRT was announced in November 2020.

IEEE

- The IEEE is the world's largest technical body publishing research in engineering and computing in addition to awarding standards to institutions and organisations involved in these fields.

7. c

Giga Mesh

- It is an innovative wireless product that gives fibre like bandwidth at fraction of cost of fibre to help telecom operators deliver reliable low-cost internet services to suburban and rural areas.
- It is a multi-beam E-band product which packs 6 point-to-point E-band radios in one, thereby distributing the cost of the device over multiple links.
- It reduces network congestion and also makes the existing infrastructure 5G ready.
- A single GigaMesh device can provide upto 40 links with 2+ Gbps capacity each, communicating upto a range of 10 kilometers.
- The flexibility in range makes it suitable for both decongesting the dense urban networks as well as extending rural coverage.
- It brings in Software Defined Networks (SDN) capability to telecom backhaul thereby reducing the operational costs significantly.

8. c

Article 244 (A) of the Indian Constitution

- It allows for creation of an 'autonomous state' within Assam in certain tribal areas.

- It was inserted into the Constitution in 1969 by the then Congress government through 22nd Constitutional Amendment Act.
- It gives the provision for a Legislature and a Council of Ministers.
- Under Article 244(A)(1), the Parliament may, by law, form within the State of Assam an autonomous State comprising all or any of the tribal areas.

Difference between Article 244 (A) and Sixth Schedule Area

- The Sixth Schedule of the Constitution i.e. Articles 244(2) and 275(1) is a special provision that allows for greater political autonomy and decentralised governance in certain tribal areas of the Northeast.
- It allows creation autonomous councils that are administered by elected representatives.
- In Assam, the hill districts of Dima Hasao, Karbi Anglong and West Karbi and the Bodo Territorial Region are under this provision.
- The Article 244(A) accounts for more autonomous powers to tribal areas in Assam.
- In Autonomous Councils under the Sixth Schedule, they do not have jurisdiction of law and order.

9. a

International Fund for Agricultural Development (IFAD)

- Founded in 1977, IFAD focuses on rural poverty reduction, working with poor rural populations in developing countries to eliminate poverty, hunger, and malnutrition.
- IFAD supports initiative to revive Kodo and Kutki Millets cultivation in Dindori district of Madhya Pradesh.

Millet Revival Project

- The project was started in 2013-14 with women-farmers from 40 villages mostly from the Gonda and Baiga tribes – growing these two minor millets (Kodo and Kutki) on 749 acres.
- The identified farmers were supplied good-quality seeds and trained by scientists on field preparation, line-sowing (as opposed to

conventional broadcasting by hand) and application of compost, zinc, bavistin fungicide and other specific plant protection chemicals.

- A federation of the farmers' self-help groups undertook procurement of the produce and also its mechanical de-hulling (the traditional manual pounding process to remove husk from the grain was time-consuming).
- It helped in increasing the number of farmers growing kodo-kutki in the project area to 14,301 in 2019-20.
- It also helped in meeting nutritional goals (fighting malnourishment among children and in reviving millet cultivation (crop yields are 1.5-2 times higher than before).

10. b

Harichand Thakur

- He was a religious reformer lived between 1812 –1878, he worked among the untouchable people of Bengal Presidency.
- He was the founder of the Matua Mahasangha, which was a religious reformation movement that originated in Orakandi in present day Bangladesh in about 1860 CE.
- He founded a sect of Vaishnava Hinduism called Matua, members of the sect were the namasudras who were considered to be untouchables.
- The objective of Thakur's religious reform was to uplift the community through educational and other social initiatives.
- Members of the community consider Thakur as God and an avatar of Vishnu or Krishna.
- After the 1947 Partition, many of the Matuas migrated to West Bengal.

02-04-2021

1) Consider the following statements with respect to Exercise Shantir Ogroshena 2021

- 1. It is a multilateral military exercise conducted by the Kingdom of Saudi Arabia.**
- 2. India and Pakistan is participating in the exercise along with Bhutan and Sri Lanka.**



Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

2) Consider the following statements with respect to *Employees' State Insurance Corporation of India (ESIC)*

- It is a statutory corporate body established under an Act of Parliament.
- It is an autonomous body under the Ministry of Labour and Employment.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

3) *Talcher Thermal Power Plant*, sometimes seen in the news recently, is located in?

- Odisha
- Jharkhand
- Maharashtra
- Madhya Pradesh

4) *Tholpavakoothu* is a ritual art popular in which of the following states?

- Kerala
- Karnataka
- Tamil Nadu
- Andhra Pradesh

5) Vaccine Wastage can be occurred during which of the following reasons?

- if the vaccine has been frozen
- if the vaccine is exposed to heat

3. if the expiry date has been reached

Select the correct answer using the codes given below:

- 1 and 2 only
- 2 and 3 only
- 1, 2 and 3
- None of the above

6) Consider the following statements with respect to *Treasury Bills*

- They are issued by the Government of India as a promissory note with guaranteed repayment at a later date.
- They are primarily long term borrowing tools, having a maximum tenure of 5 years.
- They are available at zero coupons interest rate and issued at discount to the published nominal value of government security.

Which of the statement(s) given above is/are incorrect?

- 1 and 3 only
- 2 only
- 2 and 3 only
- None of the above

7) Which of the following statements are correct with respect to *Economic and Social Survey of Asia and the Pacific 2021*

- It is published by United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP).
- It has estimated that India to record an economic growth of 7% in 2021-22 and maintaining low borrowing costs will be a major challenge for the faster economic recovery.

Select the correct answer using the codes given below:

- 1 only
- 2 only

- c. Both 1 and 2
d. Neither 1 nor 2

8) Stockholm+50 is a high level meeting that will primarily focus on which of the following area?

- a. Arms control and disarmament.
b. Counter Terrorism and Cyber Security
c. Artificial Intelligence and Cryptocurrency
d. Environmental Conservation

9) World's biggest underwater neutrino telescopes Gigaton Volume Detector (GVD) is launched in which of the following lakes?

- a. Lake Vostok, Antarctica
b. Lake Tanganyika, Africa
c. Lake Baikal, Russia
d. Lake O'Higgins, Argentina

10) Consider the following statements with respect to New Rules for Disbursal of Funds to States

1. Under the rule each state will be required to setup a Single Nodal Agency (SNA) for centrally sponsored schemes in which funds will be transferred.
2. All interest earned from the funds will be divided equally between centre and state, and states can voluntarily contribute to Consolidated Fund of India.

Which of the statement(s) given above is/are correct?

- a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answers

1. d

SHANTIR OGROSHENA 2021 (Front Runner of the Peace)

- It is a Multinational Military Exercise to be held at **Bangladesh** to commemorate the birth centenary of Bangladesh 'Father of the Nation' Bangabandhu Sheikh Mujibur Rahman and mark glorious 50 years of liberation.
- Indian Army contingent from the DOGRA Regiment will participate in the exercise along with contingent of Royal Bhutan Army, Sri Lankan Army and Bangladesh Army from 04 Apr to 12 Apr 2021.
- The theme of the exercise is "Robust Peace Keeping Operations".
- Military observers from USA, UK, Turkey, Kingdom of Saudi Arabia, Kuwait and Singapore will also be in attendance throughout the exercise.

2. c

- Employees' State Insurance Corporation of India (ESIC) is an integrated social security system tailored to provide social protection to workers, immediate dependent or family, in the organised sector, in contingencies, such as, sickness, maternity and death or disablement due to an employment injury or occupational hazard.

The ESI Act, (1948) applies to following categories of factories and establishments in the implemented areas:

1. Non-seasonal factories using power and employing ten(10) or more persons
2. Non-seasonal and non-power using factories and establishments employing twenty (20) or more persons.

3. a

- A 54-year-old coal-based thermal power plant in Odisha's Talcher, run by the government-owned National Thermal Power Corporation (NTPC), was shut down recently.
- The Central Pollution Control Board had sent the closure deadline for the plant because of its failure to adhere to environment norms.
- This might set off a power crisis in the state and cause thousands of locals who depended

on the plant to lose their livelihoods, feared activists.

Talcher Thermal Power Plant

- The 460-megawatt power plant was commissioned in 1967. It was under the Odisha government till 1995, when it was sold to NTPC.
- In 2017, Talcher was one of the 'critically polluted industrial areas' in CPCB's Comprehensive Environmental Pollution Index (CEPI).
- The city ranked 165 in the list of the world's most polluted cities, according to the World Air Quality Report, 2020 prepared by IQAir, a Swiss organization.

4. a

- Tholpavakoothu is believed to be more than 350 years old.
- Performed in the Bhadrakali temples, from January to June every year, the shadow puppeteers of Kerala are busy performing the story of the Ramayana as part of the rituals during temple festivals.

5. c

Vaccine wastage

- It is an expected component of any large vaccination drive, and a vaccine is procured from the maker with an estimated wastage.
- For each vaccine type, the wastage has to be within recommended limits.
- In general, high vaccine wastage inflates vaccine demand and increases unnecessary vaccine procurement and supply chain costs.

Reasons

It is broadly divided into two categories

1. Wastage in unopened vials
2. Wastage in opened vials

Wastage in unopened vials

It can occur due to six broad reasons:

1. if the expiry date has been reached
2. if the vaccine is exposed to heat
3. if the vaccine has been frozen

4. breakage
5. missing inventory and theft
6. while discarding unused vials returned from the vaccination site

Wastage in opened vials

It can occur due to five broad reasons

1. while discarding remaining doses at the end of the session
2. not being able to draw the number of doses in a vial
3. submergence of opened vials in the water
4. suspected contamination
5. poor vaccine administration practices

6. b

Treasury bill

- Treasury bills were first issued in India in 1917.
- They are primarily short-term borrowing tools, having a maximum tenure of 364 days.
- It is aimed at reducing total fiscal deficit in an economy, and also in regulating the total currency in circulation at any given point of time.
- They are issued via auctions conducted by the Reserve Bank of India (RBI) at regular intervals.
- Individuals, trusts, institutions and banks can purchase T-Bills.
- As per the regulations put forward by the RBI, a minimum of Rs. 25,000 has to be invested by individuals willing to procure a short term treasury bill.
- G-Sec treasury bills don't yield any interest on total deposits.
- Upon redemption, the entire par value of this bond is paid to investors, thereby allowing them to realise substantial profits on total investment.
- They can be issued in a physical form as a promissory note or dematerialized form by crediting to SGL account (Subsidiary General Ledger Account).

7. c

Economic and Social Survey of Asia and the Pacific

- Produced annually since 1947, the Economic and Social Survey of Asia and the Pacific is the oldest United Nations report on the region's progress.
- The Survey monitors regional progress, provides cutting-edge analyses and guides policy discussion on the current and emerging socio-economic issues and policy challenges to support inclusive and sustainable development in the region.
- Since 1957, the Survey has also contained a study or studies focusing on a significant aspect or challenge relevant to the economies of the Asia-Pacific region.
- The Survey of 2021 studies the impact of Covid-19 pandemic and provides insights for post-Covid-19 resilient economies.
- According to the report, India is estimated to record an economic growth of 7% in 2021-22, over a contraction of 7.7% witnessed in the previous fiscal on account of the pandemic's impact on normal business activity.
- The report mentions two major challenges for India on its path to faster recovery.
 1. Maintaining low borrowing costs, and
 2. Keeping non-performing loans in check.

United Nations Economic and Social Commission for Asia and the Pacific

- The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) is the regional development arm of the United Nations for the Asia-Pacific region, HQ in Bangkok, Thailand.
- It was established in 1947, has 53 Member States and 9 Associate Members from Asia-Pacific Region including India.
- Its objective is to overcome some of the region's greatest challenges by providing results-oriented projects, technical assistance and capacity building to member States.

8. d

Stockholm+50

- It is a high-level meeting that the Government of Sweden plans to hold in conjunction with the 50th anniversary of the first UN conference on the human environment the 1972 Stockholm Conference.
- The aim of Stockholm+50 is to leverage sustainable consumption and production patterns and nature-based solutions in order to achieve climate-neutral, resilient, circular and inclusive economies.
- The 1972 Stockholm Conference on the Human Environment, also known as the Stockholm Conference, was the first UN conference on the environment and was held between 5 and 16 June 1972 in Stockholm.
- The meeting's outcome document the Stockholm Declaration included several principles that are still important for environmental management.
- Another result of the meeting was the establishment of the United Nations Environment Programme (UNEP) and the World Environment Day, held annually on 5 June.

9. c

Gigaton Volume Detector (GVD)

- The Baikal-GVD is one of the three largest neutrino detectors in the world along with the IceCube at the South Pole and ANTARES in the Mediterranean Sea.
- The construction of this telescope started in 2016, is motivated by the mission to study in detail the elusive fundamental particles called neutrinos and to possibly determine their sources.
- Studying this will aid scientists' understanding of the origins of the universe since some neutrinos were formed during the Big Bang, others continue to be formed as a result of supernova explosions or because of nuclear reactions in the Sun.

10. a

New Rules for Disbursal of Funds to States

- Recently union government has tightened the procedure for grant of central funds under centrally sponsored schemes.
- Union government will release the funds to state's account which should be transferred to concerned SNA's account within 21 days.
- States should also release its own share within 40 days of the release of centre's share.
- The primary changes made under the rule includes phased and conditional funding from centre, which includes
 1. No more than 25% of total central funding in beginning of financial year.
 2. Further funding on the condition that state governments has transferred and ensured utilisation of 75% of the total released funding.
 3. All interest earned from the funds should be mandatorily remitted to the respective consolidated fund of India.
 4. All SNA's will get mapped to the centrally run Public Financial Management System (PFMS) to track and monitor fund flow.
- This new rules will help in addressing issue of time lag in release of grants, poor utilisation of funding and parking of funds in states for interest.

03-04-2021

1) Which of the following statements with respect to National Policy for Rare Diseases, 2021 is incorrect?

- a. It categorizes rare diseases into three groups and its funding pattern
- b. 95% of rare diseases have no approved treatment and less than 1 in 10 patients receive disease specific treatment
- c. The government will notify Centres of Excellence (CoE) for management of rare diseases and provided a one-time grant to a maximum of Rs.5 crore each
- d. The rare diseases that requires very high cost and lifelong therapy will be provided Rs. 20 lakh under the Rashtriya Arogya Nidhi

2) India's biggest floating solar power plant will be set up at which of the following states?

- a. Odisha
- b. Telangana
- c. Jharkhand
- d. Uttar Pradesh

3) Consider the following statements with respect to Millets

1. They need very little water for growing and are available almost across India.
2. China is the largest producers of millets in the world, accounting for more than 55% of the global production.
3. The United Nations has declared 2023 as the International Year of Millets.

Which of the statement(s) given above is/are incorrect?

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

4) Hamja is a folk dance performed by which of the following tribes?

- a. Onges
- b. Rabha
- c. Seharia
- d. Kurumbas

5) The Large Hadron Collider is the World's largest and most powerful particle accelerator. What among the following has been its most prominent discovery?

- a. Measure of mass of proton
- b. Sighting of the Higgs boson
- c. Evidence of supersymmetry
- d. Detection of gravitational waves

6) Consider the following statements with respect to *Model Code of Conduct*

1. It will be operational from the date that the election schedule is announced till the date that results are announced.
2. Constitution empowers Election Commission of India with judicial ability to penalise the violators of the Model Code of Conduct.

Which of the statement(s) given above is/are *incorrect*?

- a. 1 & 3 only
- b. 2 only
- c. 2 & 3 only
- d. None of the above

7) Which of the following statements are correct with respect to *Fundamental Particles*

1. It is a subatomic particle with no substructure, i.e., it is not composed of other particles and cannot be broken any further.
2. The protons are type elementary particles called leptons and electrons are type of quarks.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

8) Which of the following statements are correct with respect to *Corticosteroids*

1. They are a class of drug that lowers inflammation in the body and reduce immune system activity.
2. They resemble cortisol, a hormone naturally produced by the body's adrenal glands.

Select the correct answer using the codes given below:

- a. 1 only

- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

9) *Sindhudurg Biodiversity Heritage Site* is in which of the following States?

- a. Rajasthan
- b. Madhya Pradesh
- c. Gujarat
- d. Maharashtra

10) Consider the following statements with respect to *Digital India Land Records Modernisation Programme*

1. Under the program Unique Land Parcel Identification Number (ULPIN) has been introduced which will uniquely identify every surveyed parcel of land and prevent land fraud.
2. It is an initiative of Ministry of Home Affairs and Indian Institute of Remote Sensing.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answers

1. d

- The Union Government has recently released the National Policy for Rare Diseases, 2021.
- The policy was first prepared by the Centre in 2017 but put on hold due to some implementation challenges mainly about cost sharing between Centre and States.

Rare Diseases

- There are 7,000-8,000 classified rare diseases, but less than 5% have therapies available to treat them.

- About 95% rare diseases have no approved treatment and less than 1 in 10 patients receive disease-specific treatment.
- India has said it lacks epidemiological data on the prevalence here and hence has only classified certain diseases as 'rare.'

National Policy for Rare Diseases, 2021

- Accordingly, a 'rare disease' has been categorised into three groups.

Group 1 Diseases

- Financial support upto Rs. 20 lakh under the Umbrella Scheme of Rashtriya Arogya Nidhi shall be provided by the Central Government for treatment, of those rare diseases that require a one-time treatment (diseases listed under Group 1).
- Beneficiaries for such financial assistance would not be limited to BPL families, but extended to about 40% of the population, who are eligible as per norms of Pradhan Mantri Jan Arogya Yojana, for their treatment in **Government tertiary hospitals only**.

Group 2 Diseases

- State Governments can consider supporting patients of such rare diseases that can be managed with special diets or hormonal supplements or other relatively low cost interventions (Diseases listed under Group 2).

Group 3 Diseases

- The new policy has absolutely no consideration for Group 3 patients, who require lifelong treatment support.
- The policy states that, keeping in view the resource constraint and competing health priorities, it will be difficult for the Government to fully finance treatment of high cost rare diseases.
- The gap can however be filled by creating a digital platform for bringing together notified hospitals where such patients are receiving treatment or come for treatment, on the one hand, and prospective individual or corporate donors willing to support treatment of such patients.

2. b

- India's biggest floating solar power plant with a capacity of 100 MW will be set up at Ramagundam in Telangana.
- The project, expected to be opened in May, 2021, is being set up at Ramagundam thermal power plant reservoir.
- The solar project is commissioned by the National Thermal Power Corporation (NTPC).
- The world's largest solar power plant with 600 MW capacity is being set up on Omkareshwar Dam on Narmada river in Madhya Pradesh.
- The project costing 3,000 crore rupees is expected to start power generation only by 2022-23.

3. b

Millets Production in India

- The United Nations has declared 2023 as the International Year of Millets.
- **India, Nigeria and China** are the largest producers of millets in the world, accounting for more than 55% of the global production.
- Millets are available almost across India. They need very little water for growing.
- For many years, India was a major producer of millets. However, in recent years, millet production has increased dramatically in Africa.
- In India, pearl millet is the fourth-most widely cultivated food crop after rice, wheat and maize.
- It occupies an area of 6.93 million hectare with an average production of 8.61 million tonnes and productivity of 1,243 kg/ha during 2018-19.

4. b

- Hamja is a folk dance prevalent among the Rabha Tribes of Assam.
- Rabha is a prominent tribe in Assam and they present extensively in Meghalaya, west Bengal, Manipur, and Tripura and in Nepal too.

5. b

- In 2012, the Higgs boson, which gives mass to the heavy elementary particles was detected for the first time at the Large Hadron Collider.

6. b

Model Code of Conduct

- It is a set of guidelines issued by the Election Commission to regulate political parties and candidates prior to elections, to ensure free and fair elections.
- Key Provisions of the Model Code of Conduct are as follows -

1. The parties must inform the local police authorities of the venue and time of any meeting in time to enable the police to make adequate security arrangements.
2. If two or more candidates plan processions along the same route, organisers must establish contact in advance to ensure that the processions do not clash.

1. All authorised party workers at polling booths should be given identity badges which should not contain the party name, symbol or name of the candidate.

- The activities prohibited under the MCC are:

1. Using caste and communal feelings to secure votes.
2. Criticizing candidates based on unverified reports.
3. Bribing or intimidation of voters.
4. Organising demonstrations or picketing outside houses of persons to protest their opinions.

- The party must avoid advertising at the cost of the public exchequer or using official mass media for publicity on achievements to improve chances of victory in the elections.

- The guidelines also prohibit parties from making promises that exert an undue.

- The ECI does not have a judicial ability to penalise the violators of the Model Code of Conduct.

7. a

Fundamental Particles

- The scientists discovered that the universe is made up of three particles i.e., protons, neutrons, and electrons.
- Particles currently thought to be elementary include the:
 1. Fundamental fermions namely quarks, leptons, antiquarks, and antileptons, these are generally "matter particles" and "antimatter particles",
 2. Fundamental bosons (gauge bosons and the Higgs boson), which generally are "force particles" that mediate interactions among fermions.
- The protons (carry a positive charge) and neutrons (no charge) are types of quarks, whereas electrons (carry a negative charge) are types of leptons.
- A particle containing two or more fundamental particle is called a composite particle.

Neutrinos

- They are abundant in nature, with about a thousand trillion of them passing through a human body every second.
- They are the second most abundant particles, after photons, which are particles of light.
- They do not carry a charge because they are not easy to catch and as a result of which they do not interact with matter.

8. c

Corticosteroids

- Corticosteroids are a class of drug that lowers inflammation in the body and reduce immune system activity.
- Corticosteroids ease swelling, itching, redness, and allergic reactions, thus used in the treatment of diseases like asthma, arthritis, lupus, allergies etc.
- Corticosteroids resemble cortisol, a hormone naturally produced by the body's adrenal glands. The body needs cortisol to stay healthy.

- Cortisol is a major player in a wide range of processes in the body, including metabolism, immune response, and stress.
- Covid-19 treatments across the globe aims to scale up life-saving oxygen and corticosteroids for severe disease.

9. d

Sindhudurg Biodiversity Heritage Site

- Maharashtra government declared an area at Amboli in Western ghats in Sindhudurg district as a Biodiversity Heritage Site (BHS).
- Sindhudurg district is accorded Biodiversity Heritage Site Status after the discovery of a new small freshwater fish species discovered near Schistura Hiranyakeshi.
- BHS are areas that are unique, ecologically fragile ecosystems - terrestrial, coastal, and inland and marine waters - having rich biodiversity.
- The biodiversity comprises of any one or more of the components like,
 1. Species richness - Wild and domesticated species or intra-specific categories,
 2. High endemism,
 3. Presence of rare, endemic and threatened species, keystone species, species of evolutionary significance,
 4. Presence of wild ancestors of domestic/cultivated species or land races or their varieties,
 5. Past pre-eminence of biological components represented by fossil beds and having cultural or aesthetic values.
 6. Area with significant cultural, ethical or aesthetic values; important for the maintenance of cultural diversity

10. a

Digital India Land Records Modernisation Programme

- It is a Central Sector scheme launched in 2008 that has been extended up to 2020-21 at a total cost of Rs. 950 crores.
- The Department of Land Resources (Ministry of Rural development) has proposed a further extension to 2023-24, to complete its original

targets as well as expand its ambit with a slew of new schemes.

- It attempts to build upon the commonalities that exist in the arena of land records in various States to develop an appropriate Integrated Land Information Management System (ILIMS) across the country, on which different States can also add State-specific needs as they may deem relevant and appropriate.
- New initiatives have been taken under the program like the National Generic Document Registration System (NGDRS), ULPIN, linking of revenue court to land records, integration of consent based Aadhar numbers with land records etc.

Integrated Land Information Management System (ILIMS)

- The system will contain information on parcel ownership, land use, taxation, location boundaries, land value, encumbrances and many more.

Unique Land Parcel Identification Number (ULPIN)

- It is a number that would uniquely identify every surveyed parcel of land and prevent land fraud, especially in the hinterlands of rural India, where land records are outdated and often disputed.
- The identification will be based on the longitude and latitude coordinates of the land parcel, and is dependent on detailed surveys and geo-referenced cadastral maps.

National Generic Document Registration System (NGDRS)

- It is aimed at providing one Nation one software for registration of documents & properties to 'empower citizens'.
- DILRMP's next phase will include linkage of land record databases with banks.
- This will enhance the service deliveries to the citizens of the country and will also function as inputs to the schemes of the other sectors like Agriculture, Finance, and Disaster Management etc.



05-04-2021

1) Consider the following statements with respect to *Elsa-D Mission*

1. It is the world's first commercial mission to demonstrate a space debris removal system.
2. It was launched by the National Aeronautics and Space Administration (NASA) in cooperation with European Space Agency (ESA).

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

2) Consider the following statements with respect to *International Criminal Court (ICC)*

1. It is a permanent judicial body based at Hague in Netherlands.
2. It is a part of United Nations system established through Rome Statute in 1998.
3. It mainly hears disputes between nations for the international crimes of genocide, crimes against humanity, and war crimes.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 1 and 2 only
- c. 1 and 3 only
- d. None of the above

3) Which of the following is the main objective of *Switch Delhi Campaign*, which was launched recently by the Delhi Government?

- a. To promote Electric Vehicle Policy in New Delhi
- b. To transform New Delhi from power deficit to power surplus region

- c. To replace all existing conventional transformers in to advanced version
- d. None of the above

4) Which of the following is/are the major pollutants from coal-fired power plants?

1. Oxides of nitrogen (NO_x)
2. Sulphur dioxide (SO₂)
3. Particulate matter (PM)

Select the correct answer using the codes given below:

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

5) Consider the following statements with respect to *E-Courts Project*

1. It is a pan-India Project, monitored and funded by Department of Justice.
2. It is one of the National e-Governance projects being implemented in District and Subordinate Courts of the Country.
3. The project has been implemented by the eCommittee, Supreme Court of India along with Department of Justice and National Information Centre.

Which of the statements given above are correct?

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

6) Consider the following statements with respect to *World Cities Culture Forum (WCCF)*

1. It organizes World Cities Culture Summit which is attended by Deputy Mayors for Culture and Heads of Culture from the member cities.

2. In India Bengaluru and Delhi are only two cities which are members of WCCF

Which of the statement(s) given above is/are incorrect?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

7) Which of the following statements are correct with respect to *Monetary Policy Committee*

- It is a statutory and institutionalized framework under the Reserve Bank of India Act, 1934.
- An RBI-appointed committee led by Raghuram Rajan in 2013 recommended the establishment of the Monetary Policy Committee.

Select the correct answer using the codes given below:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

8) Which of the following statements are correct with respect to *ACT-Accelerator*

- It is a joint initiative of WHO, World Bank, GAVI, Bill & Melinda Gates Foundation.
- It aims to end the pandemic, restore full societal and economic activity globally and facilitate high-level control of Covid-19 disease.

Select the correct answer using the codes given below

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

9) *United Nations Framework Convention on Climate Change (UNFCCC)* is an international treaty drawn at which of the following event?

- World Summit on Sustainable Development, Johannesburg, 2002
- UN Climate Change Conference, Copenhagen, 2009
- United Nations Conference on the Human Environment, Stockholm, 1972
- UN Conference on Environment and Development, Rio de Janeiro, 1992

10) Consider the following statements with respect to *Biological Diversity Act, 2002*

- According to the act only central government can notify a location as Biodiversity Heritage Site (BHS) in official gazette.
- State Government in consultation with the Central Government may frame rules for the management and conservation of BHS.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answers

1. a

- ELSA-d* the world's first commercial mission to demonstrate a **space debris removal system** was launched recently from the Baikonur cosmodrome in Kazakhstan.

End-of-Life Services by Astroscale demonstration Mission (Elsa-d)

- It was developed by Astroscale, a Japanese-UK company.
- The mission will be operated from the UK's in-orbit servicing control centre (IOCC) at Satellite Applications Catapult in Harwell, near Oxford.

- ELSA-d is a small satellite designed to find, rendezvous and clamp on to an unwanted satellite.
- It will then push it into the Earth's atmosphere, where it will burn up.
- The removal of space debris is the key to space sustainability, which will ensure that new satellites can be operated without the risk of colliding with old ones.
- The European Space Agency estimates 3,600 working satellites are in orbit, and more than 28,000 pieces of debris are being tracked by the US Space Surveillance Network.

2. a

- *US has recently lifted sanctions and visa restrictions imposed by Donald Trump's administration on officials of the International Criminal Court (ICC), who are investigating American military and intelligence officials for potential war crimes in Afghanistan and had also opened a probe against alleged crimes by American ally Israel in Palestinian territories.*

International Criminal Court (ICC)

- The ICC is a permanent judicial body based at The Hague in the Netherlands.
- It was created by the 1998 Rome Statute (ICC's founding and governing document).
- The ICC began functioning on 1 July 2002 when the Statute came into force.
- The forum was established as a court of last resort to prosecute offences that would otherwise go unpunished.
- Unlike the International Court of Justice (ICJ), the ICC is not part of the United Nations system.
- International Court of Justice (ICJ) mainly hears disputes between nations, ICC, on the other hand, prosecutes individuals.

It has jurisdiction over four main crimes:

1. Genocide
2. Crimes against humanity
3. War crimes
4. Crime of aggression

- 123 nations are States Parties to the Rome Statute and recognise the ICC's authority.
- The notable exceptions to this are the US, China, Russia, and India.

3. a

Switch Delhi campaign

- To promote the use of electric vehicles in the Capital, Delhi Government has launched the 'Switch Delhi' campaign.
- It will educate people about the benefits of electric vehicles (EV) and urge them to make a switch.
- Under the campaign, awareness will be created about the benefits of electric vehicles and how it can contribute to making Delhi clean and pollution-free.

4. d

- *India has recently pushed back its deadlines for coal-fired power plants to adopt new emission norms by up to 3 years and allowed utilities that miss the new target to continue operating after paying a penalty.*
- Previously, the Environment Ministry has ordered that the deadline for these plants to install Flue Gas Desulphurization (FGD) units, it includes
 1. Plants near populous regions and New Delhi will have to comply by 2022,
 2. Utilities in less polluting area shave up to 2025 to comply or retire units.

Thermal Power Plants

- Thermal power companies produce 3/4th of the country's electricity.
- They account for 80% of industrial emissions of particulate matter, sulphur- and nitrous-oxides - Causes lung diseases, acid rain and smog.
- According to the Centre for Science and Environment (CSE), Thermal power plants account for more than 60 per cent of total industrial emissions of particulate matter; 45 per cent of SO₂; 30 per cent of NO_x; and more than 80 per cent of mercury, in the country.
- These are also responsible for 70 per cent of the total freshwater withdrawal by all

industries, according to an analysis by the green think tank.

5. d

- *The e-Committee Supreme Court has prepared the draft vision document for Phase III of the e-Courts Project under the auspices of the Supreme Court of India.*

E-Courts Project

- The e-Courts Project was conceptualized on the basis of the “National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary – 2005” submitted by eCommittee, Supreme Court of India with a vision to transform the Indian Judiciary by ICT enablement of Courts.
- It is one of the National e-Governance projects being implemented in District and Subordinate Courts of the Country.
- The project is visioned and implemented by the eCommittee, Supreme court of India along with Department of Justice and NIC(National Information Centre).
- It is a Pan-India Project, monitored and funded by Department of Justice, Ministry of Law and Justice.
- The objectives of the project is to provide designated services to litigants, lawyers and Judiciary through universal computerisation of district and subordinate courts, as well as the upgradation of ICT infrastructure of the Supreme Court and the High Courts.

6. b

World Cities Culture Forum (WCCF)

- WCCF was established in London in 2012 with eight cities, it has 43 participating member cities.
- Participating member cities include London, Hong Kong, Amsterdam, Edinburgh, Lisbon, San Francisco, Shanghai, etc.
- Delhi is invited this year but it is not a part of member cities.
- The Chief Minister of Delhi will represent Delhi and India at the World Cities Culture Forum (WCCF).

- It enables the policy makers of member cities to share research and intelligence, and explores the vital role of culture in their future prosperity.
- The activities of the World Cities Culture Forum are organised and delivered by BOP Consulting, a specialist consulting firm, on behalf of the Greater London Authority, London’s Municipal Government.
- Delhi will also be part of the World Cities Culture Report - the most comprehensive global dataset on culture in cities.
- World Cities Culture Report is published by the forum every three years, with data and details on innovative projects from cities across the world.

7. a

Monetary Policy Committee

- An RBI-appointed committee led by the then deputy governor Urjit Patel in 2014 recommended the establishment of the Monetary Policy Committee.
- The government moved the interest rate-setting role from the RBI governor to the six-member MPC in 2016.
- As per the Reserve Bank of India Act, 1934, the central bank is required to organise at least four meetings of the MPC in a year.
- The Governor of RBI is ex-officio Chairman of the committee.
- The committee comprises six members (including the Chairman) - three officials of the RBI and three external members nominated by the Government of India.
- Decisions are taken by majority with the Governor having the casting vote in case of a tie.
- The MPC determines the policy interest rate (repo rate) required to achieve the inflation target (4%).
- Recently RBI announced that (MPC), which decides on key interest rates, will meet six times during the financial year 2021-2022.

8. c

ACT-Accelerator

- It was launched in the month of April, 2020 at an event co-hosted by the Director-General of the World Health Organization (WHO), the President of France, the President of the European Commission, and the Bill & Melinda Gates Foundation.
- It brings together governments, scientists, businesses, civil society, and philanthropists and global health organizations.
- The participants include the Bill & Melinda Gates Foundation, CEPI, Foundation for Innovative New Diagnostics (FIND), Gavi, The Global Fund, Unitaid, Wellcome Trust (London), the WHO and the World Bank.
- The ACT-Accelerator is organized into four pillars of work:
 1. Diagnostics.
 2. Treatment.
 3. Vaccines.
 4. Health system strengthening.
- Each pillar is vital to the overall effort and involves innovation and collaboration.

9. d

United Nations Framework Convention on Climate Change (UNFCCC)

- The United Nations Framework Convention on Climate Change is an international environmental treaty addressing climate change.
- It signed by 154 states at the United Nations Conference on Environment and Development, informally known as the Earth Summit, held in Rio de Janeiro in 1992.
- It established a Secretariat headquartered in Bonn and entered into force in 1994.
- The Kyoto Protocol, which was signed in 1997 and which entered into force in 2005, was the first implementation of measures under the UNFCCC until 31 December 2020.
- The protocol was superseded by the Paris Agreement, which entered into force in 2016.
- As of 2020, the UNFCCC has 197 signatory parties, its supreme decision-making body, the Conference of the Parties (COP), meets

annually to assess progress in dealing with climate change.

10. b

Biological Diversity Act, 2002

- The Biological Diversity Act, 2002 is an Act implemented by the Parliament of India for the preservation of biological diversity in India.
- It provides mechanism for equitable sharing of benefits arising out of the use of traditional biological resources and knowledge.
- According to the act
 1. State Governments can notify in the official gazette, in consultation with 'local bodies', areas of biodiversity importance as BHS.
 2. State Governments can frame schemes for compensating or rehabilitating anyone economically affected by such notification.
 3. State Biodiversity Boards (SBB) may invite suggestions for declaration of BHSs, through the Biodiversity Management Committees (BMCs) and other relevant community institutions.

07-04-2021

1) Consider the following statements with respect to Integrated Health Information Platform (IHIP)

1. It is the next generation highly refined version of the presently used Integrated Disease Surveillance Programme (IDSP).
2. India is the first country in the world to adopt such an advanced disease surveillance system.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

2) Which of the following are part of *E9 countries* which was led by the United Nations (UN)?

1. India
2. Egypt
3. China
4. Pakistan
5. Bangladesh

Select the correct answer using the codes given below:

- a. All except 1 and 5
- b. All except 3 and 4
- c. All except 2, 3 and 4
- d. All of the above

3) Which of the following is true regarding *Chaff Rocket Technology*?

- a. It is the modified form of rocket technology used in high speed rail engines
- b. It is an advance technology to safeguard naval ships against enemy missile attack
- c. It is a next generation cooling technology for Reusable Launch Vehicles (RLVs)
- d. It is a technology where rocket propellants are used at extremely low temperatures to increase efficiency

4) With respect to *Exercise La Perouse*, sometimes seen in the news recently, consider the following statements:

1. It is a multi-lateral maritime exercise led by the French Navy in the Eastern Indian Ocean Region.
2. The Indian Navy is participating in the exercise for the first time.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

5) Consider the following statements with respect to *Spices Board of India*

1. It is one of the five Commodity Boards functioning under the Ministry of Commerce & Industry.
2. It is an autonomous body responsible for the export promotion of the 52 scheduled spices and development of Cardamom.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

6) Consider the following statements with respect to *National Security Act (NSA)*

1. Under this act a person can be detained for up to 12 months without a charge and no FIR is registered on the detained person.
2. A person can be held any number of days without being told the charges against them, but will be allowed a lawyer during the trial.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

7) Which of the following statements are correct with respect to *Non-Fungible Token (NFT)*

1. It is a unit of data on a digital ledger called a block chain, where each NFT can represent a unique digital item, and thus they are not interchangeable.
2. They can be used to commodify digital creations, such as digital art, video game items, and music files.

Select the correct answer using the codes given below:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

8) Which of the following statements are correct with respect to *Harmonized System of Nomenclature Code (HSN code)*

- It is a 16 digit identification code developed by World Trade Organization.
- It is used by countries as a basis to impose custom tariffs, gather trade statistics, and make trade policies.

Select the correct answer using the codes given below:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

9) *Chenab Arch Bridge* is constructed between which of the following railway line?

- Udhampur to Katra
- Banihal to Qazigund
- Qazigund to Baramulla
- Katra-Banihal

10) Consider the following statements with respect to *Star Campaigners*

- The expenditure incurred on campaigning by 'stars' is exempt from being added to the election expenditure of a candidate.
- In India there is no law governing who can or cannot be made a star campaigner.

Which of the statement(s) given above is/are incorrect?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answers

1. c

- The Union Minister of Health & Family Welfare has virtually launched the Integrated Health Information Platform (IHIP) recently.
- The Integrated Health Information Platform is the next generation highly refined version of the presently used Integrated Disease Surveillance Programme (IDSP).
- India is the first country in the world to adopt such an advanced disease surveillance system.
- It was termed as the world's biggest online disease surveillance platform.
- The new version of IHIP will house the data entry and management for India's disease surveillance program.
- In addition to tracking 33 diseases now as compared to the earlier 18 diseases, it shall ensure near-real-time data in digital mode, having done away with the paper-mode of working.
- It is in sync with the National Digital Health Mission and fully compatible with the other digital information systems presently being used in India.
- The refined IHIP with automated -data will help in a big way in real time data collection, aggregation & further analysis of data that will aid and enable evidence-based policy making

2. d

- Minister of State for Education Sanjay Dhotre has recently attended a consultation meeting of Education Ministers of E9 countries.
- The consultation is the first of a three-phased process to co-create an initiative on digital learning and skills, targeting marginalised children and youth, especially girls.

E9 Initiative

- The initiative aims to accelerate recovery and advance the Sustainable Development Goal 4 agenda by driving rapid change in education systems.
- Spearheaded by the UN, the E9 countries includes Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Nigeria and Pakistan.
- The E9 countries will have the opportunity to benefit from this global initiative and accelerate progress on digital learning.

3. b

- *Defence Research and Development Organisation (DRDO) has recently developed an Advanced Chaff Technology to safeguard the naval ships against enemy missile attack.*
- Defence Laboratory Jodhpur (DLJ), a DRDO laboratory, has indigenously developed three variants of this critical technology namely Short Range Chaff Rocket (SRCR), Medium Range Chaff Rocket (MRCR) and Long Range Chaff Rocket (LRCR) meeting Indian Navy's qualitative requirements.
- The successful development of Advanced Chaff Technology by DLJ is another step towards Atmanirbhar Bharat.
- Recently, Indian Navy conducted trials of all three variants in the Arabian Sea on Indian Naval Ship and found the performance satisfactory.

Chaff

- It is a passive expendable electronic countermeasure technology used worldwide to protect naval ships from enemy's radar and Radio Frequency (RF) missile seekers.
- The importance of this development lies in the fact that very less quantity of chaff material deployed in the air acts as decoy to deflect enemy's missiles for safety of the ships.

4. c

- The three-day multi-lateral maritime exercise 'La Perouse', led by the French Navy, was recently kickstarted in the Eastern Indian Ocean Region.
- The exercise involves the French Navy, Indian Navy, Royal Australian Navy (RAN), Japan

Maritime Self Defence Force (JMSDF) and United States Navy (USN).

- For the first time, the Indian Navy has deployed INS Satpura (with an integral helicopter embarked) and INS Kiltan alongwith P8I Long Range Maritime Patrol Aircraft in the three-day naval exercise.
- The first edition of La Perouse joint exercise, initiated by France in 2019, included ships from Australia, Japan and the US.

5. c

- *Spices Board India under Ministry of Commerce and Industry and UNDP India's Accelerator Lab recently signed a Memorandum of Understanding (MoU), with the aim to build a blockchain based traceability interface for Indian spices to enhance transparency in supply chain and trade.*
- Blockchain is a decentralized process of recording transactions on an open and shared electronic ledger.
- This allows for ease and transparency in data management across a complex network, including, farmers, brokers, distributors, processors, retailers, regulators, and consumers, thus simplifying the supply chain.
- It will allow farmers just as all other members of the supply chain to access the information which further makes the entire supply chain more efficient and equitable.

Spices Board of India

- It is one of the five Commodity Boards functioning under the Ministry of Commerce & Industry.
- It is an autonomous body responsible for the export promotion of the 52 scheduled spices and development of Cardamom (Small & Large).

The main functions of the Spices Board are the following

1. Research, Development and Regulation of domestic marketing of Small & Large Cardamom
2. Post-harvest improvement of all spices

3. Export promotion of all spices and assisting exporters in technology upgradation, quality management, brand promotion, research & product development
4. Development of spices in the North East
5. Regulation of quality of spices for exports through its quality evaluation services; etc.

6. a

National Security Act (NSA)

- The former Prime Minister Indira Gandhi brought the National Security Act in 1980.
- The maximum period of detention under National Security Act is:
 1. A person can be detained for up to 12 months without a charge.
 2. A person can be held for 10 days without being told the charges against them.
 3. The person can appeal before a high court advisory board but will not be allowed a lawyer during the trial.
- Article 22 (1) of the Indian Constitution says an arrested person cannot be denied the right to consult, and to be defended by, a legal practitioner of his choice.
- According to Section 50 of the Criminal Procedure Code (CrPC), any person arrested has to be informed of the grounds of arrest and has the right to bail.
- Under National Security Act, none of these rights are available to the person detained.
- The government holds the right to conceal information which it considers to be against public interest to disclose.
- The National Crime Records Bureau (NCRB), which collects crime data in India, does not include cases under the NSA as no FIRs are registered.

7. c

Non-Fungible Token (NFT)

- A non-fungible token (NFT) is a unit of data on a digital ledger called a block chain, where each NFT can represent a unique digital item, and thus they are not interchangeable.

- NFTs can represent digital files such as art, audio, videos, items in video games and other forms of creative work.
- The NFTs can be bought on an NFT market, it has access to any copy of the original file, however, is not restricted to the owner of the token.
- While the digital files themselves are infinitely reproducible, the NFTs representing them are tracked on their underlying block chains and provide buyers with proof of ownership of the NFTs.
- NFTs can be used to commodify digital creations, such as digital art, video game items, and music files.
- NFTs mostly run on a proof-of-work block chain, which is less energy efficient than a proof-of-stake block chain.
- Indian artists can place their digital assets including art pieces, audio files, videos, and even tweets, for auction over the block chain-based NFT marketplace to earn royalty thereafter.
- Indian cryptocurrency exchange, WazirX has launched a non-fungible tokens (NFT) marketplace for Indian artists and creators.
- Indian artists can place their digital assets including art pieces, audio files, videos, and even tweets, for auction over the blockchain-based NFT marketplace to earn royalty thereafter.

8. b

Harmonized System of Nomenclature Code (HSN code)

- It is a 6 digit identification code developed by World Customs Organization.
- Of the six digits, the first two denote the HS Chapter, the next two give the HS heading, and the last two give the HS subheading.
- It is called the “universal economic language” for goods, a multipurpose international product nomenclature.
- The system currently comprises of around 5,000 commodity groups.

- It has been made mandatory for a GST taxpayer having a turnover of more than Rs 5 crore in the preceding financial year, to furnish 6 digits HSN Code (Harmonized System of Nomenclature Code).
- Over 200 countries use the system as a basis for their customs tariffs, gathering international trade statistics, making trade policies, and for monitoring goods.
- The system helps in harmonising of customs and trade procedures, thus reducing costs in international trade.

World Customs Organization (WCO)

- It was established in 1952 as the Customs Co-operation Council (CCC) is an independent intergovernmental body whose mission is to enhance the effectiveness and efficiency of Customs administrations.
- As the global centre of Customs expertise, the WCO is the only international organization with competence in Customs matters and can rightly call itself the voice of the international Customs community.
- The WCO has divided its Membership into six Regions, Each of the six Regions is represented by a regionally elected Vice-Chairperson to the WCO Council.
- Besides the vital role played by the WCO in stimulating the growth of legitimate international trade, its efforts to combat fraudulent activities are also recognized internationally.
- WCO has also been responsible for administering the World Trade Organization's Agreements on Customs Valuation, which provide a system for placing values on imported goods, and the Rules of Origin, which are used to determine the origin of a given commodity.

9. d

Chenab Arch Bridge

- It is a 1.3 km-long bridge that is being built across the Chenab River, which is being constructed at a height of 359 metres from the riverbed.

- It will be at a height 35 meters more than the Eiffel Tower in Paris and at five times the height of the Qutab Minar in Delhi.
- It is being built on the Katra-Banihal railway line at village Kauri in the Reasi district.
- The bridge forms the crucial link in the 111-km stretch between Katra and Banihal which is part of the Udhampur- Srinagar-Baramulla section of the Kashmir Railway project.
- At present, the Kashmir link means a 25-km stretch from Udhampur to Katra, an 18-km stretch from Banihal to Qazigund in the Valley and thereafter the 118-km Qazigund to Baramulla line.
- The only missing piece in the link is the Katra-Banihal stretch, and the bridge over Chenab was the main engineering hurdle holding up the progress all these years.
- The bridge will be able to withstand earthquakes with a magnitude of up to eight and high-intensity blasts.

10. d

Star Campaigner

- A star campaigner is a celebrity vote seeker in an election for a party.
- They are nominated by the concerned political parties specifying their constituencies and duration of the status.
- Provisions for Star Campaigners
 1. The expenditure incurred on campaigning by 'stars' is exempt from being added to the election expenditure of a candidate.
 2. It only applies when a star campaigner limits herself to a general campaign for the political party she represents.
 3. A recognised political party can have up to 40 star campaigners while an unrecognised party (but registered) political party can have 20.
 4. The list of star campaigners has to be communicated to the Chief Electoral Officer and Election Commission within a week from the date of notification of an election.
- The Model Code of Conduct (MCC) guidelines say when a prime minister or a former prime minister is star campaigner, the expenditure

incurred on security will be borne by the government.

- The Election Commission has the right to decide whether a star campaigner can further campaign or not.

08-04-2021

1) Consider the following statements with respect to *Anamaya*

1. It is a tribal health collaborative which will converge efforts of various Government agencies and organizations to enhance the health and nutrition status of the tribal communities of India.
2. The Collaborative is a multi-stakeholder initiative of Ministry of Tribal Affairs supported by Piramal Foundation and Bill and Melinda Gates Foundation (BMGF).

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

2) INS Sarvekshak, sometimes seen in the news recently, is a/an/the?

- a. Off Shore Patrol Vessel
- b. Hydrographic Survey Ship
- c. Indian Naval Submarine Base
- d. Deep-submergence rescue vehicle

3) Consider the following statements with respect to *Project Natick*

1. It is an experiment carried out by Microsoft to check the viability of seafloor data storage in the near future.
2. Under the experiment, a shipping container-sized data centre was sunk in to the seafloor off Scotland's Orkney Islands.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

4) Which of the following sectors in India is/are approved by the Union Cabinet for the Production-Linked Incentive (PLI) Scheme so far?

1. White Goods
2. Food Products
3. Textile Products
4. Automobiles & Auto Components
5. Manufacturing of Medical Devices

Select the correct answer using the codes given below:

- a. 5 only
- b. All except 1 and 4
- c. All except 3 and 4
- d. None of the above

5) Which of the following organizations had recently submerged its servers in fluorocarbon-based liquid to improve performance and save energy?

- a. IBM
- b. Google
- c. Microsoft
- d. Facebook

6) Consider the following statements with respect to *India Energy Exchange (IEX)*

1. It is a virtual exchange used to trade carbon footprints of Industries and discoms.
2. It is launched by Ministry of Environment, Forest, and Climate change.

3. Energy saving certificates and Renewable Energy Certificates are products of IEX.

Which of the statement(s) given above is/are correct?

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

7) Which of the following statements are correct with respect to *Wolf-Rayet Star*

- The massive stars which are at an advanced stage of stellar evolution and losing mass at a very high rate.
- They are highly luminous objects, a thousand times more than the Sun.

Select the correct answer using the codes given below:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

8) Which of the following statements are correct with respect to *Supreme Court Portal for Assistance in Court's Efficiency (SUPACE)*

- It is a tool that collects relevant facts and laws and makes them available to a judge.
- It is designed to correlate and verify evidence in given cases and suggests better judgements to magistrates.

Select the correct answer using the codes given below:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

9) Which of the following organizations are known as *Bretton Woods Twins*?

- IMF & WTO
- IMF & World Bank
- World Bank & WTO
- IMF & World Economic Forum

10) Consider the following statements with respect to *Seechewal Method*

- It is a microorganism-based cleaning method used in cleaning arsenic polluted water bodies.
- National Mission to clean Ganga is implementing this method to remove pollutants from the River.

Which of the statement(s) given above is/are *incorrect*?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answers

1. c

- A Tribal Health Collaborative was launched by the Union Minister of Health and Family Welfare and the Union Minister of Tribal Affairs recently.

Anamaya

- The Collaborative is a multi-stakeholder initiative of Tribal Affairs Ministry supported by Piramal Foundation and Bill and Melinda Gates Foundation (BMGF).
- This Collaborative is a unique initiative bringing together governments, philanthropists, national and international foundations, NGOs/CBOs to end all preventable deaths among the tribal communities of India.
- It aims to build a sustainable, high-performing health eco-system to address the key health challenges faced by the tribal population of India.

- It will begin its operations with 50 tribal, Aspirational Districts (with more than 20% ST population) across 6 high tribal population states.
- Over a 10-year period, the work of the THC will be extended to 177 tribal Districts as recognised by the Ministry of Tribal Affairs.

2. b

- INS Sarvekshak, a hydrographic survey ship, is on a deployment to Mauritius for undertaking joint hydrographic surveys along with their Mauritian counterparts.
- During the deployment, training of Mauritian personnel on advanced hydrographic equipment and practices will also be undertaken.
- The ship visited Port Louis, Mauritius and commenced the hydrographic survey of 'Deep sea area off Port Louis'.

INS Sarvekshak

- It is a specialised survey ship, fitted with state-of-the-art survey equipment like Deep Sea Multi-Beam Echo Sounder, Side Scan Sonars and a fully automated digital surveying and processing system.
- In addition, the ship carries an integral Chetak helicopter, which would be extensively deployed during the survey.
- INS Sarvekshak has undertaken various foreign cooperation surveys over the last few years in Mauritius, Seychelles, Tanzania and Kenya.

3. c

Project Natick

- Microsoft sank a shipping container-sized data centre 117 feet deep in the seafloor off Scotland's Orkney Islands in 2018 as part of its Project Natick.
- The tech giant in September last year said it retrieved the data centre coated in algae, barnacles and sea anemones, **confirming viability of seafloor data storage in the near future.**
- The researchers think this hardware will help them understand why the servers in the

underwater datacenter are eight times more reliable than those on land.

- The team hypothesises that the atmosphere of nitrogen, which is less corrosive than oxygen, and the absence of people to bump and jostle components, are the primary reasons for the difference.

4. c

- In the Union Budget 2021-22, the Finance Minister announced an outlay of INR 1.97 Lakh Crores for the Production-Linked Incentive (PLI) Schemes for 13 key sectors.
- It aims to create national manufacturing champions and generate employment opportunities for the country's youth.

Atmanirbhar Bharat

- PLI Schemes are a cornerstone of the Government's push for achieving an Atmanirbhar Bharat.
- The objective is to make domestic manufacturing globally competitive and to create global Champions in manufacturing.
- The strategy behind scheme is to offer companies incentives on incremental sales from products manufactured in India, over the base year.
- They have been specifically designed to boost domestic manufacturing in sunrise and strategic sectors, curb cheaper imports and reduce import bills, improve cost competitiveness of domestically manufactured goods, and enhance domestic capacity and exports.

Sectors under PLI Scheme

- The first three PLI Schemes were approved earlier in March, 2020 and these were followed by another 10 New PLI Schemes in November, 2020.

Of these, the previous three Schemes have been notified. They are:

1. MeitY - Mobile Manufacturing and Specified Electronic Components
2. D/o Pharmaceuticals - Critical Key Starting Materials (KSMs)/ Drug Intermediates And Active Pharmaceutical Ingredients (APIs)

3. D/o Pharmaceuticals - Manufacturing Of Medical Devices

Out of remaining ten Schemes, six have also been approved by the Cabinet as below:

1. Electronic/Technology Products – MeitY
2. Pharmaceuticals drugs - D/o Pharmaceuticals
3. Telecom & Networking Products - D/o Telecommunications
4. Food Products - Ministry of Food Processing Industries
5. White Goods (ACs & LED) - DPIIT
6. High Efficiency Solar PV Modules - MNRE

Another four Schemes are in process of obtaining Cabinet approval as below:

1. Automobiles & Auto Components - D/o Heavy Industry
2. Advance Chemistry Cell (ACC) Battery - D/o Heavy Industry
3. Textile Products: MMF segment and technical textiles - M/o Textiles
4. Specialty Steel - M/o Steel

5. c

- Microsoft has started to submerge its servers in liquid to improve performance and save energy.
- The fluorocarbon-based liquid works by removing heat as it directly hits components, and the fluid reaches a lower boiling point to condense and fall back into the bath as a raining liquid.
- This liquid cooling has been used by cryptocurrency players to mine for bitcoin and other cryptocurrencies.
- It potentially will eliminate the need for water consumption in data centres.

6. d

India Energy Exchange (IEX)

- It provides a nationwide, automated trading platform for physical delivery of electricity, Renewable Energy Certificates and Energy Saving Certificates.
- It enables efficient price discovery and increases the accessibility and transparency of

the power market in India while also enhancing the speed and efficiency of trade execution.

- It is a publicly listed company with National Stock Exchange (NSE) and Bombay Stock Exchange (BSE).
- It is approved and regulated by Central Electricity Regulatory Commission (CERC) and has been operating since 2008.
- Products of Indian Energy Exchange (IEX) are as follows
- **Day-Ahead Market (DAM)** - It is a physical electricity trading market for deliveries for any/some/all 15 minute time blocks in 24 hours of next day starting from midnight.
- **Term-Ahead Market (TAM)** - The contracts under TAM cover a range for buying/selling electricity for duration up to 11 days.
- It enables participants to purchase electricity for the same day through intra-day contracts, for the next day through day-ahead contingency, on daily basis for rolling seven days through daily contracts.
- **Renewable Energy Certificates (REC)** - The Renewable Energy (RE) generator can opt to get RECs against green attributes of their generation.
- It aims to ease the purchase of renewable energy by the state utilities and obligated entities, including the states which are not well endowed with RE sources.
- The REC framework seeks to create a national level market for renewable generators to recover their cost.
- **Energy Saving Certificates (ESCerts)** - These are the tradable certificates under the Perform, Achieve, Trade (PAT) Scheme of Bureau of Energy Efficiency (BEE).

7. c

Wolf-Rayet

- They are massive stars and strip their outer hydrogen envelope which is associated with the fusion of Helium and other elements in the massive core.

- The sequence of Wolf Rayet stars dominated by helium and nitrogen emission lines but can contain some carbon are known as WN Stars.
- While WC stars show no nitrogen and are dominated by helium, carbon and oxygen emission lines.
- Recently, the Indian astronomers have tracked a rare supernova explosion and traced it to one of the hottest kinds of stars called 'Wolf-Rayet' or WR stars.
- The long-term monitoring of these transients opens the door to understand the nature of the exploding star as well as the explosion properties.
- Supernovae (SNe) are highly energetic explosions in the universe releasing an enormous amount of energy.

8. a

Supreme Court Portal for Assistance in Court's Efficiency (SUPACE)

- Recently, the Chief Justice of India has launched the Supreme Court Portal for Assistance in Court's Efficiency (SUPACE).
- It is an Artificial Intelligence (AI) portal which is designed to make research easier for judges, thereby easing their workload.
- It is not designed to take decisions, but only to process facts and to make them available to judges looking for an input for a decision.
- It is a perfect blend of human intelligence and machine learning and 'a hybrid system', which works better with human intelligence.
- The portal has ensured that AI only collects all relevant facts & law and makes it available to Judge on their fingertips.
- The AI can process words and figures in a better way and the results only get better with more examples that are given to the system, to process.
- The AI doesn't have access to feelings and emotions and operates in areas of cognition, where understanding takes place only through language and symbols.

9. b

Bretton Woods Twins

- The IMF was set up along with the World Bank after the Second World War to assist in the reconstruction of war-ravaged countries.
- The two organisations were agreed to be set up at a conference in Bretton Woods in the US.
- Hence, they are known as the Bretton Woods twins.

International Monetary Fund

- Created in 1945, the IMF is governed by and accountable to the 189 countries that make up its near-global membership.
- India joined on 27th December, 1945.
- The Fund's mandate was updated in 2012 to include all macroeconomic and financial sector issues that bear on global stability.
- Reports published by IMF are
 1. Global Financial Stability Report
 2. World Economic Outlook

10. a

Seechewal Method

- It was first introduced by Balbir Singh Seechewal, an environmentalist in Punjab.
- The model is a pipe-and-pump formula used to remove heavy solid particles, oil, and other material from water.
- The Seechewal model has rejuvenated the 160-km Kali Bein, a rivulet of the Beas in the Doaba region of Punjab.
- Under this method first the water from sewerage system is collected in a pond and a filter-mash is used to remove objects floating on the surface of water.
- Then the polluted water is taken into three separate wells,
 1. In the first well the silt from the sewerage is removed.
 2. In the second well fats, oil is taken away.
 3. The third well conveys the cleaned water into the main pond.
- The water collected in the pond is cleaned with sun rays, then a motor pump is installed to lift the treated water to send it to fields for irrigation.



09-04-2021

1) Consider the following statements with respect to *Oxygen Enrichment Device*

1. It concentrates the Oxygen from the air around us by selectively removing nitrogen to supply an oxygen-enriched air.
2. An Oxygen Enrichment Device capable of better treatment of COVID-19 patients was indigenously developed by the CSIR-CMERI recently.

Which of the statement(s) given above is/are *incorrect*?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

2) Consider the following statements with respect to *Indian National Young Academy of Sciences (INIAS)*

1. INIAS is the first and only recognized young scientist academy in India.
2. It was founded by the National Innovation Foundation (NIF) council in December 2014.
3. It aims to promote Science education and networking among young scientists at National as well as International level.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 3 only
- c. 1 and 3 only
- d. 2 and 3 only

3) Consider the following statements with respect to *Copyright (Amendment) Rules, 2021*

1. In India, the copyright regime is governed by the Copyright Act, 1957 and the Copyright Rules, 2013.

2. Under the rules, Copyright societies will be required to draw up and make public a Transparency Report for every five years.

3. The amendment merged the Copyright Board with the Appellate Board.

Which of the statements given above are correct?

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

4) *NanoSniffer*, sometimes seen in the news recently, refers to?

- a. Explosive trace detector
- b. A software to analyze network traffic
- c. Microprocessor based hacking networks
- d. None of the above

5) With respect to *Muons*, consider the following statements:

1. They are subatomic particles similar to electron but heavier than it.
2. It is one of the member of lepton group and are more unstable.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

6) Consider the following statements with respect to *Disqualification of MLAs under Representation of People Act (1951)*

1. An MLA can be disqualified when he holds any office of profit under union or state government.
2. Under the Parliament disqualifications rules, the detention of a person under a

preventive detention law is not a disqualification.

3. He/she will be disqualified for failing to lodge an account of his election expenses within the time.

Which of the statement(s) given above is/are correct?

- 1 and 2 only
- 2 and 3 only
- 1 and 3 only
- All of the above

7) Which of the following resource constitute *Forex reserve of India*

- Foreign currency assets
- Gold reserves
- Silver holdings
- Special Drawing rights
- Reserve position with IMF

Select the correct answer using the codes given below:

- 1, 4 & 5 only
- 4 & 5 only
- 1, 2, 4 & 5 only
- All of the above

8) Which of the following statements are *incorrect* with respect to *Provisions under Tribunal Reforms Ordinance 2021*

- Under this Chairperson and Members of the Tribunals will be appointed by the central government on the recommendation of a Search-cum-Selection Committee.
- It has amended the Cinematograph Act, 1952 by which abolished the Film Certification Appellate Tribunal (FCAT).

Select the correct answer using the codes given below:

- 1 only

- 2 only
- Both 1 and 2
- Neither 1 nor 2

9) *Peltzman Effect* often seen in news is related to which of the following?

- Cyber Security and Data privatization
- Crypto currencies and Block chain Technology
- Risk Behaviour and Safety Standards
- Macro Economics and Trade Regulations

10) Consider the following statements with respect to *Central Vigilance Commission (CVC)*

- It is a constitutional body which submits its report annually to the parliament.
- Recent CVC Guidelines mandates tenure of vigilance personnel who have completed 3 years in one destination can be extended for another 3 years in same destination.

Which of the statement(s) given above is/are *incorrect*?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answers

1. d

- The CSIR-CMERI indigenously developed an Oxygen enrichment unit recently.

Oxygen Enrichment Unit

- An Oxygen enrichment unit is a device, which concentrates the Oxygen from the air around us by selectively removing nitrogen to supply an oxygen-enriched air.
- The unit works on the principle of Pressure Swing Adsorption (PSA) and utilizes Zeolite Columns to selectively remove nitrogen from

air under certain pressure, thereby increasing the Oxygen Concentration.

- The subsystems of oxygen enrichment unit are Compressor, solenoid operated 3/2 valves, flow meter and Pre-Filter.
- The concentrated Oxygen is delivered to the patients, having respiratory diseases, through oxygen mask or nasal cannula.
- The device may be used in remote places, homes or hospital like facilities for patients with chronic obstructive pulmonary diseases (COPD), chronic hypoxemia and pulmonary edema.
- It may be used as an adjunct treatment for severe sleep apnea (in conjunction with a continuous positive airway pressure unit).

Working

- The Compressor feeds pressurized air into the module and oxygen is enriched on the permeate side due to its preferential permeation over nitrogen.
- The suspended particles, viruses, bacteria present in the air are filtered out by the available HEPA filter.
- The machine can regulate flow with accuracy 0.5 lpm.
- This facility will help in High Flow Oxygen Therapy, which is proven to be a better method in treatment and management of COVID-19 patients.

2. c

- *Ministry of Science & Technology has recently launched a multipronged nationwide mass awareness campaign with information packages to bust myths about COVID 19 vaccination in 11 languages, including English and Hindi, make the immunization programme successful.*
- The COVID-19 vaccination awareness campaign organized by Indian National Young Academy of Sciences (IN-YAS) will be carried out through COVACNEWS android-based mobile app made by IN-YAS for ensuring information at the fingertips.

Indian National Young Academy of Sciences (IN-YAS)

- It is the first and only recognized young scientist academy of India.
- IN-YAS was founded by the Indian National Science Academy (INSA) council in December 2014 with a vision to promote Science education and networking among young scientists at National as well as International level.
- Currently, it has 80 members.
- IN-YAS provides a platform to exchange ideas, initiate discussions on scientific topics, collaborations among the new generation of scientists and to make the voices of the young researchers be heard by senior academicians and policy makers of the country.

3. b

- *The Government of India has recently notified the Copyright (Amendment) Rules, 2021.*
- In India, the copyright regime is governed by the Copyright Act, 1957 and the Copyright Rules, 2013.
- The Copyright Rules, 2013 were last amended in the year 2016.

Copyright (Amendment) Rules, 2021

- It aims to ensure smooth and flawless compliance in the light of the technological advancement in digital era by adopting electronic means as primary mode of communication and working in the Copyright Office.

Amendments

- **Elimination of Publication in Official Gazette** - A new provision regarding publication of a copyrights journal has been incorporated, thereby eliminating the requirement of publication in the Official Gazette.
- The said journal would be available at the website of the Copyright Office.
- **Accountability and Transparency** - In order to encourage accountability and transparency, new provisions have been introduced, to deal with the undistributed royalty amounts and use of electronic and traceable payment methods while collection and distribution of royalties.

- To reinforce transparency in working of copyright societies a new rule has been introduced, whereby the copyright societies will be required to draw up and make public an Annual Transparency Report **for each financial year**.
- **Merger** - The amendments have harmonised the Copyright Rules with the provisions of Finance Act, 2017 whereby the Copyright Board has been merged with Appellate Board.
- **Registration of Software** - The compliance requirements for registration of software works have been largely reduced, as now the applicant has the liberty to file the first 10 and last 10 pages of source code, or the entire source code if less than 20 pages, with no blocked out or redacted portions.
- **Increased Time Limit** - The time limit for the Central Government to respond to an application made before it for registration as a copyright society is extended to one hundred and eighty days, so that the application can be more comprehensively examined.

4. a

- *Union Education Minister Ramesh Pokhriyal 'Nishank' recently launched the NanoSniffer, the world's first Microsensor-based Explosive Trace Detector (ETD).*

Nanosniffer

- It has been developed by NanoSniff Technologies which is an IIT Bombay incubated startup.
- It can detect explosives in less than 10 seconds and it also identifies and categorizes explosives into different classes.
- It detects all classes of military, conventional and homemade explosives.
- NanoSniffer gives visible & audibles with sunlight-readable color display.
- It is a step towards Prime Minister Narendra Modi's vision of a self-reliant India.
- NanoSniffer is a 100 per cent Made in India product in terms of research, development & manufacturing.
- The core technology of NanoSniffer is protected by patents in the U.S. & Europe.

- This affordable device will reduce our dependency on imported explosive trace detector devices.
- It will also encourage other institutions, startups and medium-scale industries to research & develop products indigenously.

5. c

- *Fermilab, the American particle accelerator, has released first results from its "muon g-2" experiment.*
- These results spotlight the anomalous behaviour of the elementary particle called the muon.
- The muon g-2 experiment measured the extent of the anomaly and the Fermilab announced recently that "g" deviated from the amount predicted by the Standard Model.

Muons

- Muons are elementary subatomic particles similar to the electron but heavier than electron.
- They belong to lepton family and has two forms, the negatively charged muon and its positively charged antiparticle.
- A muon is relatively unstable, with a lifetime of only 2.2 microseconds before it decays by the weak force into an electron and two kinds of neutrinos.
- Muons are expected to have a value of 2 for its magnetic moment, labelled "g".

6. b

Disqualification of MLAs

- **Constitutional Provisions for Disqualification of MLAs**

Under the Constitution, a person shall be disqualified for being chosen as and for being a member of the legislative assembly or legislative council of a state:

1. If he holds any office of profit under the Union or state government (except that of a minister or any other office exempted by state legislature),
2. If he is of unsound mind and stands so declared by a court,
3. If he is an undischarged insolvent,

4. If he is not a citizen of India or has voluntarily acquired the citizenship of a foreign state or is under any acknowledgement of allegiance to a foreign state, and
5. If he is so disqualified under any law made by Parliament.

• **Parliamentary Provisions for Disqualification of MLAs**

The Parliament has prescribed a number of additional disqualifications in the Representation of People Act (1951) and the same is followed by Legislative Assembly and Council:

1. He must not have been found guilty of certain election offences or corrupt practices in the elections.
 2. He must not have been convicted for any offence resulting in imprisonment for two or more years.
 3. But, the detention of a person under a preventive detention law is not a disqualification.
 4. He must not have failed to lodge an account of his election expenses within the time.
- The governor's decision is final on the question whether a member has become subject to any of the above disqualifications and the governor should obtain the opinion of the Election Commission and act accordingly.

Disqualification on Ground of Defection

- The Constitution lays down that a person shall be disqualified for being a member of either House of state legislature if he is so disqualified on the ground of defection under the provisions of the Tenth Schedule.
- The question of disqualification under the Tenth Schedule is decided by the Chairman, in the case of legislative council and, Speaker, in the case of legislative assembly.
- In 1992, the Supreme Court ruled that the decision of Chairman/Speaker in this regard is subject to judicial review.

7. c

Forex reserve of a country

- Foreign-exchange reserves are, in a strict sense, only foreign-currency deposits held by

national central banks and monetary authorities.

- However, in popular usage and in the list below, it also includes gold reserves, special drawing rights (SDRs) and International Monetary Fund (IMF) reserve position because this total figure, which is usually more accurately termed as official reserves or international reserves or official international reserves, is more readily available and also arguably more meaningful.
- These foreign-currency deposits are the financial assets of the central banks and monetary authorities that are held in different reserve currencies (e.g. the U.S. dollar, the Euro, the Japanese Yen, Swiss Franc, Chinese Yuan, Indian Rupees and the Pound Sterling).
- These are used to back its liabilities (e.g. the local currency issued and the various bank reserves deposited with the Central bank by the government or financial institutions).
- China is the top nation with high amount of forex reserve where India has the fourth highest amount of forex reserve amounting 579000 Million USD.

8. d

Provisions under Tribunal Reforms Ordinance 2021

- Recently, the President promulgated Tribunal Reforms (Rationalisation and Conditions of Service) Ordinance 2021 through which the Appellate authorities under nine laws have been replaced with High Courts.
- It empowered the central government to notify rules on qualifications of members, terms and conditions of their service, and composition of search-cum-selection committees for 19 tribunals (such as Customs, Excise, and Service Tax Appellate Tribunal).
- Search-cum-selection committees will consist of:
 1. Chief Justice of India, or a Supreme Court Judge nominated by him, as the Chairperson (with casting vote),
 2. Secretaries nominated by the central government,

3. The sitting or outgoing Chairperson, or a retired Supreme Court Judge, or a retired Chief Justice of a High Court.
4. The Secretary of the Ministry under which the Tribunal is constituted (with no voting right).
 - The term of office for the Chairperson of the tribunals will be of four years or till the attainment of the age of seventy years, whichever is earlier.
 - For other members of the tribunals, the term will be of four years or till the age of sixty-seven years, whichever is earlier.
 - The Nine Laws (Replacement of Appellate Authorities/Tribunals):
 1. The Cinematograph Act, 1952.
 2. The Trade Marks Act, 1999.
 3. The Copyright Act, 1957.
 4. The Customs Act, 1962.
 5. The Patents Act, 1970.
 6. The Airports Authority of India Act, 1994.
 7. The Control of National Highways (Land and Traffic) Act, 2002.
 8. The Geographical Indications of Goods (Registration and Protection) Act, 1999.

9. c

Peltzman Effect

- The reduction of predicted benefit from regulations that intend to increase safety is sometimes referred to as the Peltzman effect.
- Peltzman first published the "Effects of Automobile Safety Regulation" in the Journal of Political Economy in 1975 in which he controversially suggested that "offsets (due to risk compensation) are virtually complete, so that regulation has not decreased highway deaths".
- According to Peltzman, regulation was at best useless, at worst counterproductive.
- Peltzman effect is often connected with HIV and HPV infections and its safety measures, in recent times it is being associated with Covid-19.

10. a

Central Vigilance Commission

- Central Vigilance Commission is conceived to be the apex vigilance institution, free of control from any executive authority, monitoring all vigilance activity under the Central Government.
- It advises various authorities in Central Government organizations in planning, executing, reviewing and reforming their vigilance work.
- The CVC was set up by the Government in February, 1964 on the recommendations of the Committee on Prevention of Corruption, headed by K. Santhanam.
- CVC has no investigation wing of its own as it depends on the CBI and the Chief Vigilance Officers (CVO) of central organizations, while CBI has its own investigation wing drawing its powers from Delhi Special Police Establishment Act, 1946.
- It is a multi-member Commission consisting of a Central Vigilance Commissioner (Chairperson) and not more than 2 Vigilance Commissioners (Member).

Central Vigilance Commission (CVC) guidelines

- Recently, the Central Vigilance Commission (CVC) has modified the guidelines pertaining to the transfer and posting of officials in the vigilance units of government organisations, restricting their tenure to three years at one place.
- The tenure of personnel in a vigilance unit at one place including lower level functionaries, should be limited to three years only.
- The tenure may be extended to three more years, although at a different place of posting.
- The personnel, who have completed more than five years in vigilance units at the same place, should be shifted on top priority basis.
- After transfer from the vigilance unit, a compulsory cooling off period of three years should be observed before a person can be considered again for posting in the vigilance unit of the organisation concerned.



10-04-2021

1) Consider the following statements with respect to *Indian Council for Cultural Relations (ICCR)*

1. It was founded in 1950 by Maulana Abul Kalam Azad, independent India's first Education Minister.
2. It works under the administrative control of Ministry of Culture.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

2) *SARTHAQ Initiative* was launched recently by which of the following ministries?

- a. Ministry of Education
- b. Ministry of Tribal Affairs
- c. Ministry of Minority Affairs
- d. Ministry of Social Justice and Empowerment

3) With respect to *UN Convention on the Law of the Sea (UNCLOS)*, consider the following statements:

1. It is an International treaty adopted and signed in 1982.
2. United States of America (USA) has both signed and ratified the convention.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

4) Consider the following statements

1. Article 25 of Indian Constitution guarantees the right to freely profess,

practise and propagate religion, subject to public order, morality and health.

2. Religious faith is a part of the fundamental Right to Privacy.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

5) With respect to *India's Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976*, consider the following statements:

1. Exclusive Economic Zone is an area beyond and adjacent to the territorial waters, and the limit of such zone is two hundred nautical miles from the baseline.
2. Under the law, all foreign ships including warships shall enjoy the right of innocent passage through the territorial waters of India.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

6) Consider the following statements with respect to *Madhukranti Portal*

1. It is an initiative of Khadi Village Industries Commission (KVIC) and TRIFED.
2. It is being developed for online registration to achieve traceability source of Honey and other beehive products on a digital platform.

Which of the statement(s) given above is/are correct?

- a. 1 only

- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

7) Consider the following statements with respect to *International Quiet Ocean Experiment (IQOE)*

1. It uses hydrophones to record low-frequency signals from whales and other marine animals, as well as those emanated by human activities.
2. International Maritime Organization (IMO) and IUCN are implementing the project and funded by UN- Environment Program.

Which of the above statement(s) is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

8) Which of the following statements are correct with respect to *Tribunals*

1. It is a quasi-judicial institution that is set up to deal with problems such as resolving administrative or tax-related disputes.
2. Santhanam Committee recommendations led to the introduction of tribunals in India.
3. Constitutional provisions contemplate the establishment of tribunals for public service matters only and not for certain other matters.

Select the correct answer using the codes given below:

- a. 1 only
- b. 1 and 2 only
- c. 1 and 3 only
- d. All of the above

9) Consider the following statements with respect to *Clean Ganga Fund (CGF)*

1. It is set up with voluntary contributions from residents of the country, NRIs and Person of Indian Origin (PIO).
2. It is set up as a trust under the Indian Trusts Act and managed by a Trust to be headed by Finance Minister.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

10) Consider the following statements with respect to *Government Securities Acquisition Programme (G-SAP)*

1. Under this the RBI will purchase government securities worth Rs 1 lakh crore in the first quarter of FY22.
2. It will help market participants to bid better in scheduled auctions and reduce volatility in bond prices.

Which of the statement(s) given above is/are incorrect?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answers

1. a

- The Indian Council for Cultural Relations (ICCR) is celebrating its 71st Foundation Day recently.

Indian Council for Cultural Relations (ICCR)

- It was founded in 1950 by Maulana Abul Kalam Azad, independent India's first Education Minister.
- ICCR is a society registered in the year 1957 under Society Registration Act 1860.

- The organization was under the administrative control of the Ministry of Education and Youth Affairs till 1970.
- Since its mandate involved interaction with foreign entities, ICCR was in 1970 transferred from Ministry of Human Resource Development to the Ministry of External Affairs (MEA).
- Since then it has been functioning as an autonomous body under the administrative control of MEA.

2. a

- Union Education Ministry has recently launched the SARTHAQ initiative.
- The initiative will help in the implementation of National Education Policy in the country.
- The students and teachers holistic advancement through quality education, SARTHAQ has been initiated as a part of the Amrit Mahotsav celebrations.
- The initiative will pave the way for the children and youths to meet the diverse national and global challenges.
- It will also help them to imbibe 21st century skills, indian tradition, culture and value system as envisioned in National Education Policy.

3. a

United Nations Convention on the Law of the Sea (UNCLOS)

- It is also called the Law of the Sea Convention or the Law of the Sea treaty.
- It is an international agreement that resulted from the third United Nations Conference on the Law of the Sea (UNCLOS III), which took place between 1973 and 1982.
- The Law of the Sea Convention defines the rights and responsibilities of nations with respect to their use of the world's oceans, establishing guidelines for businesses, the environment, and the management of marine natural resources.
- USA has signed the Agreement but has not ratified it.

4. c

- The Supreme Court has recently said that, people are free to choose their own religion.
- Article 25 of Indian Constitution guarantees the right to freely profess, practise and propagate religion, subject to public order, morality and health.
- The court also said that every person is the final judge of their own choice of religion or who their life partner should be.
- Courts cannot sit in judgment of a person's choice of religion or life partner.
- Religious faith is a part of the fundamental right to privacy.

5. a

India's Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976

- EEZ of India is an area beyond and adjacent to the territorial waters, and the limit of such zone is two hundred nautical miles from the baseline.
- India's limit of the territorial waters is the line every point of which is at a distance of twelve nautical miles from the nearest point of the appropriate baseline.
- Under the 1976 law, **all foreign ships (other than warships** including submarines and other underwater vehicles) shall enjoy the right of innocent passage through the territorial waters, innocent passage being one that is not prejudicial to the peace, good order or security of India.

6. b

Madhukranti Portal

- It is an initiative of National Bee Board (NBB), Ministry of Agriculture and Farmers Welfare under National Beekeeping & Honey Mission (NBHM).
- The technical and banking partner for development of this digital platform is Indian Bank.
- It is aimed at creating a database of all stakeholders involved in Honey and other hive

products' production, sales and marketing chain.

- The online registration/ traceability system for source of Honey & other beehive products will help in checking the quality & source of adulteration of honey.
- The system will also enable consumers/public to know the source of honey and assure quality of the products.
- KVIC Honey mission provides training and 10 bee boxes with live colonies to beneficiaries including farmers, beekeepers and unemployed youth.

7. a

International Quiet Ocean Experiment (IQOE)

- It is an international scientific program to promote research, observations, and modelling to improve understanding of ocean soundscapes and effects of sound on marine organisms.
- The IQOE Science Plan has been reviewed and approved by the Scientific Committee on Oceanic Research (SCOR) and the Partnership for Observation of the Global Oceans (POGO).
- SCOR and POGO staff members will assist project scientists with implementation.
- The International Quiet Ocean Experiment (IQOE) has identified a network of over 200 non-military hydrophones (underwater microphones) in oceans across the world.
- These hydrophones that pick up even faraway low-frequency signals have recorded sounds from whales and other marine animals, as well as those emanated by human activities.
- This will help them understand how the soundscape of the oceans is changing and how it impacts marine life.
- The three broad components of oceanic acoustics are
 1. Geophony - Sounds created by non-biological natural events like earthquakes, waves and bubbling.
 2. Biophony - Sounds created by the ocean's living creatures.
 3. Anthrophony – sounds created by human activities.

8. a

Tribunals

- It is a quasi-judicial institution that is set up to deal with problems such as resolving administrative or tax-related disputes.
- It performs a number of functions like adjudicating disputes, determining rights between contesting parties, making an administrative decision, reviewing an existing administrative decision and so forth.
- A Tribunal, generally, is any person or institution having an authority to judge, adjudicate on, or to determine claims or disputes – whether or not it is called a tribunal in its title.
- Tribunals were not originally a part of the Constitution.
- The 42nd Amendment Act 1976 introduced provision for tribunals in accordance with the recommendations of the Swaran Singh Committee.
- The Amendment introduced Part XIV-A to the Constitution, which deals with 'Tribunals' and contains two articles:
 1. Article 323-A deals with Administrative Tribunals.
 2. Article 323-B deals with tribunals for other matters.
- Santhanam Committee recommendations led to the establishment of Central Vigilance Commission (CVC)

Constitutional provisions of Tribunals

- Articles 323 A and 323 B differ in the following three aspects:
 1. While Article 323 A contemplates the establishment of tribunals for public service matters only, Article 323 B contemplates the establishment of tribunals for certain other matters (mentioned above).
 2. While tribunals under Article 323 A can be established only by Parliament, tribunals under Article 323 B can be established both by Parliament and state legislatures with respect to matters falling within their legislative competence.

3. Under Article 323 A, only one tribunal for the Centre and one for each state or two or more states may be established. There is no question of the hierarchy of tribunals, whereas under Article 323 B a hierarchy of tribunals may be created.
- Article 262: The Indian Constitution provides a role for the Central government in adjudicating conflicts surrounding inter-state rivers that arise among the state/regional governments.

9. c

Clean Ganga Fund (CGF)

- The secretariat of the Trust to manage CGF is set up in Ministry of Jal Shakti under the Mission Director, Clean Ganga.
- The proposal to set up CGF was to attract private contributions globally for increasing people's participation in this massive task.
- The domestic donors to the Fund shall be eligible for tax benefits as applicable in the case of the Swachh Bharat Kosh.
- CGF will have the objective of contributing to the national effort of improving the cleanliness of the river Ganga with the contributions received from the residents of the country, NRIs/ PIO and others.
- Recently, the Ministry of Jal Shakti has informed that as on March 2021, funds of Rs 453 crore have been deposited in the Clean Ganga Fund

10. d

Government Securities Acquisition Programme (G-SAP)

- Recently, the governor of RBI has announced a new programme called Government Securities Acquisition Programme (G-SAP).
- It will reiterate the RBI's commitment to maintain the current accommodative policy stance until the economy is back on track.
- It will provide certainty to the bond market participants with regard to RBI's commitment of support to the bond market in FY22.
- The market participants have always wanted to know the RBI's Open Market Operations (OMO) purchase calendar, and the RBI has

now provided that to the market through G-SAP.

- It will help reduce the spread between the repo rate and the 10-year government bond yield which will help to reduce the aggregate cost of borrowing for the Centre and states in FY22.

Open Market Operation

- Open Market Operations is the simultaneous sale and purchase of government securities and treasury bills by RBI.
- The objective of OMO is to regulate the money supply in the economy.
- RBI carries out the OMO through commercial banks and does not directly deal with the public.
- OMO is one of the quantitative tools that RBI uses to smoothen the liquidity conditions through the year and minimize its impact on the interest rate and inflation rate levels.

12-04-2021

1) Natanz Nuclear Complex, often seen in the news recently, is one of the main uranium enrichment plants of which of the following countries?

- a. Iraq
- b. Pakistan
- c. North Korea
- d. None of the above

2) Consider the following statements

- 1. The Indus and Ganges River dolphins are same species but found in different waters.**
- 2. Both Indus and Ganges River Dolphins are classified as 'Endangered' by the International Union for Conservation of Nature (IUCN).**

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2



d. Neither 1 nor 2

3) *Umngot River*, sometimes seen in the news recently, is located in which of the following states?

- Meghalaya
- Chhattisgarh
- Himachal Pradesh
- Arunachal Pradesh

4) Consider the following statements with respect to *Shaphari Scheme*

- The scheme certifies hatcheries and farms, for a period of two years, which adopts good aquaculture practices.
- The scheme was developed by the Marine Products Exports Development Authority (MPEDA).
- The scheme is based on the United Nations' Food and Agriculture Organization's (UN FAOs) technical guidelines on aquaculture certification.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 and 3 only
- 1, 2 and 3
- None of the above

5) Consider the following pairs

- La Soufriere Volcano - Indonesia
- Thwaites Glacier - Antarctica

Which of the pair(s) given above is/are correctly matched?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

6) Consider the following statements with respect to *Classical Swine Fever (CSF)*

- It is caused by type A influenza viruses H1N1, which causes 100% mortality in pigs.
- The humans are not affected by this disease and swines are the only species known to be susceptible.

Which of the statement(s) given above is/are incorrect?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

7) Which of the following statements are incorrect with respect to *Municipal Bonds*

- In India interest rates generated on municipal bonds are exempt from taxation.
- It is incentivised by Ministry of Housing and Urban Affairs under Mission AMRUT.

Select the correct answer using the codes given below:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

8) Which of the following states have rolled out *Advanced Antiquities Management System*?

- Punjab
- Karnataka
- Gujarat
- Goa

9) Consider the following statements with respect to *Net-Zero Target*

1. It is a plan on Co2 emissions formulated in COP15, by which a country would bring down its net carbon emission to zero.
2. It suggests absorption of the emissions through carbon sinks such as forests, and futuristic technologies such as carbon capture and storage.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

10) Consider the following statements with respect to *Sheep Pox*

1. It is a highly contagious disease of sheeps caused by a poxvirus different from the benign orf or contagious ecthyma.
2. Indigenously developed vaccine for the disease can protect the vaccinated animals for a period of 40 months.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answers

1. d

- Iran's nuclear chief has said its Natanz nuclear facility was hit by a terrorist act recently.
- Iran Atomic Energy Organisation (IAEO) condemned the incident and urged the international community and the International Atomic Energy Agency (IAEA) to deal with this nuclear terrorism.

Background

- Iran's President Hassan Rouhani had recently inaugurated new centrifuges at the Natanz site, which is key to the country's uranium enrichment programme.
- The facility, located in the desert in the central province of Isfahan, is the centre piece of Iran's uranium enrichment programme and is monitored by inspectors of the IAEA.

2. b

- A Detailed analysis of South Asian river dolphins has recently revealed that the Indus and Ganges River dolphins are not one, but two separate species.
- The study estimates that Indus and Ganges River Dolphins may have diverged around 550,000 years ago.
- The Indus and Ganges River dolphins are both classified as 'Endangered' species by the International Union for Conservation of Nature (IUCN).

3. a

- 12 villages in Meghalaya protest against a 210 MW hydroelectric power project on Umngot River.
- The river attracts many tourists to Dawki bordering Bangladesh.

Umngot River

- The river acts as a natural divide between Jhaintia and Khasi hills, before finally flowing into Bangladesh.
- The water of the river is so clear that the boats floating on it look as if they are on a crystal glass surface.

4. c

- India exported frozen shrimp worth almost \$5 billion in 2019-20 to the U.S. and China — its biggest buyers.
- But a combination of factors had hurt export volumes in recent months, including container shortages and incidents of seafood consignments being rejected because of food safety concerns.
- To bolster confidence in India's frozen shrimp produce, the Centre has kicked off a new

scheme “**Shaphari**” to certify hatcheries and farms that adopt good aquaculture practices.

Shaphari Scheme

- The scheme was developed by the Marine Products Exports Development Authority (MPEDA).
- Shaphari is a Sanskrit word which means superior quality of fishery products suitable for human consumption.
- Frozen shrimp is India’s largest exported seafood item.
- Certified aquaculture products will help exporters to export their consignments to markets under stringent food safety regulations without the fear of getting rejected.
- The Shaphari scheme is based on the United Nations’ Food and Agriculture Organization’s technical guidelines on aquaculture certification and will have two components – certifying hatcheries for the quality of their seeds and, separately, approving shrimp farms that adopt the requisite good practices.
- The certification of hatcheries will help farmers easily identify good quality seed producers.
- Those who successfully clear multiple audits of their operations shall be granted a certificate for a period of two years.
- The entire certification process will be online to minimise human errors and ensure higher credibility and transparency.

5. b

La Soufriere Volcano

- La Soufriere, a volcano in the main Island of St. Vincent and the Grenadines, **Southern Caribbean** erupted in a billowing blast of gray smoke recently, spewing clouds of ash for miles and forcing thousands to evacuate.
- The La Soufriere Volcano has been dormant for decades and last erupted in 1979.

Thwaites Glacier

- Researchers at Sweden’s University of Gothenburg had recently said that the fears related to the melting of Antarctica’s Thwaites Glacier are worse than previously thought,

owing to the supply of warm water flowing underneath at a rate underestimated in the past.

- It is 120 km wide at its broadest, fast-moving, and melting fast over the years.
- Because of its size (1.9 lakh square km), it contains enough water to raise the world sea level by more than half a metre.
- Studies have found the amount of ice flowing out of it has nearly doubled over the past 30 years.
- As of now, Thwaites’s melting already contributes 4% to global sea level rise each year.
- It is estimated that it would collapse into the sea in 200-900 years.
- Thwaites is important for Antarctica as it slows the ice behind it from freely flowing into the ocean.
- Because of the risk it faces – and poses – Thwaites is often called the Doomsday Glacier.

6. a

Classical Swine Fever (CSF)

- It is also known as hog cholera, a contagious viral disease of domestic and wild swine.
- It is caused by a virus of the genus Pestivirus of the family Flaviviridae, which is closely related to the viruses that cause bovine viral diarrhoea in cattle and border disease in sheep.
- The most common method of transmission is through direct contact between healthy swine and those infected with CSF virus.
- Humans are not affected by this virus. Swine are the only species known to be susceptible.
- Recently ICAR-IVRI has developed a Cell Culture CSF Vaccine using the Lapinized Vaccine Virus from foreign strain.

Swine flu

- It is a respiratory disease of pigs caused by type A influenza viruses i.e. H1N1.
- It is called swine flu because it was known in the past to occur in people who had been in the vicinity of pigs.

7. d

Municipal Bonds

- A municipal bond (muni) is a debt security issued by a state, municipality or county to finance its capital expenditures, including the construction of highways, bridges or schools.
- Through muni bonds, a municipal corporation raises money from individuals or institutions and promises to pay a specified amount of interest and returns the principal amount on a specific maturity date.
- Municipal Bonds can help the Urban Local Bodies (ULBs) to garner revenue to complete budgetary projects as property tax is the only major source of municipal revenue.
- Municipal bonds that are issued to the public are rated by renowned agencies such as CRISIL, which allows investors transparency regarding the credibility of the investment option.
- Municipal bonds are issued by municipal authorities, implying involvement of minimal risk with these securities.

Mission Amrut

- Atal Mission for Rejuvenation and Urban Transformation (AMRUT) was launched in 2015 to:
 1. Ensure that every household has access to a tap with the assured supply of water and a sewerage connection.
 2. The Priority zone of the Mission is water supply followed by sewerage.
 3. Increase the amenity value of cities by developing greenery and well-maintained open spaces (e.g., parks).
 4. Reduce pollution by switching to public transport or constructing facilities for non-motorized transport (e.g., walking and cycling).
- It is a centrally sponsored scheme with 80% budgetary support from the Centre.

8. d

Advanced Antiquities Management System

- The AAMS is a software-driven automated storage used for the storage of various objects.

- So far it has been used for storage of industrial equipment but the decision of Goa's DAA to use it for storing valuable antiquities is the first such in the country.
- The AAMS will ensure safety of antiquities, clean storage space, access control and data management and also enhance utilisation of space.
- With antiquities preserved within the system, it will provide access to these in one place with the help of a screen on which the preserved antiquities can be searched and accessed within the system for viewing.
- It will also provide information about the age of the antiquity, the material it is made of and its brief history.

9. b

Net-Zero Target

- It is also referred to as carbon-neutrality, does not mean that a country would bring down its emissions to zero.
- Rather, net-zero is a state in which a country's emissions are compensated by absorption and removal of greenhouse gases from the atmosphere.
- Absorption of the emissions can be increased by creating more carbon sinks such as forests, while the removal of gases from the atmosphere requires futuristic technologies such as carbon capture and storage.
- This way, it is even possible for a country to have negative emissions, if the absorption and removal exceed the actual emissions.
- A good example is Bhutan which is often described as carbon-negative because it absorbs more than it emits.
- India, the world's third biggest emitter of greenhouse gases, after the US and China.
- However, India is the only one opposing this target because it is likely to be the most impacted by it.

10. c

Sheep Pox

- It is a severe viral disease in sheep which is economically important in small ruminants.



- It is a serious and often fatal disease characterized by widespread skin eruption.
- It is a highly contagious disease of sheep caused by a poxvirus different from the benign orf (or contagious ecthyma).
- The transmission is usually by aerosol after close contact with severely affected animals containing ulcerated papules on the mucous membranes.
- The live attenuated Sheep Pox Vaccine using indigenous strain was developed by the Institute for preventive vaccination in the sheep population.
- The developed Vaccine uses indigenous Sheep Pox Virus Strain [SPPV Srin 38/00] and is adapted to grow in the Vero cell line which makes the Vaccine production to be easily scalable.

- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

3) Which one of the following passes is/are not located in the state of Himachal Pradesh?

1. Sach Pass
2. Kunzum Pass
3. Asirgarh pass
4. Chanshal Pass
5. Haldighati Pass

Select the correct answer using the codes given below:

- a. 3 only
- b. 1 and 2 only
- c. 2 and 4 only
- d. 3 and 5 only

13-04-2021

1) Consider the following statements with respect to India Energy Dashboard (IED)

1. It aims to provide single-window access to the energy data in the country.
2. It was launched by NITI Aayog.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

2) Consider the following statements with respect to E-filing 3.0

1. Under the scheme, there will be no need for lawyers or clients to visit the court premises for filing of a case.
2. It was introduced by the e-Committee of the Supreme Court.

Which of the statement(s) given above is/are correct?

- a. 1 only

4) With respect to Election Commissioners of India, consider the following statements:

1. The Chief Election Commissioner and the two other election commissioners have equal powers and receive equal salary and allowances, similar to those of a judge of the Supreme Court.
2. In case of difference of opinion amongst the Chief Election Commissioner and/or two other Election Commissioners, the matter is decided by the Commission by majority.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

5) Which of the following was not adopted as the International Year for 2021?

- a. International Year of Peace and Trust

- b. International Year of Fruits and Vegetables
- c. International Year for the Elimination of Child Labour
- d. None of the above

6) Consider the following statements with respect to *Brucellosis*

1. It is a fungal disease caused by *Blastomyces* which causes respiratory disease in human.
2. *Brucellosis* is often spread when people eat contaminated food, which may include raw meat and unpasteurized milk.

Which of the statement(s) given above is/are *incorrect*?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

7) Which of the following statements are *incorrect* with respect to *Poppy Straw*

1. It is one of the narcotic drugs under the Narcotic Drugs & Psychotropic Substances Act 1985 (NDPS Act).
2. Farmers can sell the poppy straw to those licensed by the State Governments to purchase poppy straw.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

8) Which of the following statements are correct with respect to *100% Sustainable Fuels*

1. It essentially represents the 3rd Generation biofuels which typically are made from by-products of industrial or agricultural waste and Algae.

2. Federation of International Automobile had developed a 100% sustainable fuel which is intended for commercial use by 2026.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

9) Consider the following statements with respect to Bar Headed Goose

1. Its original habitat is South East Asia adjoining Vietnam, Thailand and Cambodia.
2. It is listed as least concerned species under IUCN red list.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

10) Consider the following statements with respect to *Global Minimum Corporate Tax Rate*

1. It is proposed by India in the WTO to attract multinational corporations (MNCs).
2. It aims to offset any disadvantages that might arise from increase in the US corporate tax rate.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answers

1. c

- *India Energy Dashboards Version 2.0 was recently launched by Dr Rajiv Kumar, Vice Chairman, NITI Aayog.*

India Energy Dashboards (IED)

- It is an endeavour to provide single-window access to the energy data for the country.
- Energy data published/provided by Central Electricity Authority, Coal Controller's Organisation, and Ministry of Petroleum and Natural Gas is compiled in the Dashboards.
- **NITI Aayog** launched the Version 1.0 in May 2017.

2. c

- Dr Justice Dhananjaya Y. Chandrachud, Judge, Supreme Court of India and Chairperson, e-Committee of the Supreme Court has recently inaugurated a Judgments and Orders Portal for searching past judgments and orders and an e-Filing 3.0 module to allow electronic filing of court documents, through a virtual event.
- The initiatives are developed by Pune based e-Courts project team are aimed to strengthen legal system.

Judgments and Orders search portal

- The portal is a repository of judgments pronounced by various High Courts in the country.
- It provides facility to search judgements and final orders based on multiple search criteria.

e-filing 3.0 module

- It was introduced by the e-Committee of the Supreme Court and it allows electronic filing of court documents.
- With the introduction of the new module, there will be no need for lawyers or clients to visit the court premises for filing of a case.
- The filing process can take place even when the court, client and lawyer are at three different locations.

3. d

1. Haldighati Pass – Rajasthan

2. Asirgarh pass – Madhya Pradesh

4. c

- *President has recently appointed Shri Sushil Chandra, the senior-most Election Commissioner, as the Chief Election Commissioner in the Election Commission of India.*

Election Commissioners

- Article 324 of Indian Constitution has made the following provisions with regard to the composition of election commission.
- The Election Commission shall consist of the chief election commissioner and such number of other election commissioners, if any, as the president may from time to time fix.
- The appointment of the chief election commissioner and other election commissioners shall be made by the president.
- The chief election commissioner and the two other election commissioners have equal powers and receive equal salary, allowances and other perquisites, which are similar to those of a judge of the Supreme Court.
- In case of difference of opinion amongst the Chief election commissioner and/or two other election commissioners, the matter is decided by the Commission by majority.
- They hold office for a term of six years or until they attain the age of 65 years, whichever is earlier.
- They can resign at any time or can also be removed before the expiry of their term.

5. d

United Nation (UN) had declared 2021 as:

1. International Year of Peace and Trust
2. International Year of Fruits and Vegetables
3. International Year for the Elimination of Child Labour
4. International Year of Creative Economy for Sustainable Development

6. a

Brucellosis

- Brucellosis is a bacterial disease caused by various *Brucella* species, which mainly infect cattle, swine, goats, sheep and dogs.
- Humans generally acquire the disease through direct contact with infected animals, by eating or drinking contaminated animal products, or by inhaling airborne agents.
- The majority of cases are caused by ingesting unpasteurized milk or cheese from infected goats or sheep.
- Person to person transmission is rare.
- The disease causes flu-like symptoms, including fever, weakness, malaise and weight loss.

7. d

Poppy Straw

- Poppy straw is the husk left after the opium is extracted from pods.
- This poppy straw also contains a very small morphine content and if used in sufficient quantities, poppy straw can give a high.
- Possession, sale, use, etc. of poppy straw is regulated by the State Governments under the State Narcotic Drugs & Psychotropic Substances Rules.
- Farmers sell the poppy straw to those licensed by the State Governments to purchase poppy straw.
- Any excess poppy straw is ploughed back into the field.
- Hence, anyone possessing, selling, purchasing or using poppy straw without a license or authorization or in violation of any conditions of the license is liable to prosecution under the NDPS Act.

8. c

100% Sustainable Fuels

- In 2020, the Federation of International Automobile (FIA) announced that it had developed a 100% sustainable fuel and that engine manufacturers were already in the process of testing
- A 100% sustainable fuel essentially represents the third generation and most advanced iteration of biofuels, which typically are made

from by-products of industrial or agricultural waste.

- F1 cars already use biofuels but current regulations only mandate that the fuel include 5.75% of bio-components.
- In 2022 that number will increase to 10% and by 2025, when new power units are proposed to enter the competition, the FIA hopes to transition completely to 100% advanced sustainable fuels.

Biofuels

- Any hydrocarbon fuel that is produced from an organic matter (living or once living material) in a short period of time (days, weeks, or even months) is considered a biofuel.
- Biofuels may be solid, liquid or gaseous in nature.
 1. Solid: Wood, dried plant material, and manure
 2. Liquid: Bioethanol and Biodiesel
 3. Gaseous: Biogas.
- These can be used to replace or can be used in addition to diesel, petrol or other fossil fuels for transport, stationary, portable and other applications.
- Also, they can be used to generate heat and electricity.

9. b

Bar Headed Goose

- The bar-headed goose (*Anser indicus*) is a goose that breeds in Central Asia in colonies of thousands near mountain lakes and winters in South Asia, as far south as peninsular India.
- It lays three to eight eggs at a time in a ground nest.
- It is known for the extreme altitudes it reaches when migrating across the Himalayas.
- The bird's original habitat is around Central China and Mongolia, however they make the world's highest bird migration.

10. b

Global Minimum Corporate Tax Rate

- US Treasury Secretary has urged G20 nations to move towards a global minimum corporate tax.
- It is an attempt to reverse a “30-year race to the bottom” in which countries have resorted to slashing corporate tax rates to attract multinational corporations (MNCs).
- The US proposal envisages a 21% minimum corporate tax rate, coupled with cancelling exemptions on income from countries that do not legislate a minimum tax to discourage the shifting of multinational operations and profits overseas.
- It is tailored to address the low effective rates of tax shelled out by some of the world’s biggest corporations, including digital giants such as Apple, Alphabet and Facebook.
- These companies typically rely on complex webs of subsidiaries to hoover profits out of major markets into low-tax countries such as Ireland or Caribbean nations such as the British Virgin Islands or the Bahamas, or to Central American nations such as Panama.
- The increase in corporation tax comes at a time when the pandemic is costing governments across the world, and is also timed with the US’s push for a USD 2.3 trillion infrastructure upgrade proposal.

15-04-2021

1) Consider the following statements with respect to *Aahaar Kranti*

- 1. It is a national digital repository on health and nutrition to tackle the challenges of knowledge awareness and behaviour change in the nutrition sector.**
- 2. It was launched by the NITI Aayog and Bill and Melinda Gates Foundation (BMGF).**

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

2) Consider the following statements with respect to *Poshan Gyan*

- 1. The mission aimed to create awareness about the importance of nutritionally balanced diet and local fruits and vegetables.**
- 2. It was launched by the Ministry of Health and Family Welfare.**

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

3) With respect to *mRNA vaccines*, consider the following statements:

- 1. They are non-infectious, non-integrating in nature, and degraded by standard cellular mechanisms.**
- 2. They are highly efficacious because of their inherent capability of being translatable into the protein structure inside the cell cytoplasm.**
- 3. They are fully synthetic and do not require a host, like eggs or bacteria, for growth.**

Which of the statements given above are correct?

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

4) With respect to *Infant Toddler and Caregiver-friendly Neighbourhoods (ITCN) Training and Capacity Building Programme*, consider the following statements:

- 1. It is designed to help build capacities of city officials and young professionals for developing young children and family-friendly neighbourhoods within cities in India.**

2. It was launched by the National Institute of Urban Affairs (NIUA) in partnership with Bernard van Leer Foundation (BvLF).

- c. Both 1 and 2
d. Neither 1 nor 2

Which of the statement(s) given above is/are correct?

- a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

5) Consider the following statements with respect to *Raisina Dialogue, 2021*

1. It is India's informal strategic dialogue with the United States, Japan, Australia and India.
2. The theme for the 2021 Edition is *Viral World: Outbreaks, Outliers and Out of Control*.
3. It will be jointly organised by the Ministry of External Affairs and the Observer Research Foundation (ORF).

Which of the statement(s) given above is/are correct?

- a. 2 only
b. 3 only
c. 2 and 3 only
d. None of the above

6) Which of the following statements are correct with respect to *e-SANATA*

1. It is an electronic marketplace providing a platform to connect aqua farmers and the buyers.
2. It is backed by an end to end electronic payment system with National Centre for Sustainable Aquaculture (NaCSA) as an Escrow agent.

Select the correct answer using the codes given below:

- a. 1 only
b. 2 only

7) Which of the following statements are *incorrect* with respect to *Narrow line Seyfert1 (NLS1) galaxies*

1. It is active galaxy which emits high-energy gamma rays which is 31 billion light years away from earth.
2. Light from these galaxies is shifted to longer wavelengths, the hue of light turns redder which is termed as 'redshifted'

Select the correct answer using the codes given below:

- a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

8) Which of the following statements are *incorrect* with respect to *Alkaloids*

1. They are synthetically produced organic compounds which contain high Carbon and Hydrogen atom or atoms in their structures.
2. It can be extracted from opium gum, such extraction is controlled by the Revenue Department in the Ministry of Finance.

Select the correct answer using the codes given below:

- a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

9) *Gyanvapi Mosque* in Varanasi was constructed during the reign of which of the following ruler?

- a. Muhammad-Bin-Tughlaq
b. Akbar

- c. Alla-ud-din Khilji
- d. Aurangzeb

10) India's deepest port Gangavaram is located in which of the following state?

- a. Gujarat
- b. Maharashtra
- c. Andhra Pradesh
- d. West Bengal

Answers

1. d

- Union Health Minister Harsh Vardhan has recently launched the Aahaar Kranti Movement.

Aahaar Kranti

- The mission is aimed to spread the message of the need for a nutritionally balanced diet and to understand the importance of accessible to all local fruits and vegetables.
- **Vijnana Bharati (Vibha) and Global Indian Scientists' and Technocrats' Forum (GIST)** have come together to launch the mission with the motto of "Uttam Aahaar Uttam Vichaar" or "Good Diet-Good Cognition".
- The programme will focus on training teachers, who, in turn, will pass on the message to the multitudes of students, and through them to their families and finally the society at large.
- Such a strategy was adopted for the eradication of Polio and it turned out to be a grand success.

Background

- The movement is designed to address the peculiar problem being faced by India and the world called 'hunger and diseases in abundance'.
- Studies estimate that India produces as much as two times the amount of calories that it consumes.

- However, many in the country are still malnourished.
- The root cause of this strange phenomenon is a lack of nutritional awareness in all sections of our society.

2. d

- *NITI Aayog, in partnership with Bill and Melinda Gates Foundation (BMGF) and Centre for Social and Behaviour Change, Ashoka University launched Poshan Gyan, a national digital repository on health and nutrition recently.*

Poshan Gyan

- It is a collection of effective communication materials created by government agencies and other development organizations to tackle the challenges of knowledge awareness and behaviour change in the nutrition sector.
- The materials cover a range of topics, such as antenatal care, complementary feeding, adolescent health, diet diversity, anemia prevention etc.
- This repository is curated and maintained by NITI Aayog in joint efforts with other development partners.
- Poshan Gyan is designed to be accessible for everybody to use - whether frontline health workers, community leaders, teachers or anyone else seeking to improve nutritional outcomes.

3. d

- *The Department of Biotechnology (DBT), Ministry of Science & Technology has recently announced that it has approved additional funding towards clinical studies of **India's first of its kind mRNA-based COVID-19 vaccine - HGCO19**, developed by Pune-based biotechnology company Gennova Biopharmaceuticals Ltd.*
- This funding has been awarded under the **Mission COVID Suraksha** - The Indian COVID-19 Vaccine Development Mission by DBT's dedicated Mission Implementation Unit at Biotechnology Industry Research Assistance Council (BIRAC) after multiple rounds of evaluation of all the applications.

Advantages over traditional vaccines

Safety

- Unlike live-attenuated or viral-vectored vaccines, mRNA is non-infectious and poses no concern for DNA integration—mainly because it cannot enter the nucleus which contains DNA.
- Other strategies such as protein-based or inactivated vaccines also require chemicals and cell cultures to produce.
- mRNA is made through a cell-independent process and does not require inactivation; thus, it poses no safety concerns due to contamination with toxic agents.

Efficacy

- mRNA is rapidly degraded in the body, and cells don't readily take up foreign mRNA.
- Recent technology has modified the mRNA molecule to make it more stable and packaged the molecules in fats (called lipids), increasing cell delivery efficiency.
- These advances increase the amount of spike protein produced on your cells, thereby stimulating a more effective immune response.

Production

- They are fully synthetic and do not require a host for growth, e.g., eggs or bacteria.
- It can be quickly designed and scaled up, if necessary.
- The manufacturing is sequence-independent, which makes it highly adaptable to different pathogens.
- The cost is also lower than other platforms and will continue to decrease as the technology expands.

4. c

Infant Toddler and Caregiver-friendly Neighbourhoods (ITCN) Training and Capacity Building Programme

- The programme was launched virtually by **National Institute of Urban Affairs (NIUA)** in partnership with Bernard van Leer Foundation (BvLF) recently.
- The Programme is designed to help build capacities of city officials and young professionals for developing young children

and family-friendly neighbourhoods within cities in India.

- The programme is a continuation of the long-term partnership between NIUA and BvLF to scale up the efforts and embed the lessons of ITC needs at neighbourhood level within the city level programmes.

5. c

Raisina Dialogue, 2021

- *The 6th Edition of the prestigious Raisina Dialogue was inaugurated recently.*
- Prime Minister Shri Narendra Modi delivered a video address at the Inaugural Session of the Raisina Dialogue in virtual format, along with Chief Guests H.E. Paul Kagame, President of Rwanda and H.E. Mette Frederiksen, Prime Minister of Denmark.
- The theme for the 2021 Edition is **ViralWorld: Outbreaks, Outliers and Out of Control.**

Raisina Dialogue

- It is India's premier conference on geopolitics and geo-economics committed to addressing the most challenging issues facing the global community.
- Every year, leaders in politics, business, media, and civil society converge in New Delhi to discuss the state of the world and explore opportunities for cooperation on a wide range of contemporary matters.
- The conference is hosted by the Observer Research Foundation in partnership with the Ministry of External Affairs, Government of India.

6. c

e-SANATA

- The term e-SANTA was coined for the web portal, meaning Electronic Solution for Augmenting NaCSA farmers' Trade in Aquaculture.
- It is a Digital Bridge to end the market divide and will act as an alternative marketing tool between farmers & buyers by eliminating middlemen.
- The platform provides detailed specification of each product listing and it is backed by an end

to end electronic payment system with NaCSA as an Escrow agent.

- National Centre for Sustainable Aquaculture (NaCSA) is an extension arm of Marine Products Export Development Authority (MPEDA).

7. d

Narrow line Seyfert1 Galaxies

- Aryabhata Research Institute of Observational Sciences (ARIES), in collaboration with researchers from other institutions, studied around 25,000 luminous Active Galactic Nuclei (AGN) and found a unique object that emits high-energy gamma rays located at a high red-shift.
- They identified it as a gamma-ray emitting NLS1 galaxy, which is a rare entity in space.
- The Sloan Digital Sky Survey (SDSS), a major optical imaging and spectroscopic survey of astronomical objects that have been in operation for the last 20 years was used for the study.
- As of today, gamma-ray emission has been detected in about a dozen NLS1 galaxies, which are a separate class of AGN identified four decades ago.
- All of them are at lower redshifts, and no method was available to date to find NLS1 at higher redshifts.
- This opens up a new way to find gamma-ray emitting NLS1 galaxies in the early Universe.
- For the research, the scientists used one of the largest ground-based telescopes in the world, the 8.2 m Subaru Telescope located in Hawaii, USA.

8. a

Alkaloids

- Alkaloids are a huge group of naturally occurring organic compounds which contain nitrogen atom or atoms (amino or amido in some cases) in their structures.
- These nitrogen atoms cause alkalinity of these compounds.
- Well-known alkaloids include morphine, strychnine, quinine, ephedrine, and nicotine.

- Recently central government has decided to rope in the private sector to commence production of concentrated poppy straw (CPS) from India's opium crop to boost the yield of alkaloids, used for medical purposes and exported to several countries.

9. d

Gyanvapi Mosque

- The mosque was built during the reign of the Mughal emperor Aurangzeb in 1669 CE.
- It is a Jama Masjid located in north of Dashashwamedh Ghat, near Lalita Ghat along the river Ganga.
- Recently, Varanasi civil court ordered Archaeological Survey of India to conduct a survey to ascertain whether the Gyanvapi mosque was built over a demolished Hindu temple.

10. c

Gangavaram Port

- It has a depth of 21m, located in Visakhapatnam, Andhra Pradesh.
- It is managed by Gangavaram Port Ltd., a special-purpose company floated by Mr. DVS Raju, who serves as its chairman and managing director.
- The company is owned by the DVS Raju Group (58.1%), Adani Ports (31.5%) and the Andhra Pradesh Government (10.4%).
- Recently Competition Commission of India (CCI) has approved Adani ports acquisition of 89.6% stake in Gangavaram Port Ltd.

16-04-2021

1) Consider the following statements with respect to National Commission for Scheduled Castes (NCSC)

- 1. It is a constitutional body established under Article 338 of Indian Constitution.**
- 2. The members of the commission are appointed by the President by warrant under his/her hand and seal.**

3. The conditions of service and tenure of office of members of NCSC are determined by the President.

Which of the statements given above are correct?

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

2) With respect to *Hydrogen Sulphide Gas (H₂S)*, consider the following statements:

- It is a poisonous, corrosive, and flammable gas produced from swamps and sewers.
- It is the primary gas produced from the microbial breakdown of organic matter in the absence of oxygen.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

3) Consider the following statements with respect to *National Internet Exchange of India (NIXI)*

- It is a not-for-profit organization under section 8 of the Companies Act 2013.
- It was set up for peering of ISPs by routing the domestic traffic to US/Abroad, thereby resulting in better quality of services.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

4) *State of World Population Report, 2021* was recently launched by?

- World Bank
- UN Population Fund
- World Economic Forum
- Food and Agricultural Organization

5) Consider the following statements with respect to *Regulations Review Authority 2.0*

- It was setup by the Ministry of Finance for a period of one year.
- The Governor of Reserve Bank of India (RBI) is the ex-officio chairman of RRA 2.0.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

6) Which of the following pairs are matched correctly with respective to *New years in India?*

| New Year | Celebrating States |
|----------|--------------------|
|----------|--------------------|

- | | |
|-------------------|---------------|
| 1. Bohag Bihu | - Odisha |
| 2. Pana Sankranti | - Assam |
| 3. Naba Barsha | - West Bengal |

Select the correct answer using the codes given below:

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

7) Which of the following statements are correct with respect to *MANAS Platform?*

- It is a national digital wellbeing platform to augment mental well-being of Indian citizens.

2. It is initiated by Ministry of Health and Family Welfare and WHO.

Select the correct answer using the codes given below:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

8) Which of the following statements are correct with respect to *Indian Rhino Vision (IRV) 2020*?

- It was designed by Rhino Task Force with a target to achieve rhino population to 3,000.
- Worldwide Fund for Nature India (WWF-India) and Biodiversity Conservation Council are part of this initiative.

Select the correct answer using the codes given below:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

9) Strait of Kerch connects black sea with which of the following sea?

- Mediterranean Sea
- Sea of Azov
- Aegean Sea
- Sea of Crete

10) Consider the following statements with respect to *Danube Sturgeon*

- They are called 'living fossils' because their appearance has altered very little over the years.
- Five out of six species of sturgeon in the Danube River are now listed as critically endangered.

Which of the statement(s) given above is/are incorrect?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answers

1. d

- Union Minister for Communication & IT and Law & Justice Shri Ravi Shankar Prasad has recently launched the Online Grievance Management Portal of National Commission for Scheduled Castes (NCSC) on the occasion of 130th birth anniversary of Bharat Ratna Baba Saheb Dr. B. R. Ambedkar.

National Commission for Scheduled Castes (NCSC)

- It was set up under the Article 338 of the Constitution of India with the objective to investigate and monitor all issues pertaining to the safeguards provided for the Scheduled Castes under any law for the time being in force or under any order of the Government of India.
- The Commission also enquires into specific complaints with respect to the deprivation of rights and safeguards provided for the Scheduled Castes.
- The NCSC renews its commitment to serve the cause of the SC community as mandated in the Constitution and policies of the government.

2. c

- Scientists have developed an electronic nose with biodegradable polymer and monomer that can detect hydrogen sulphide (H₂S) gas.
- Scientists from the Centre for Nano and Soft Matter Sciences (CeNS), Bangalore, an autonomous institute of the Department of Science & Technology, in collaboration with their counterparts from Saudi Arabia, have developed an exceptionally sensitive and selective H₂S Gas sensor developed by impersonating the neuron responsible for identification of airborne molecules or olfactory receptor neuron (ORN).

Hydrogen Sulphide (H₂S)

- It is a poisonous, corrosive, and flammable gas produced from swamps and sewers.
- H₂S is the primary gas produced from the microbial breakdown of organic matter in the absence of oxygen.

3. a

- NIXI has recently inaugurated three path breaking initiatives for National Internet Exchange of India (NIXI).
- The details of the three new initiatives are as below:

IPv6 Expert Panel (IP Guru)

- It is a group to extend support to all the Indian entities who are finding it technically challenging to migrate and adopt IPv6.

NIXI Academy

- NIXI Academy is created to educate technical/non-technical people in India to learn and relearn technologies like IPv6 which are normally not taught in Educational Institutes.

NIXI-IP-INDEX

- NIXI has developed an IPv6 index portal for the Internet community.
- NIXI-IP-INDEX portal will showcase the IPv6 adoption rate in India and across the world.

National Internet Exchange of India (NIXI)

- It is a not-for-profit organization (section 8 of the Companies Act 2013) working since 2003 for spreading the internet infrastructure to the citizens of India.
- It was set up for peering of ISPs among themselves for the purpose of routing the domestic traffic within the country, instead of taking it all the way to US/Abroad, thereby resulting in better quality of service (reduced latency) and reduced bandwidth charges for ISPs by saving on International Bandwidth.
- It spreads the internet infrastructure to the citizens of India through the following activities:

1. Internet Exchanges through which the internet data is exchanged amongst ISP's, Data Centers and CDNs.
2. .IN Registry, managing and operation of .IN country code domain and IDN domain for India.
3. IRINN, managing and operating Internet protocol (IPv4/IPv6)

4. b

- United Nations Population Fund's (UNFPA) flagship State of World Population Report, 2021 titled 'My Body is My Own' was recently launched.
- According to the report, nearly half the women from 57 developing countries do not have the right to make decisions regarding their bodies, including using contraception, seeking healthcare or even on their sexuality.
- This is the first time a United Nations report has focused on bodily autonomy, defined as the power and agency to make choices about your body without the fear of violence or having someone else decide for you.

5. d

- The Reserve Bank of India (RBI) has recently set up the Regulations Review Authority 2.0.

Regulations Review Authority 2.0

- It will review regulatory prescriptions internally as well as by seeking suggestions from RBI-regulated entities for simplification and ease of implementation.
- Deputy Governor M. Rajeshwar Rao has been appointed as the Regulations Review Authority.
- The authority would have validity for a period of one year from May 1.
- The RBI had set up a similar authority in 1999 for reviewing regulations, circulars, and reporting systems.
- The recommendations enabled streamlining and increasing the effectiveness of several procedures, paving the way for issuance of master circular and reducing reporting burden on regulated entities.

6. d

New years in India

- **Bohag Bihu festival** - It marks the beginning of the Assamese New Year.
- The word “Bihu” is derived from the Sanskrit word Bishu, meaning “to ask blessings and prosperity from the Gods” before the onset of the harvest season.
- **Vishu** - It is an important festival celebrated in the state of Kerala, and by Keralites around the country and the world.
- It marks the first day of the Malayalam calendar and, therefore, is celebrated with a lot of festive excitement by Malayalis.
- **Puthandu** - Puthandu or Puthuvarusham is celebrated with much fervour by people in Tamil Nadu.
- Puthandu is celebrated when the sun is exactly over the equator.
- **Naba Barsha** - Shubho Nabo Barsho or Pohela Boisakh marks the first day of the Bengali lunisolar calendar.
- It marks the beginning of the financial year for the Bengali business class and shopkeepers.
- **Vaisakhadi** - Mesadi - Vaisakhadi is a festival for the harvest season celebrated among Khalsa community.
- **Maha Bishuba Pana Sankranti** – It marks the Odia New Year.
- People mark the advent of the New Year by drinking pana, a sweet-sour drink made with bael (wood apple), fruits and sugar.

7. a

MANAS Platform

- The MANAS platform stands for Mental Health and Normalcy Augmentation System.
- It was endorsed as a national program by the Prime Minister’s Science, Technology, and Innovation Advisory Council (PM-STIAC).
- It was initiated by the Office of the Principal Scientific Adviser to the Government of India.
- It was jointly executed by,

1. National Institute of Mental Health and Neuro-Sciences (NIMHANS), Bengaluru,
 2. Armed Forces Medical College (AFMC), Pune and
 3. Centre for Development of Advanced Computing (C-DAC), Bengaluru.
- It is based on life skills and core psychological process, with universal accessibility, delivering age-appropriate methods and promoting positive attitude focusing on wellness.
 - The current version has identified two age groups i.e. ages 15 to 20, termed as Mann-Marg, and ages 20 to 35, termed as YoungISTAN.

8. c

Indian Rhino Vision (IRV) 2020

- Under the IRV 2020 program, at least 22 rhinos have been translocated within Assam since 2008.
- It is a joint programme of the Assam Forest Department, Worldwide Fund for Nature India (WWF-India), Bodoland Territorial Council, and the International Rhino Foundation.
- IRV was designed by Rhino Task Force 2005 with a target to achieve rhino population to 3,000 by establishing populations in seven protected areas in Assam by 2020.
- Seven protected areas are
 1. Pabitora Wildlife Reserve,
 2. Rajiv Gandhi Orang National Park,
 3. Kaziranga National Park,
 4. Manas National Park,
 5. Laokhowa wildlife sanctuary,
 6. Burachapori wildlife sanctuary,
 7. Dibru Saikhowa wildlife sanctuary.
- It aims to reduce the risk to the rhino population, mainly from poachers by spreading the population in multiple parks with enough habitats to encourage population growth.

9. b

Black Sea

- Black Sea is an inland sea located between far-southeastern Europe and the far-western edges of the continent of Asia and the country of Turkey.
- It connects to the Mediterranean Sea first through the Bosphorus Strait, then through the Sea of Marmara and the Dardanelles Strait, then south through the Aegean Sea and the Sea of Crete.
- The Black Sea is also connected to the Sea of Azov by the Strait of Kerch.
- Romania, Bulgaria, Ukraine, Russia, Georgia, and Turkey are bordering nations of Black Sea.

10. d

Danube Sturgeon

- Sturgeons have existed since the time of dinosaurs, for about 200 million years. Some of the species can grow up to eight metre in length and live more than a century.
- Living Fossil is an organism that has remained unchanged from earlier geologic times and whose close relatives are usually extinct.
- Other than Sturgeons, Horseshoe crab and ginkgo trees are examples of living fossils.
- There are 27 species of sturgeons and paddlefishes distributed across the Northern hemisphere.
- While some species inhabit only freshwater, most species are anadromous, spawning in freshwater but spending much of their life history in marine or brackish environments.
- Danube sturgeons live mostly in the Black Sea, migrating up the Danube and other major rivers to spawn.
- There are 6 species of sturgeon in the Danube River, Five of them are now listed as under IUCN red list.

17-04-2021

1) Which of the following statements are correct with respect *Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)*?

1. It is a free trade agreement (FTA) between all nations participating in ASEAN, RCEP with United States.
2. It is a separate treaty that incorporates, by reference, the provisions of the Trans-Pacific Partnership (TPP) Agreement.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

2) Which of the following statements are correct with respect to *Types of LEDs*

1. Mini-LEDs are around 0.2 millimetres in size or a bit smaller that collectively produce the backlight on LCD display panels.
2. Where Micro-LEDs panels basically mean smaller individual LED panels in an OLED screen.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

3) Which of the following statements are *incorrect* with respect to *National Start-up Advisory Council*

1. The term of the non-official members of NSAC will be five years and they are chosen from group of economists and financial scholars.
2. It was constituted by the Ministry of Skill Development and Entrepreneurship.

Select the correct answer using the codes given below:

- a. 1 only

- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

4) Eat Smart Cities Challenge is organized by under which of the following ministries?

- a. Ministry of Women and Child Development
- b. Ministry of Health and Family Welfare
- c. Ministry of Agriculture & Farmers' Welfare
- d. Ministry of Food Processing Industries

5) Consider the following statements with respect to Transport 4 All Challenge

1. It is launched by Ministry of Road Transport and Highways.
2. It will support cities to recover from the mobility crisis brought by coronavirus pandemic.

Which of the statement(s) given above is/are incorrect?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answers

1. b

Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)

- It is a free trade agreement (FTA) between Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, Peru, New Zealand, Singapore and Vietnam.
- It was signed by 11 countries in 2018 in Santiago, Chile.
- The CPTPP entered into force in 2018 for Australia, Canada, Japan, Mexico, New Zealand and Singapore and in 2019 for Vietnam.
- The CPTPP will enter into force for Brunei Darussalam, Chile, Malaysia and Peru 60 days

after they complete their respective ratification processes.

- The 11 countries have a shared vision of the CPTPP as a platform that is open to others to join if they are able to meet its high standards.
- It recognises the challenges facing Small and Medium-sized enterprises (SMEs) in establishing export markets, and include outcomes to help make this task easier in the CPTPP region.
- India decided to not even participate in TPP discussions with China not being a party to it and on the other hand, it chose to negotiate the RCEP where China was the fulcrum.

2. c

Types of LEDs

- **Mini-LED technology** - Mini-LEDs are essentially very small LEDs (around 0.2 millimetres in size or a bit smaller) that collectively produce the backlight on LCD display panels.
- Sitting behind the LCD matrix, they offer granular control over light intensity and hence a better contrast ratio.
- Mini-LEDs are essentially the best of both worlds between traditional LCDs and OLED panels.
- They bring the contrast of OLED panels and are set to be much easier and cheaper to make than OLED displays.
- **Micro-LEDs** - While OLED panels already cost more than LCD panels, Micro-LEDs take that cost up way higher for this very reason.
- Making even a fairly small Micro-LED panel incurs a lot of cost because of the super-precise construction.
- That is also likely why most of us will not be using Micro-LED TVs in our homes anytime soon.

LCD vs OLED displays

- A traditional LCD display consists of a single backlight that throws light on screen.
- However, the contrast is controlled by something called an LCD matrix.

- The matrix selectively blocks out certain parts of the backlight to produce contrast on the individual pixels.
- However due to this, when one pixel is supposed to show a bright colour, like white, and the pixel next to it is supposed to show a dark colour like black, the single backlight ends up throwing some extra light meant for the white pixel on the adjacent black pixel as well, preventing the dark pixel from showing a true pitch-black colour. This is called bleeding.
- On OLED displays, each individual pixel own lighting which allows the screen to have granular control over, which pixel is supposed to show lighter and which one is not.
- OLEDs typically have a better contrast ratio compared to traditional LCDs.

3. c

National Start-up Advisory Council

- It was constituted by the Department for Promotion of Industry and Internal Trade (DPIIT) in January 2020.
- The chairman of the NSAC is Union Minister of Commerce & Industry.
- The ex-officio members of the NSAC are nominees of the concerned Ministries/ Departments/ Organisations not below the rank of Joint Secretary.
- It is constituted to advise the Government on measures needed to build a strong ecosystem for nurturing innovation and start-ups in the country.
- The council shall act as the guiding light for many budding start-ups entrepreneurs in India.
- The council has a number of non-official members, representing various stakeholders such as founders of successful start-ups, veterans who have grown and scaled companies in India.
- The term of the non-official members of NSAC will be two years and they will advise the government on measures needed to build a strong ecosystem for start-ups.

4. b

Eat smart Cities Challenge

- It was organized in association with Food Safety and Standards Authority of India (FSSAI) under the aegis of Ministry of Health and Family Welfare.
- It will nudge the urban populace to make the right food choices and help build a healthier and happier nation.
- It aims to motivate Smart Cities to develop a plan that supports a healthy, safe and sustainable food environment.
- It is envisioned as a competition among cities to recognize their efforts in adopting and scaling up various initiatives under Eat Right India.
- In partnership with Smart Cities Mission, the Eatsmart Cities Challenge will:
 1. Create an environment of right food practices and habits;
 2. Strengthen the food safety and regulatory environment; and
 3. Build awareness among the consumers and urge them to make better food choices in India's major cities
 4. The challenge is open to all Smart Cities, capital cities of States /UTs, and cities with a population of more than 5 lakh.

5. a

Transport 4 All Challenge

- The Ministry of Housing and Urban Affairs launched the Transport 4 All challenge in collaboration with Institute for Transportation and Development Policy (ITDP).
- The cities and start-ups will receive guidance to develop and test various solutions, learn from them, and scale them to build people's trust in public transport and enhance their mobility.
- All the Smart Cities Mission cities, capitals of states and union territories (UTs), and all cities with a population of over 5 lakh are eligible for the Challenge.
- The Transport4All through Digital Innovation Challenge comprises three stages:
 1. **Stage I PROBLEM IDENTIFICATION:** Cities, with the support

of NGOs, identify key recurring problems that citizens and public transport operators face

2. **Stage II SOLUTION GENERATION:** Start-ups develop prototypes of solutions to improve public transport with inputs from cities and NGOs
3. **Stage III PILOT TESTING:** Cities engage start-ups for large-scale pilots and refine the solutions based on citizen feedback
 - It will support cities to recover from the mobility crisis brought by coronavirus pandemic.
 - It aims to develop digital solutions that will make public transport safe, affordable, comfortable, and reliable for all.
 - It will support the cities and start-ups all over the country to move towards digital transformation in urban mobility.

19-04-2021

1) Consider the following statements with respect to *System for Assessment, Awareness & Training for the Hospitality Industry (SAATHI)*

1. It aims to assist the hospitality industry in their preparedness to continue operations safely and mitigate risks arising out of the COVID-19 pandemic.
2. It was launched by the Ministry of Tourism in partnership with Quality Council of India (QCI).

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

2) With respect to the report, *Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework*, released recently, consider the following statements:

1. It was released by the Department of Science and Technology.
2. It identifies eight states, located mostly in the eastern part of the country, as highly vulnerable to climate change.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

3) *Nongkhylllem Wildlife Sanctuary* is located in which of the following?

- a. Sikkim
- b. Meghalaya
- c. Arunachal Pradesh
- d. None of the above

4) Which of the following countries share borders with *Black Sea*?

1. Serbia
2. Russia
3. Greece
4. Bulgaria
5. Romania

Select the correct answer using the codes given below:

- a. 2 and 4 only
- b. 1, 3 and 5 only
- c. 2, 4 and 5 only
- d. All of the above

5) Which of the following statements about elephants is not true?

- a. African elephants and Asian elephants are different species
- b. Elephant calves can stand up and walk after one week after birth

- c. Males leave their family after puberty and roam with other males or singly
- d. Elephants can detect and communicate with seismic signals

6) Which of the following statement(s) is/are *incorrect* with respect to *Wholesale Price Index*

1. The WPI captures only the average movement of wholesale prices of goods and not services.
2. It is released by the Economic Advisor in the Ministry of Commerce and Industry.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

7) Which of the following statement(s) is/are correct with respect to *Multisystem Inflammatory Syndrome in Children (MIS-C)*

1. It is related to a surge of inflammation triggered by an immune response to the virus, particularly connected to Covid-19
2. Neurological symptoms of the syndrome include hallucinations, confusion, speech impairments, and problems with balance and coordination.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

8) Which of the following statements are correct with respect to *Currency Manipulators Watch List*

1. It is a semi-annual report released by World Bank which tracks foreign exchange reserves of a nation.
2. Inclusion in the list does not subject to any kind of penalty and sanctions but it deteriorates the global financial image of the country.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

9) *Global Diabetes Compact* is launched by which of the following group?

- a. World Health Organization
- b. World Diabetes Foundation
- c. Doctors without Borders
- d. International Diabetes Federation

10) Consider the following statements with respect to *Ultra White Paint*

1. It is made of calcium carbonate and reflects 85% of white light.
2. It remains cooler than the ambient temperature in full sunlight.

Which of the statement(s) given above is/are *incorrect*?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answers

1. c

SAATHI (System for Assessment, Awareness and Training for Hospitality Industry)

- It was launched by the Ministry of Tourism in partnership with the Quality Council of India (QCI).
- It aims to assist the hospitality industry in their preparedness to continue operations safely and mitigate risks arising out of the COVID-19 pandemic.
- This initiative is aligned with the Hon'ble Prime Minister's clarion call for "Atmanirbhar Bharat".
- SAATHI Standard will assist in the Unit's preparedness.
- It's not mandatory as of now, however, given the current COVID-19 outbreak, it is imperative that all accommodation units take suitable measures to restrict infection.

2. c

- A report titled 'Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework' was released recently by the Department of Science and Technology.
- The report has identified Jharkhand, Mizoram, Odisha, Chhattisgarh, Assam, Bihar, Arunachal Pradesh, and West Bengal as states highly vulnerable to climate change.
- These states, mostly in the eastern part of the country, require prioritization of adaptation interventions, the report pointed out.

3. b

- Meghalaya has recently yielded India's first bamboo-dwelling bat with sticky discs.
- It brings the species count of the flying mammal in the country to 130.

Eudiscopus denticulus

- The disc-footed bat was recorded in the northeastern State's Lailad area near the Nongkhyllam Wildlife Sanctuary, about 1,000 km west of its nearest known habitat in Myanmar.
- The newly recorded bat was presumed to be a bamboo-dwelling species, but its flattened skull and adhesive pads helped in identifying it as the disc-footed known from specific localities in southern China, Vietnam, Thailand and Myanmar.

- The disc-footed bat has raised Meghalaya's bat count to 66, the most for any State in India.

4. c

- Russia beefs up its naval presence at a time of tense relations with the West and Ukraine.
- Two Russian warships transited the Bosphorus en route to the Black Sea recently and 15 smaller vessels completed a transfer to the sea.
- Moscow has recently expelled 10 American diplomats in retaliation for the expulsion of the same number of Russian diplomats from the United States over alleged malign activity.

5. b

- Elephant calves can, in fact, stand a mere 20 minutes after birth.

6. d

Wholesale Price Index

- It measures the changes in the prices of goods sold and traded in bulk by wholesale businesses to other businesses.
- The WPI tracks prices at the wholesale or factory gate/mandi levels whereas the Consumer Price Index (CPI) looks at the price at which the consumer buys goods.
- The difference between the wholesale price and the retail price is the former only tracks basic prices devoid of transportation cost, taxes and the retail margin etc.
- The WPI is primarily used as a GDP deflator (the ratio of the value of goods an economy produces in a particular year at current prices to that of prices that prevailed during the base year).
- The base year was updated to 2011-12 from 2004-05 for the new series of Wholesale Price Index (WPI), effective from April 2017.
- WPI has a sub-index called WPI Food Index, which is a combination of the Food Articles from the Primary Articles basket, and the food products from the Manufactured Products basket.
- Recently, the centre has provided that the Wholesale-level inflation, measured by the WPI or the wholesale price index, shot up to 7.39 per cent in March on a year-on-year basis.

- The rise in WPI in March is the highest wholesale inflation rate since October 2012.
- Surge in WPI was driven largely by higher prices of crude oil and a surge in price levels of food items such as pulses and fruits.

7. c

Multisystem Inflammatory Syndrome in Children (MIS-C)

- MIS-C is a rare but severe hyper inflammatory condition in children and adolescents that typically occurs 2-6 weeks after a Covid-19 infection.
- It is a potentially deadly condition where different body parts can become inflamed, including the heart, lungs, kidneys, brain, skin, eyes, or gastrointestinal organs.
- Children with MIS-C may have a fever and various symptoms, including abdominal (gut) pain, vomiting, diarrhea, neck pain, rash, bloodshot eyes, or feeling extra tired.
- In a recent study, young people with the MIS-C syndrome have shown neurological issues which were life-threatening such as strokes or severe encephalopathy (any brain disease that alters brain function or structure).
- It involves symptomatic relief such as supportive care or use of various medicines to treat inflammation.

8. b

Currency Manipulators Watch List

- The US Department of Treasury releases the semi-annual report where it has to track developments in international economies and inspect foreign exchange rates.
- It reviews currency practices of the US' 20 biggest trading partners.
- This is a label given by the US government to countries it feels are engaging in "unfair currency practices" by deliberately devaluing their currency against the dollar.
- The practice would mean that the country in question is artificially lowering the value of its currency to gain an unfair advantage over others.

- This is because the devaluation would reduce the cost of exports from that country and artificially show a reduction in trade deficits as a result.

- Criteria for placed on the Watch List includes

1. A "significant" bilateral trade surplus with the US one that is at least USD 20 billion over a 12-month period.
 2. A material current account surplus equivalent to at least 2% of Gross Domestic Product (GDP) over a 12-month period.
 3. "Persistent", one-sided intervention, when net purchases of foreign currency totalling at least 2% of the country's GDP over a 12 months period are conducted repeatedly, in at least six out of 12 months.
- Countries that meet all three of the criteria are labelled as currency manipulators by the Treasury.
 - Recently India was listed under the list, India met two of the three criteria that is the trade surplus criterion and the "persistent, one-sided intervention" criterion.
 - Inclusion in the list does not subject to any kind of penalty and sanctions but it deteriorates the global financial image of the country in the financial markets in terms of foreign exchange policies including undervaluation of currencies to gain export advantages.

9. a

World Health Organization

- The World Health Organization (WHO) launched a Global Diabetes Compact to better fight the disease while marking the centenary of the discovery of insulin.
- The programme was launched at the Global Diabetes Summit co-hosted by the Government of Canada.
- It has the vision of reducing the risk of diabetes, and ensuring that all people who are diagnosed with diabetes have access to equitable, comprehensive, affordable and quality treatment and care.
- It will also support the prevention of type 2 diabetes from obesity, unhealthy diet and physical inactivity.

- It will set standards for tackling the diseases in the form of 'global coverage targets' for ensuring a wider reach of diabetes care.

10. a

Ultra White Paint

- The team of researchers from Purdue University have created an ultra-white paint made up of barium sulphate.
- The newer paint is whiter and keeps the surface areas it is painted on cooler and thus can act as a breakthrough in combating the woes of global warming.
- Barium Sulphate is used to make photo paper and cosmetics white. Different sized particles of this chemical compound, helps in scattering different amounts of light.
- This allows for light to scatter in a broad range, resulting in the highest reflectance.
- The new ultra white white paint reflects 99% of all light that hits it, remaining significantly cooler than the ambient temperature, even when sitting in full sunlight.
- Typical commercial white paint gets warmer instead of cooler and paints currently available in the market reflect only 80-90% of the sunlight and therefore, they can't make surfaces cooler than their surroundings.

Vantablack

- The paint could be the closest equivalent to the blackest black paint Vantablack, which is able to absorb 99.9% of visible light.
- Vantablack has a diverse range of applications including high performance infrared cameras, sensors, satellite borne calibration sources etc.
- Its ability to absorb light energy and convert it to heat is also of relevance in solar power development.

20-04-2021

1) With respect to Khajuraho Temples, consider the following statements:

- 1. It is located in the state of Madhya Pradesh and managed by the Archaeological Survey of India (ASI).**

- 2. It was built between 950-1050 AD by the Chandela Dynasty.**
- 3. The Khajuraho group of monuments have been recognised by UNESCO as a World Heritage Site in 1986.**

Which of the statements given above are correct?

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

2) Consider the following statements

- 1. More than half of India's total installed electricity generation is based on renewables.**
- 2. India is the first country to formulate a basic hydrogen strategy.**

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

3) With respect to ALH Mk III, consider the following statements:

- 1. It is a multirole helicopter with Shakti engine manufactured by Hindustan Aeronautics Limited (HAL).**
- 2. It will be primarily used for Search and Rescue, Special Operations and Coastal Surveillance.**

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2



4) Consider the following statements with respect to *Startup India Seed Fund Scheme (SISFS)*

1. The fund aims to provide financial assistance to startups which provides proof of concept and a developed prototype.
2. The scheme was launched by the Ministry of Commerce and Industry.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

5) India had recently signed an agreement titled "Cities combating plastic entering the marine environment". With respect to the agreement, consider the following statements:

1. The project which aims to enhance practices to prevent plastic entering the marine environment will be undertaken in all India states for a period of three and a half years.
2. The project was signed between India and the Federal Republic of Germany.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

6) Which of the following statement(s) is/are *incorrect* with respect to *Exotic Animals*

1. It usually refers to a wild animal or one that is more unusual and rarer than normal domesticated pets like cats or dogs.
2. Wildlife Protection Act 1972, provides protection to all exotic animals that are in India.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

7) Which of the following goods are not used for the calculation of *Wholesale Price Index*?

1. Crude Petroleum
2. Fruits
3. LPG
4. Cement
5. Tobacco products

Select the correct answer using the codes given below:

- a. 1, 3 & 5 only
- b. 4 & 5 only
- c. 2, 4 & 5 only
- d. None of the above

8) Which of the following statements are correct with respect to *Right to Freedom of Movement*

1. It is protected against only state action and not private individuals.
2. It is guaranteed under Article 19 of the Indian Constitution.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

9) Which of the following group has established *World Heritage Day*?

- a. World Monuments Fund (WMF)

- b. Indian National Trust for Art and Cultural Heritage (INTACH)
- c. Indian National Trust for Art and Cultural Heritage (INTACH)
- d. Global Heritage Fund (GHF)

10) Consider the following statements with respect to Centralised & Decentralised Payment Systems

1. Centralised payment systems will include Cheque Truncation System (CTS) centres and Express Cheque Clearing System (ECCS) centres.
2. Decentralised payment systems will include Real Time Gross Settlement (RTGS) System and National Electronic Fund Transfer (NEFT) system.

Which of the statement(s) given above is/are incorrect?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answers

1. d

- The Ministry of Tourism's Dekho Apna Desh Webinar series held its 85th webinar titled "Khajuraho-Temples of Architectural Splendour" recently.

Khajuraho Temples

- The temples at Khajuraho were built during the Chandella dynasty, which reached its apogee between 950 and 1050.
- Only about 20 temples remain; they fall into three distinct groups and belong to two different religions – Hinduism and Jainism.
- Built in sandstone, each temple is elevated from its environs by a highly ornate terraced platform, or jagati, on which stands the body, or jangha, whose sanctum is topped by a tower, or shikhara, of a type unique to Nagara.

- Khajuraho Group of Monuments is owned by the Government of India and managed by the Archaeological Survey of India through the Ancient Monuments and Archaeological Sites and Remains (AMASR) Act (1958).

2. d

- India and Japan has recently participated in a webinar on De-carbonisation: Exploring the Hydrogen Prospects and Innovative Technologies.
- During the event, eminent experts, scientists, and technocrats from India and Japan discussed the most recent innovations, trends, concerns, and solutions adopted in the field of decarbonisation and promotion of Hydrogen based technologies.

Background

- 38% of India's total installed electricity generation is based on renewables.
- This is about 136 Giga Watts now, and it is expected to reach a target of 175 GW by next year and 450GW by 2030.
- Hydrogen can play a critical role as a clean fuel in achieving this ambitious goal.
- Japan is the first country to formulate a basic hydrogen strategy.
- Hydrogen is included in the fifth Energy plan of Japan.
- The country thus has a good ecosystem for R&D and commercialization, which could be used by the Scientific and Commercial Communities of the two countries.
- India and Japan have strategic relationships, and this has to be elevated to a strategic partnership enabling sharing of knowledge without any inhibition on Hydrogen and utilization of H2 in future.

3. c

- Indian Naval Air Squadron (INAS) 323, the first unit of the indigenously built ALH Mk III aircraft, was commissioned recently into the Indian Navy.

ALH Mk III

- It is the state-of-the-art multirole helicopter with Shakti engine.

- It was manufactured by the Hindustan Aeronautics Limited (HAL).
- The Mk III version of the ALH has an all glass cockpit and will be used for Search and Rescue, Special Operations and Coastal Surveillance.

4. b

Startup India Seed Fund Scheme (SISFS)

Background

- Funding from angel investors and venture capital firms becomes available to startups only after the proof of concept has been provided.
- Similarly, banks provide loans only to asset-backed applicants. It is essential to provide seed funding to startups with an innovative idea to conduct proof of concept trials.
- DPIIT, Ministry of Commerce and Industry has created Startup India Seed Fund Scheme (SISFS) with an outlay of INR 945 Crore to provide financial assistance to startups for Proof of Concept, prototype development, product trials, market entry, and commercialization.
- It will support an estimated 3,600 entrepreneurs through 300 incubators in the next 4 years.
- This would enable these startups to graduate to a level where they will be able to raise investments from angel investors or venture capitalists or seek loans from commercial banks or financial institutions.

5. b

- *The Ministry of Housing and Urban Affairs (MoHUA), Government of India and the German Federal Ministry of Environment, Nature Conservation and Nuclear Safety signed an agreement on Technical Cooperation titled 'Cities Combating Plastic Entering the Marine Environment' at a virtual ceremony in New Delhi recently.*

Cities Combating Plastic Entering the Marine Environment

- This project is envisaged under the contours of the Joint Declaration of Intent regarding cooperation in the field of 'Prevention of

Marine Litter' signed between Republic of India and Federal Republic of Germany in 2019.

- The project, aimed at enhancing practices to prevent plastic entering the marine environment,
- The project will be undertaken at the national level (at MoHUA), **select states (Uttar Pradesh, Kerala and Andaman & Nicobar Islands)** and in the cities of Kanpur, Kochi and Port Blair for a period of **three and a half years**.
- The new project is envisaged to be another successful collaborative effort under the Indo-German Bilateral Development Corporation working on sustainable urban transformation.

Background

- Marine litter threatens ecosystems and adversely affects fishery and tourism industries around the globe.
- In addition to negative economic impact, it affects public health with increased concerns about micro-plastic and risk of particles entering the food chain.
- It is estimated that 15-20% of all plastics are entering oceans via riverine ecosystems of which 90% are contributed by 10 of the world's most polluting rivers.
- Two of these river systems are located in India, namely Ganga and Brahmaputra.

6. b

Exotic Animals

- The term exotic does not have a set definition but it usually refers to a wild animal or one that is more unusual and rarer than normal domesticated pets like cats or dogs.
- These are those species which are not usually native to an area and are introduced to an area by humans.
- Illegally traded exotic animals are confiscated under Section 111 of the Customs Act, 1962 which is read with the provision of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Foreign Trade Policy (Import-Export Policy) of India.

- Also, Sections 48 and 49 of the Wildlife Protection Act, 1972 prohibit trade or commerce in wild animals, animal articles or trophies.
- Ministry of Environment, Forest and Climate Change issued an advisory to streamline and formalise the process of importing live exotic animals.
- Recently, the Delhi High Court directed the Centre to take a decision on framing rules to confer protection for exotic animals that are currently not under the purview of the Wildlife (Protection) Act, 1972.
- Not all exotic animals are protected under Wildlife Protection Act.

7. d

Wholesale Price Index

- Wholesale Price Index is the price of a representative basket of wholesale goods.
- Some countries use WPI changes as a central measure of inflation.
- But now India has adopted new CPI to measure inflation.
- The primary articles are a major component of WPI, further subdivided into Food Articles and Non-Food Articles.
- **The food Articles** include items such as Cereals, Paddy, Wheat, Pulses, Vegetables, Fruits, Milk, Eggs, Meat & Fish, etc.
- **The non-Food Articles** include Oil Seeds, Minerals and Crude Petroleum
- The next major basket in WPI is Fuel & Power, which tracks price movements in Petrol, Diesel and LPG
- The biggest basket is Manufactured Goods - It spans across a variety of manufactured products such as Textiles, Apparels, Paper, Chemicals, Plastic, Cement, Metals, and more.
- The manufactured Goods basket also includes manufactured food products such as Sugar, Tobacco Products, Vegetable and Animal Oils, and Fats.

8. c

Right to Freedom of Movement

- It entitles every citizen to move freely throughout the territory of the country.
- Moreover, it is available only to the citizens and to shareholders of a company but not to foreigners or legal persons like companies or corporations, etc.
- Restrictions on this freedom can only be imposed on two grounds which are mentioned in the Article 19 of the constitution itself, namely, the interests of the general public and the protection of interests of any scheduled tribe.
- The entry of outsiders in tribal areas is restricted to protect the distinctive culture, language, customs and manners of scheduled tribes and to safeguard their traditional vocation and properties against exploitation.
- The Supreme Court held that the freedom of movement of prostitutes can be restricted on the ground of public health and in the interest of public morals.
- The freedom of movement has two dimensions, viz, internal (right to move inside the country) and external (right to move out of the country and right to come back to the country).
- Article 19 protects only the first dimension. The second dimension is dealt by Article 21 (right to life and personal liberty).
- Recently, the Union government told the Bombay High Court that making FASTag mandatory for all vehicles does not breach a citizen's fundamental right to freedom of movement in any way.

9. c

International Council on Monuments and Sites (ICOMOS)

- Every year, 18th April is celebrated as 'International Day for Monuments and Sites', also known as 'World Heritage Day'.
- The International Council on Monuments and Sites (ICOMOS) established the day in 1982 and the United Nations Educational, Scientific and Cultural Organization (UNESCO) approved it in 1983.
- The aim of the Day is to create awareness about Heritage among communities.

- ICOMOS is a global non-governmental organization associated with UNESCO and located in Paris, France.
- Its mission is to promote the conservation, protection, use and enhancement of monuments, building complexes and sites.
- It is an Advisory Body of the World Heritage Committee for the implementation of the World Heritage Convention of UNESCO.

10. c

Centralised & Decentralised Payment Systems

- The centralised payment systems will include Real Time Gross Settlement (RTGS) System and National Electronic Fund Transfer (NEFT) system and any other system as may be decided by RBI from time to time.
- **RTGS** - It enables real-time transfer of funds to a beneficiary's account and is primarily meant for large-value transactions.
- Real time means the processing of instructions at the time they are received and gross settlement implies that settlement of funds transfer instructions occurs individually.
- **NEFT** - It is an electronic fund transfer system in which the transactions received up to a particular time are processed in batches.
- It is generally used for fund transfers of up to Rs. 2 lakh.
- The decentralised payment systems will include clearing houses managed by RBI (Cheque Truncation System (CTS) centres) as well as other banks (Express Cheque Clearing System (ECCS) centres) and any other system as decided by RBI from time to time.

21-04-2021

1) Consider the following statements with respect to *Global Forum on TB Vaccine*

- 1. It is the world's largest gathering of stakeholders striving to develop new vaccines to prevent Tuberculosis.**
- 2. The 5th Global Forum on TB Vaccines will be convened in Toulouse, France with the theme "Advancing TB vaccines in the time of COVID-19".**

Which of the statement(s) given above is/are incorrect?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

2) With respect to *Talcher Fertilizers Limited (TFL)*, consider the following statements:

- 1. It is a Joint Venture Company of four Public Sector Undertakings (PSUs).**
- 2. It was incorporated in the state of Karnataka in 2015.**

Which of the statement(s) given above is/are incorrect?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

3) With respect to *Gender Samvaad Initiative*, consider the following statements:

- 1. It aims to establish a shared platform to generate awareness on National Rural Livelihood Mission (NRLM's) gender interventions across the country.**
- 2. It is a joint initiative of Ministry of Rural Development's DAY-NRLM and Initiative for What Works to Advance Women and Girls in the Economy (IWWAGE).**

Which of the statement(s) given above is/are incorrect?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

4) Which of the following statements regarding *Ingenuity*, sometimes seen in the news recently, is incorrect?

- a. It is a solar powered helicopter developed by NASA
- b. It was attached to the Perseverance rover and travelled to mars
- c. It is the first aircraft in history to make a powered, controlled flight on another planet
- d. None of the above

5) Which of these ecological zones is practically circumpolar?

- a. Boreal zone
- b. Tropical forests
- c. Grasslands
- d. Temperate forests

6) Which of the following statements are correct with respect to *Counter Cyclical Capital Buffer*

1. It is calculated as the weighted average of the buffers in effect in the jurisdictions to which banks have a credit exposure.
2. It ensures that central banks can direct bankers to release more credit by freeing up capital, when distress situations arise.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

7) Which of the following Statements are *incorrect* with respect to *Sulphur Dioxide (SO₂)*?

1. It is a natural byproduct of volcanic activity and it is also produced as a result of fossil fuels combustion.
2. Secondary pollutants such as sulphate aerosols, particulate matter, and acid rain are created by So₂.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

8) Which of the following statements are correct with respect to *Occultation*

1. It is an event that occurs when one object is hidden by another object that passes between it and the observer.
2. If the closer object does not entirely conceal the farther one, and shadow is not casted on the observer it is called an eclipse.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

9) Which of the following organization releases *State of the Global Climate for 2020*?

- a. Intergovernmental Panel on Climate Change (IPCC)
- b. World Meteorological Organization (WMO)
- c. Global Atmosphere Watch (GAW)
- d. United Nations Environment Programme (UNEP)

10) Consider the following statements with respect to *National Marine Turtle Action Plan*

1. It is launched by National centre for coastal research, under Ministry of Earth Sciences.
2. It aims to promote Inter-sectoral action for conservation of turtle species and improved coordination amongst relevant stakeholders.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answers

1. b

- Dr Harsh Vardhan, Union Minister for Health and Family Welfare has recently addressed the 5th Global Forum on TB Vaccine.

Global Forum on TB Vaccines

- It is the world's largest gathering of stakeholders striving to develop new vaccines to prevent TB.
- It brings together stakeholders from across the spectrum of TB vaccine research and development to share data, concepts, and new approaches to tuberculosis vaccine R&D, as well as promote a global dialogue on the path forward for this critical research.
- **Due to the ongoing coronavirus pandemic, 5th Global Forum on TB Vaccines will be convened virtually from 20 - 22 April 2021.**
- The 6th Global Forum on TB Vaccines will be convened in **Toulouse, France** from 22 - 24 February 2022.

2. b

- The Cabinet Committee on Economic Affairs has given its approval for the proposal of the Department of Fertilizers for the formulation of exclusive subsidy policy for Urea produced through coal gasification route by Talcher Fertilizers Limited (TFL).
- Considering the strategic energy security and urea self-sufficiency of the country, looking into the country's vast coal reserves, it has been decided go ahead with Talcher Fertilizer Limited plant based on coal gasification technology.

Talcher Fertilizers Ltd. (TFL)

- It is a Joint Venture Company of four PSUs namely Rashtriya Chemicals & Fertilizers (RCF), GAIL (India) Ltd. (GAIL), Coal India Ltd. (CIL) and Fertilizer Corporation of India Ltd. (FCIL) which was incorporated on 13th November, 2015.

3. d

- Ministry of Rural Development's Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM) and the Initiative for What Works to Advance Women and Girls in the Economy (IWWAGE) jointly launched the **Gender Samvaad Initiative** recently.

Gender Samvaad

- It was launched as a part of the Azadi ka Amrut Mahotsav launched by the Prime Minister of India.
- It is a unique attempt aims to establish a shared platform to generate awareness on NRLM's gender interventions across the country, with a focus on hearing voices from the states and of SHG members.

4. d

- NASA had successfully flew its tiny helicopter Ingenuity on Mars recently.
- Ingenuity is the first powered flight on another planet.
- The solar powered 1.8 kg rotorcraft lifted off, hovered 10 feet above the Martian surface, then came back to rest after 39.1 seconds.
- The first powered flight on Earth was achieved by the Wright brothers in 1903 in North Carolina.
- A piece of fabric from that plane has been tucked inside Ingenuity in honour of that feat.

5. a

- Boreal zone includes Canada, the U.S., Norway, Sweden, Russia China and a few other countries.
- It covers 14% of the land and 33% of forested area.

6. c

Counter Cyclical Capital Buffer

- Following Basel-III norms, central banks specify certain capital adequacy norms for banks in a country.
- The CCCB is a part of such norms and is calculated as a fixed percentage of a bank's risk-weighted loan book.
- However, one key respect in which the CCCB differs from other forms of capital adequacy is that it works to help a bank counteract the effect of a downturn or distressed economic conditions.
- With the CCCB, banks are required to set aside a higher portion of their capital during good times when loans are growing rapidly, so that the capital can be released and used during bad times, when there's distress in the economy.
- The CCCB is supposed to be in the form of equity capital, and if the minimum buffer requirements are breached, capital distribution constraints such as limits on dividends and share buybacks can be imposed on the bank.
- Although the RBI had proposed the CCCB for Indian banks in 2015 as part of its Basel-III requirements, it hasn't actually required the CCCB to be maintained, keeping the ratio at zero per cent ever since.

7. d

Sulphur Dioxide (SO₂)

- The Sulphur Dioxide (SO₂) emissions from a volcanic eruption in the Caribbean (La Soufriere Volcano) have reached India, sparking fear of increased pollution levels in the northern parts of the country and acid rain.
- SO₂ emissions that lead to high concentrations of SO₂ in the air generally also lead to the formation of other sulfur oxides (SO_x).
- SO_x can react with other compounds in the atmosphere to form small particles. These particles contribute to Particulate Matter (PM) pollution.
- Small particles may penetrate deeply into the lungs and in sufficient quantities can contribute to health problems.
- Acid rain results when sulphur dioxide (SO₂) and nitrogen oxides (NO_x) are emitted into

the atmosphere and transported by wind and air currents.

- The SO₂ and NO_x react with water, oxygen and other chemicals to form sulphuric and nitric acids.
- These then mix with water and other materials before falling to the ground.

8. a

Occultation

- Recently a rare celestial event occurred when the moon came between Earth and Mars, known as occultation.
- The term occultation is most frequently used to describe those relatively frequent occasions when the Moon passes in front of a star during the course of its orbital motion around the Earth.
- If the closer body does not entirely conceal the farther one, the event is called a transit.
- Both transit and occultation may be referred to generally as occlusion; and if a shadow is cast onto the observer, it is called an eclipse.

9. b

State of the Global Climate for 2020

- Recently, the World Meteorological Organization (WMO) released its annual State of the Global Climate for 2020.
- The report stated that the extreme weather combined with COVID-19 is a double blow for millions of people in 2020.
- The pandemic-related economic slowdown failed to put a brake on climate change drivers and accelerating impacts.
- It highlighted that the year 2020 was one of the three warmest years on record, despite a cooling La Nina event.

India and State of the Global Climate for 2020

- **Costliest tropical cyclone** - Cyclone Amphan, which made landfall on May 2020 near the India-Bangladesh border in the eastern Bay of Bengal, was the costliest tropical cyclone on record for the North Indian Ocean.

- **Large displacement of population in India** - About 2.4 million people were displaced in India, mostly in West Bengal and Odisha, and 2.5 million were displaced in Bangladesh due to the cyclone.
- The report also noted that India had one of its two wettest monsoon seasons since 1994, with nationally-averaged rainfall above the long-term average.

10. b

National Marine Turtle Action Plan

- It is launched by Ministry of Environment Forest and Climate Change (MoEFCC)
- It aims to strengthen and sustain collective and collaborative sea turtle conservation through the monitoring of key sites and a network of partners in the Indian sub-continent
- It highlights actions to be taken for handling stranded animals on the shore, stranded or entangled animals in the sea or on a boat, reducing threats to marine species and their habitats, rehabilitation, etc.
- India has significant nesting and feeding grounds for four species of marine turtles, namely
 1. Leatherback (*Dermochelys coriacea*),
 2. Green (*Chelonia mydas*),
 3. Hawksbill (*Eretmochelys imbricata*)
 4. Olive Ridley (*Lepidochelys olivacea*)

22-04-2021

1) With respect to *US Currency Manipulation Watchlist*, consider the following statements:

1. A country will be designated as a currency manipulator by the United States Treasury Department based on three criteria.
2. The designation of a country as a currency manipulator does not attract any penalties immediately.
3. India was recently added to the currency manipulator list for the very first time.

Which of the statements given above are correct?

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

2) With respect to *Project Kuiper*, sometimes seen in the news recently, consider the following statements:

1. It aims to build Low Earth Orbit (LEO) satellites to provide high-speed and low latency broadband service to under-served regions.
2. It was launched by SpaceX in cooperation with LeoSat.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

3) Which of the following countries share borders with *Republic of Chad*?

1. Libya
2. Sudan
3. Egypt
4. South Sudan

Select the correct answer using the codes given below:

- a. 1 and 2 only
- b. 1 and 3 only
- c. 2 and 4 only
- d. 1, 2, 3 and 4

4) Consider the following statements with respect to *Gangaikondacholapuram*

1. It was established by King Raja Raja Chola II after his victorious expedition up to the Gangetic plains.
2. The temple located in Tamil Nadu is dedicated to Lord Vishnu.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

5) Which one of the following statements is *incorrect*?

- a. Plasma, the pale yellow liquid portion of your blood, is about 90% water
- b. Pale yellow urine is a sign of dehydration
- c. Water helps break down the food you eat, allowing its nutrients to be absorbed by your body
- d. Water helps skeletal system of human body by acting as a lubricant and cushion for joints

6) Which of the following statements are correct with respect to *Green New Deal (GND)*

1. It is a global roadmap for Climate change proposed by United Nations Framework Convention on Climate Change (UNFCCC).
2. It aims to possibly ban the sale of gasoline and diesel vehicles by 2030.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

7) Which of the following Statements are correct with respect to *Saturation of Peripheral Oxygen (SpO₂)*?

1. It is a measure of the percentage of haemoglobin saturated with oxygen and can be measured by oximetry or through blood tests.
2. Very low levels of SpO₂ can result in very serious symptoms known as hypoxemia.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

8) Which of the following is purpose of *ISRO's RESPOND Programme*

- a. Space telescope for atmospheric studies of exoplanets
- b. Academic infrastructure for Indian Space programme.
- c. Geospatial imagery to monitor natural hazards and disaster
- d. Rover for sampling and analysis of lunar soil

9) Which of the following organization releases *World Press Freedom Index*?

- a. International Centre for Journalists
- b. Transparency International
- c. Committee to Protect Journalists
- d. Reporters without Borders

10) Consider the following statements with respect to *Boao Forum for Asia*

1. It is a Non-profit organization initiated by 25 Asian countries and Australia.
2. It is modelled on the World Economic Forum held annually in Davos, Switzerland.

Which of the statement(s) given above is/are correct?

- a. 1 only

- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answers

1. c

- *The United States has **retained** India among many other countries on its currency manipulation watchlist.*
- India was added to the list for a second time in December 2020.
- It was first added to the list in December 2018, and later removed in 2019.

Currency Manipulation

- The US Treasury Department uses three criteria to assess whether an economy has manipulated its currency or not:
 1. Bilateral trade surplus with the US of more than \$20 billion
 2. Current account surplus of at least 3 percent of Gross Domestic Product (GDP)
 3. Net purchases of foreign currency of 2 percent of GDP over 12 months.

Currency Manipulation

- This is a label given by the US government to countries it feels are engaging in “unfair currency practices” by deliberately devaluing their currency against the dollar.
- The practice would mean that the country in question is artificially lowering the value of its currency to gain an unfair advantage over others.
- This is because the devaluation would reduce the cost of exports from that country and artificially show a reduction in trade deficits as a result.

2. a

- *Amazon has secured an agreement with space launch firm, United Launch Alliance (ULA), to support the deployment of its Project Kuiper satellites.*

Project Kuiper

- In July, 2020, Amazon had received approval to build Low Earth Orbit (LEO) satellites to provide high-speed and low latency broadband service to under-served regions.
- US Federal Communication Commission (FCC) allows Amazon to deploy and operate a constellation of 3,236 inter-connected satellites to provide internet.
- In comparison to Amazon’s plan, SpaceX is working on blanketing the earth with nearly 12,000 LEO satellites by 2027.
- Apart from SpaceX and Amazon, Facebook, Boeing and Luxemborg-based LeoSat are also planning to enter the LEO-based internet business.

3. a

- *Chad’s President Idriss Deby Itno died in combat after three decades in power.*
- *Mr. Deby had died from injuries sustained as he led his troops against rebels who launched an offensive against his regime from Libya last week.*

Chad

- Chad is a landlocked state in north-central Africa.
- It is bounded on the north by Libya, on the east by Sudan, on the south by the Central African Republic, and on the west by Cameroon, Nigeria, and Niger.

4. d

- *The State Department of Archaeology has made some encouraging finds in the excavation at Maligaimedu near Gangaikondacholapuram, the capital of King Rajendra Chola I, in Tamil Nadu.*

Gangaikondacholapuram

- It was established by King Rajendra Chola I (1012-1044 CE) after his victorious expedition up to the Gangetic plains.
- Excavations conducted earlier at Maligaimedu had revealed the remains of a royal palace.
- The previous excavations were carried out at the site on a smaller scale on six occasions when portions of the Rajendra Chola’s palace were unearthed.

- Antiques and other items found in the excavations are on display at a museum at Gangaikondacholapuram.

5. b

- Pale yellow urine is a sign of drinking enough water.
- If you are dehydrated, the urine will become a deep amber or even light brown.
- Pigments and other compounds in certain foods and medications can also change the urine colour.

6. b

Green New Deal (GND)

- Recently, the US President Joe Biden has unveiled his \$2 trillion infrastructure plan, promising to fight climate change and create new jobs in the process.
- The Green New Deal is a resolution, a roadmap for what America needs to do to address climate change and avoid a global catastrophe.
- The resolution says the US must take a leading role in reducing emissions.
- The main goal is to reduce US's greenhouse gas emissions to net-zero by 2030 along with creating jobs, establishing universal healthcare, high minimum wages and integrating the US through public transport.
- It includes improvements to the public transport network to include more electric vehicles, and also investments in making the network denser.
- It aims to decarbonise the economy by reducing carbon emissions to net-zero by switching to 100 percent renewable energy sources.
- It aims to reduce emissions by implementing a zero-carbon standard for new buildings and funding for retrofitting of existing buildings that are dependent on natural gas for heating and cooling.

7. c

Saturation of Peripheral Oxygen (SpO₂)

- The body needs there to be a certain level of oxygen in the blood or it will not function as efficiently.

- In fact, very low levels of SpO₂ can result in very serious symptoms, this condition is known as hypoxemia.
- There is a visible effect on the skin, known as cyanosis due to the blue (cyan) tint it takes on.
- Hypoxemia, low levels of oxygen in the blood can turn into hypoxia (low levels of oxygen in the tissue).
- This progression and the difference between the two conditions is important to understand.
- Healthy individuals at sea level usually exhibit oxygen saturation values between 96% and 99%, and should be above 94%.
- At 1,600 meters' altitude (about one mile high) oxygen saturation should be above 92%.
- SaO₂ (arterial oxygen saturation) value below 90% causes hypoxia, which can also be caused by anemia.
- Defence Research and Development Organisation (DRDO) has developed SpO₂ (Blood Oxygen Saturation) supplemental Oxygen Delivery System for soldiers posted at extreme high-altitude areas.

8. b

RESPOND Programme

- Under RESPOND, projects in the advanced areas of relevance to Space programme are encouraged to be taken up by premiere universities/academic institutions.
- ISRO helps the academic institutions to establish the necessary technical facilities and also provide fellowships to researchers to work on cutting edge research topics.
- ISRO provides financial support to Academic Institutions in India for conducting research and development activities related to Space Science, Space Technology and Space Applications.
- Its objective is to establish strong links with premiere academic institutions in the country to carry out research and developmental projects which are of relevance to Space.
- The research proposals received from academia for consideration under RESPOND are accepted for taking up research along with appropriate technical and financial support.

- Recently, the Indian Space Research Organisation (ISRO) has announced that it will support the projects of IIT-Delhi under its RESPOND Programme.

9. d

World Press Freedom Index

- Recently, the Reporters without Borders (RSF) has released the 2021 edition of World Press Freedom Index.
- It is an annual report published every year since 2002 by Reporters without Borders (RSF).
- It is a qualitative analysis combined with quantitative data on abuses and acts of violence against journalists during the period evaluated.
- It does not rank public policies even if governments obviously have a major impact on their country's ranking.
- The countries have been given scores ranging from 0 to 100, with 0 being the best possible score and 100 the worst, ever since the 2013 index.
- It ranks 180 countries, topped by Norway followed by Finland and Denmark, while Eritrea is at the bottom.
- In the South Asian neighbourhood, Nepal is at 106, Sri Lanka at 127, Myanmar (before the coup) at 140, Pakistan at 145 and Bangladesh at 152.
- India is ranked 142 after it had consistently slid down from 133 in 2016.
- It continues to be counted among the countries classified "bad" for journalism, India shares the "bad" classification with Brazil, Mexico and Russia.
- India is termed as one of the most dangerous countries for journalists trying to do their jobs properly.

Reporters without Borders (RSF)

- It is an international journalism not-for profit body based in Paris.
- It is an independent NGO with consultative status with the United Nations, UNESCO, the

Council of Europe and the International Organization of the Francophonie (OIF).

- It was founded by four journalists in the southern French city Montpellier in 1985.

10. c

Boao Forum for Asia (BFA)

- The Boao Forum for Asia is a non-profit organisation, was initiated in 2001 by 25 Asian countries and Australia (increased to 28 in 2006).
- It has provided a high-end platform for political, business and academic leaders in Asia and the world.
- The Forum is committed to promoting regional economic integration and bringing Asian countries even closer to their development goals.
- It has made positive contributions to the promotion of regional economic integration, common development and the building of a more prosperous and harmonious Asia.
- Recently BFA released an annual report on the Asian economy.

23-04-2021

1) Consider the following statements with respect to *International Submarine Escape and Rescue Liaison Office (ISMERLO)*

- 1. It is a military organisation operating in an international environment focused on the humanitarian objective of saving lives at sea.**
- 2. Though it was established by North Atlantic Treaty Organization (NATO), it supports all nations and pursues the involvement of global submarine-operating nations.**

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

2) Consider the following statements with respect to *National Green Tribunal (NGT)*

1. It was established under the National Green Tribunal Act, 2010.
2. The Tribunal shall not be bound by the procedure laid down under the Code of Civil Procedure, 1908, but shall be guided by principles of natural justice.
3. The Tribunal should have at least ten but not more than twenty judicial members and expert members jointly.

Which of the statements given above are correct?

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

3) Consider the following statements pairs

1. Taikonaut – China
2. Spationaut – French
3. Vyomanauts – India
4. Cosmonauts – Russia

Which of the pair(s) given above is/are correctly matched?

- a. 4 only
- b. 1 and 2 only
- c. 1 and 4 only
- d. 1, 2, 3 and 4

4) *Dandeli Wildlife Sanctuary* is located in which of the following states?

- a. Odisha
- b. Karnataka
- c. Jharkhand
- d. Uttarakhand

5) Which of the following attributes of Ethanol makes it greener than gasoline?

1. Absorption CO₂ from the atmosphere as they grow
2. Nontoxic and biodegradable
3. Breaks down into harmless substances if spilled
4. Higher octane levels

Select the correct code

- a. 1 only
- b. 1 and 4 only
- c. 1, 2 and 3 only
- d. All of the above

6) Which of the following statements are correct with respect to *Codex Alimentarius Commission (CAC)*

1. It aims to protect the health of consumers and ensure fair practices in the food trade.
2. The Membership of the Commission is open to all Member Nations and Associate Members of FAO and WHO.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

7) Consider the following statements with respect to *Commission on Crime Prevention and Criminal Justice*?

1. It was established by the UN Economic and Social Council (ECOSOC) resolution.
2. It offers Member States a forum for exchanging information in order to develop national and international strategies, and to identify priorities for combating crime.

Which of the statement(s) given above is/are incorrect?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

8) Consider the following statements with respect to *Countries of particular Concern*?

- It is designated by United Nations Human Rights Council which also monitors international religious freedom.
- It is offered under International Religious Freedom Act (IRFA), to any nation that has negative trajectory in religious freedom.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

9) Which of the following statement is correct with respect to *Harlequin ichthyosis*

- It is a parasitic disease that affects Brain functions
- It is a zoonotic infection that causes inflammation of blood vessels
- It is a genetic disorder that affects skin
- It is a fungal infection that affects respiratory tract of children below 5

10) *Mars Oxygen In-Situ Resource Utilization Experiment (MOXIE)* is a part of which of the following space mission?

- NASA's Perseverance Mission
- Emirates Mars Mission
- CNSA's Tianwen-1 Mission
- CNSA's Tianwen-1 Mission

Answers

1. c

- The Indian Navy has recently dispatched its deep submergence rescue vessel (DSRV) from Visakhapatnam to support the Indonesian Navy in the search and rescue efforts for its submarine KRI Nanggala that went missing recently with 53 personnel aboard.
- An alert was received by the Navy through the International Submarine Escape and Rescue Liaison Office (ISMERLO), regarding the missing Indonesian submarine.

International Submarine Escape and Rescue Liaison Office (ISMERLO)

- It is an organisation that aims to facilitate an international response for a distressed submarine (DISSUB) and to improve the ability to respond to a call for assistance through its coordination role.
- Although established by NATO, ISMERLO supports all nations and pursues the involvement of global submarine-operating nations.
- ISMERLO is a military organisation operating in an international environment focused on the humanitarian objective of saving lives at sea.

2. a

National Green Tribunal (NGT)

- It was established in 2010, as per the National Green Tribunal Act.
- It is a specialised judicial body equipped with expertise solely for the purpose of adjudicating environmental cases in the country.
- The Tribunal has a presence in five zones- North, Central, East, South and West. The Principal Bench is situated in the North Zone, headquartered in Delhi.
- The Central zone bench is situated in Bhopal, East zone in Kolkata, South zone in Chennai and West zone in Pune.
- The Tribunal is headed by the Chairperson who sits in the Principal Bench and has at least ten but not more than twenty judicial members and at least ten but not more than twenty expert members.

3. d

1. Taikonaut – China
2. Spationaut – French
3. Vyomanauts – India
4. Cosmonauts – Russia

4. b

Dandeli Wildlife Sanctuary

- The Dandeli Wildlife Sanctuary is located in Uttara Kannada, Karnataka and is located on the banks of River Kali.
- It is part of the Kali Tiger Reserve (earlier called the Dandeli Anshi Tiger Reserve).
- [The Kali Tiger Reserve has two protected areas - Dandeli Wildlife Sanctuary and Anshi National Park]
- Species found - Crocodiles, barking deer, bison, Indian Mongolian, black panther, sambhar, tiger, leopard, elephant, flying squirrel and the Malabar giant squirrel, king cobra, or giant iguana.

5. d

6. c

Codex Alimentarius Commission (CAC)

- It is an intergovernmental body established in 1963.
- It is constituted jointly by the UN's Food and Agriculture Organisation (FAO) and the World Health Organisation (WHO), within the framework of the Joint Food Standards Programme.
- It is the body responsible for all matters regarding the implementation of the Joint FAO/WHO Food Standards Programme.
- The Commission meets in regular session once a year alternating between Geneva and Rome.
- Codex Committee on Spices and Culinary Herbs (CCSCH) was formed in 2013 with support of more than a hundred countries under Codex Alimentarius Commission (CAC).
- It has been successful in developing harmonised global Codex standards for spices and herbs.

- It has developed and finalized standards for four spices, viz. dried or dehydrated forms of black/ white/ green pepper, cumin, thyme, and garlic.

7. d

Commission on Crime Prevention and Criminal Justice

- It was established by the Economic and Social Council (ECOSOC) resolution 1992/1, upon request of General Assembly (GA) resolution 46/152.
- It acts as the principal policymaking body of the United Nations in the field of crime prevention and criminal justice.
- It offers Member States a forum for exchanging expertise, experience and information in order to develop national and international strategies, and to identify priorities for combating crime.
- It is the preparatory body to the United Nations Crime Congresses.
- India was elected by acclamation to the Commission on Crime Prevention and Criminal Justice for a three-year term beginning January 1, 2022.

UN Economic and Social Council (ECOSOC)

- The UN Charter established ECOSOC in 1945 as one of the six main organs of the United Nations.
- It is at the heart of the United Nations system to advance the three dimensions of sustainable development – economic, social and environmental.
- It is the central platform for fostering debate and innovative thinking, forging consensus on ways forward, and coordinating efforts to achieve internationally agreed goals.
- ECOSOC links a diverse family of UN entities dedicated to sustainable development, providing overall guidance and coordination.

8. b

US Commission for International Religious Freedom (USCIRF)

- It is a quasi-judicial body constituted by US-Congress, established by the US Government

in 1998 after the inaction of the International Religious Freedom Act.

- The recommendations of USCIRF are non-binding to the State Department.
- It monitors international religious freedom.
- It is an independent, bipartisan U.S. federal government commission created by the 1998 International Religious Freedom Act (IRFA).
- Recently, USCIRF has recommended India for 'countries of particular concern' tag along with other three countries are Russia, Syria and Vietnam.
- The USCIRF report has alleged that religious freedom conditions in 2020 in these countries continued their negative trajectory.
- USCIRF urges to impose targeted sanctions on individuals and entities responsible for severe violations of religious freedom by freezing those individuals' or entities' assets and barring their entry into the US.

9. c

Harlequin ichthyosis

- The disease is an extremely rare genetic disorder that resulted in thickened skin forming over nearly the entire body at birth.
- The disease affected one in three million births and is caused due to a mutated gene inherited from the parents.
- The disease sees the skin form large diamond-shaped plates across the body that are separated by deep cracks (fissures).
- The skin is dry and scaly, almost like fish skin, Mutations in the ABCA 12 gene are stated to cause harlequin ichthyosis.
- The ABCA12 protein plays a major role in transporting fats in cells which make up the outermost layer of skin.
- Severe mutations in the gene lead to the absence or partial production of the ABCA12 protein.
- This results in lack of lipid transport and as a result, the skin development is affected by varying degrees according to the severity of the mutation.

- Recently Odisha reported it's first-ever case of a baby born with harlequin ichthyosis.

10. a

Mars Oxygen In-Situ Resource Utilization Experiment (MOXIE)

- NASA's Perseverance mission was able to produce oxygen from the thin Martian atmosphere for the first time.
- In its first operation since arriving on the Red Planet, the Mars Oxygen In-Situ Resource Utilization Experiment (MOXIE) produced 5 grams of oxygen from carbon dioxide in the Martian atmosphere, enough for an astronaut to breathe for 10 minutes.
- On Mars, carbon dioxide makes up ~96% of the gas in the planet's atmosphere.
- Oxygen is only 0.13%, compared to 21% in Earth's atmosphere, like a tree on Earth, MOXIE inhales carbon dioxide and exhales oxygen.
- It does so by using heat at a temperature of around 800 degrees Celsius, and in the process also produces carbon monoxide as a waste product, which it releases in the Martian atmosphere.
- MOXIE is designed to generate up to 10 grams of oxygen per hour, and is placed inside the Perseverance rover.
- It is the size of a car battery, weighing 37.7 pounds (17.1 kg) on Earth, but just 14.14 pounds (6.41 kg) on Mars.
- MOXIE is only a test model, Future oxygen generators that descend from its technology need to be about 100 times larger to support human missions on Mars.
- A substantial amount of oxygen supply on Mars is essential for crewed missions that plan to go there, not just for astronauts to breathe but for rockets to use as fuel while coming back to Earth.

24-04-2021

1) With respect to SVAMITVA Scheme, consider the following statements:

1. It is a central sector scheme launched by the Ministry of Panchayati Raj.
2. The scheme aims to provide the record of rights to village household owners in rural abadi areas and issuance of Property cards.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

2) *Reaching Zero Forum*, sometimes seen in the news recently, is associated with elimination of?

- a. AIDS
- b. Malaria
- c. COVID-19
- d. Tuberculosis

3) Consider the following statements with respect to *Kowloon Peninsula*, often seen in the news recently:

1. It is located in the south of Korean Peninsula.
2. It was bordered by both Pacific and Indian Ocean.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

4) Consider the following statements regarding the Ecotype:

1. Ecotype of a species are always inter-fertile.
2. Ecotypes arise due to mutations, hybridization and isolation.

3. Ecotype is genetically distinct and adapted to specific environmental conditions.

Which of the statements given above is/are correct?

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

5) Which of the following is considered as legislative powers of the President?

- a. The Power of the President to consult Supreme Court on matters of public importance
- b. The Power of the President to promulgate Ordinances during recess of Parliament
- c. The Power of the President to appoint the Chief Election Commissioner
- d. The Power of the President to appoint the chiefs of the Indian Armed Forces

6) Which of the following statements are incorrect with respect to *Stylophora Pistillata*

1. It is a coral species found only in Atlantic Ocean region and listed as endangered species under IUCN.
2. It consist of a bio mineral containing a highly organized organic mix of proteins that resembles human bones.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

7) Consider the following statements with respect to *Beach Environment & Aesthetics Management Services (BEAMS)*?

1. It was launched by the Society of Integrated Coastal Management

(SICOM) and the Union Ministry of Environment, Forest and Climate Change (MoEFCC).

2. It comes under ICZM (Integrated Coastal Zone Management) project.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

8) Consider the following statements with respect to *Blue Nature Alliance*?

- It is a global alliance of non-profit organization and it aims to protect 5% of the world ocean in five years.
- Marine Protection Atlas and World Database on Protected Areas are the two main initiatives of Blue Nature Alliance.

Which of the statement(s) given above is/are incorrect?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

9) *Padmaja Naidu Himalayan Zoological Park* is located in which of the following state?

- Himachal Pradesh
- Uttarakhand
- Arunachal Pradesh
- West Bengal

10) *Global Energy Transition Index* is released by which of the following International organization?

- International Solar Alliance (ISA)
- International Energy Agency (IEA)
- World Economic Forum (WEF)

- International Renewable Energy Agency (IRENA)

Answers

1. c

Survey of Villages and Mapping with Improved Technology in Village Areas' (SVAMITVA) Scheme

- It is central sector scheme launched by the Ministry of Panchayati Raj.
- It was launched towards the objectives of socio-economic empowerment of the rural mass and making them self-reliant.
- The scheme aims to provide the 'record of rights' to village household owners in rural abadi areas and issuance of Property cards.
- The pilot phase of the Scheme was implemented during 2020–2021 in States of Maharashtra, Karnataka, Haryana, Uttar Pradesh, Uttarakhand and Madhya Pradesh and few border villages of Punjab & Rajasthan.
- Prime Minister will dedicate the Scheme of SVAMITVA to the entire nation on 24th April 2021.
- The Prime Minister will also launch distribution of e-property cards to 4.09 lakh property owners on this occasion.

2. b

- Dr. Harsh Vardhan, Union Minister of Health and Family Welfare has recently chaired the "Reaching Zero" forum on malaria elimination to celebrate World Malaria Day.
- Every year, 25th April is observed as 'World Malaria Day'.
- This year's theme for the day is "Reaching the Zero Malaria target."

3. d

- Hong Kong is set to grant a site on the western Kowloon peninsula, close to the high-speed railway to the mainland, to Beijing's national security office for its permanent base in the city.
- It constitutes the Chinese mainland portion of the Hong Kong region and is located north of

Hong Kong Island and east of the mouth of the Pearl (Zhu) River Delta.

4. d

5. b

6. a

Stylophora Pistillata

- Stylophora Pistillata, a common stony coral in the Indo-Pacific region.
- It is listed as near threatened species under IUCN Red list.
- Recent study on the coral highlighted that several proteins are organized spatially – a process that's critical to forming a rock-hard coral skeleton.
- The study highlighted that corals have survived global climate change over millions of years by the process called Bio mineralization.
- Bio mineralization is the study of processes that lead to the formation of hierarchically structured organic–inorganic materials generated by living organisms, such as shells, bone and teeth.

7. c

Beach Environment & Aesthetics Management Services (BEAMS)

- On the lines of Blue Flag certification for beaches India has also launched its own eco-label BEAMS (Beach Environment & Aesthetics Management Services).
- The objectives of BEAMS program is to:
 1. Abate pollution in coastal waters,
 2. Promote sustainable development of beach facilities,
 3. Protect & conserve coastal ecosystems & natural resources,
 4. Strive and maintain high standards of cleanliness,
 5. Hygiene & safety for beachgoers in accordance with coastal environment & regulations.

Blue Flag Programme

- The Blue Flag Programme for beaches and marinas is run by the international, non-governmental, non-profit organisation FEE

(the Foundation for Environmental Education).

- FEE (the Foundation for Environmental Education) was established in France in 1985.

8. b

Blue Nature Alliance

- It is a global partnership of five core partners and few other Non-Profit Organisations launched on April 20, 2021.
- The core partners are Conservation International, The Global Environment Facility, the Pew Charitable Trusts, Minderoo Foundation and Rob and Melani Walton Foundation.
- The alliance aims to target seven ocean locations, they are as follows:
 1. Antarctica
 2. Seychelles
 3. Canada
 4. Palau
 5. Western Indian Ocean
 6. Fiji
 7. Tristan da Cunha, an island in the South Atlantic Ocean

Marine Protection Atlas

- It was launched by the Marine Conservation Institute in 2012.
- The atlas was prepared to provide the best available information on marine protection all over the world.
- This will help the marine conservation communities to work together and protect at least 30% of the world ocean by 2030.
- It has been built based on the World Database on Protected Areas.

World Database on Protected Areas

- It holds the database on terrestrial and marine protected areas.
- It was a joint project between IUCN (International Union for Conservation of Nature) and UNEP (United Nations Environment Programme).

9. d

Padmaja Naidu Himalayan Zoological Park

- It is also called the Darjeeling Zoo located in the town of Darjeeling in West Bengal.
- The zoo was opened in 1958, and an average elevation of 7,000 feet (2,134 m), is the largest high altitude zoo in India.
- It specializes in breeding animals adapted to alpine conditions, and has successful captive breeding programs for the snow leopard, the critically endangered Himalayan wolf and the red panda.
- The zoo serves as the central hub for Central Zoo Authority of India's red panda program and is a member of the World Association of Zoos and Aquariums.

Snow leopards

- It act as an indicator of the health of the mountain ecosystem in which they live, due to their position as the top predator in the food web.
- In India, their geographical range encompasses:
 1. Western Himalayas: Jammu and Kashmir, Himachal Pradesh.
 2. Eastern Himalayas: Uttarakhand and Sikkim and Arunachal Pradesh.
- Hemis National Park is the biggest national park in India and also has a good presence of Snow Leopard, known as Snow Leopard capital of the world.
- The snow leopard is listed as Vulnerable on the IUCN-World Conservation Union's Red List of the Threatened Species.
- In addition, it is also listed in Appendix I of the Convention on International Trade of Endangered Species (CITES).
- It is listed in Schedule I of the Indian Wildlife (Protection) Act 1972.
- It is also listed in the Convention on Migratory Species (CMS), affording the highest conservation status to the species, both globally and in India.

10. c

Global Energy Transition Index

- Recently, the World Economic Forum (WEF) has released the annual rankings of the.
- The index benchmarks 115 economies on the current performance of their energy systems across economic development and growth, environmental sustainability and energy security and access indicators and their readiness for transition to secure, sustainable, affordable and inclusive energy systems.
- Sweden has topped the Index for the third consecutive year and is followed by Switzerland and Finland in the top three.
- Argentina, China, India and Italy are among the major countries with consistent annual improvements.
- India has moved up two positions to rank 74th with improvements in all three dimensions of the energy triangle namely:
 1. Economic development and growth.
 2. Energy access and security.
 3. Environmental sustainability.

World Economic Forum

- It is a Swiss non-profit foundation established in 1971, based in Geneva, Switzerland.
- Major reports published by WEF:
 1. Global Competitiveness Report
 2. Global IT Report
 3. Global Gender Gap Report
 4. Global Risk Report
 5. Global Travel and Tourism Report

26-04-2021

1) Which of the following statement(s) is/are incorrect with respect to Nitric Oxide ?

1. It is known to have a broad antimicrobial effect against bacteria, fungi, helminths, protozoa and viruses.
2. It can be used as nasal spray to kill viruses including SARS-CoV-2.

Select the correct answer using the codes given below:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

2) Consider the following statements with respect to *Oxygen Concentrator*?

- It is a medical device that concentrates oxygen from ambient air.
- It can supply up to 50 Litre of oxygen per minute which is 99% pure.
- It is a cheaper alternative for oxygen cylinders but heavier and non-portable.

Which of the statement(s) given above is/are correct?

- 1 only
- 1 & 2 only
- 1 & 3 only
- All of the above

3) Consider the following statements with respect to *ND-GAIN Index*?

- It shows which countries are best prepared to deal with global changes brought about by overcrowding, resource-constraints and climate disruption.
- It is formulated by United Nations Statistics Division and World Bank.

Which of the statement(s) given above is/are incorrect?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

4) *E-2025 Initiative* is launched by which of the following organizations?

- Ministry of Health and Family Welfare

- Ministry of AYUSH
- World Health Organization
- Office of the Principle Scientific Advisor

5) Which of the following space missions involve *Tissue Chips* in space study?

- ISRO's Gaganyaan
- NASA's Mars 2020
- CNSA's Tianwen-1
- NASA-SapceX Crew-2

Answers

1. d

Nitric Oxide

- Recently, a multinational collaboration has announced the results of phase 2 clinical trials indicating that a nitric oxide nasal spray can be an effective viral treatment.
- The researchers evaluated nitric oxide's vitro antiviral effect on SARS-CoV-2 replication and published their findings in September 2020.
- It has been developed by a Vancouver-based biotech firm, SaNOTize Research and Development Corporations.
- The spray releases a small, topical amount of nitric oxide that is well known to kill viruses including SARS-CoV-2, It is non-specific and thus kills any virus.
- The patients treated with the spray saw an average reduction of around 95% in viral load in the first 24 hours, and more than 99% within 72 hours.
- The self-administered nasal spray releases a small topical amount of nitric oxide and aims to kill the virus in the upper airways, preventing it from incubating and making its way to the lungs.
- The World Health Organization has yet to give an emergency use authorisation (EUA).

2. a

Oxygen Concentrator

- Atmospheric air has about 78 per cent nitrogen and 21 per cent oxygen, with other gases making up the remaining 1 per cent.
- The oxygen concentrator takes in this air, filters it through a sieve, releases the nitrogen back into the air, and works on the remaining oxygen.
- This oxygen, compressed and dispensed through a cannula, is 90-95 per cent pure.
- A pressure valve in concentrators helps regulate supply, ranging from 1-10 litres per minute.
- While it is not as pure as Liquid Medical Oxygen (LMO) (99%), experts say it is good enough for mild and moderate Covid-19 patients with oxygen saturation levels of 85% or above. It is, however, not advisable for ICU patients.
- Oxygen concentrators are the easiest alternatives to cylinders but can only supply 5-10 litres of oxygen per minute (critical patients may need 40-50 litres per minute) and are best suited for moderately ill patients.
- Concentrators are portable and unlike LMO that needs to be stored and transported in cryogenic tankers, need no special temperature.
- And unlike cylinders that require refilling, concentrators only need a power source to draw in ambient air.
- Concentrators are more expensive than cylinders, it's largely a one-time investment.
- Apart from electricity and routine maintenance, there's little by way of operational cost, unlike cylinders that involve refilling costs and transportation.

3. b

ND-GAIN Index

- ND-GAIN is part of the Climate Change Adaptation Program of the University of Notre Dame's Environmental Change initiative (ND-ECI).
- The Country Index uses 20 years of data to rank more than 180 countries annually based on their vulnerability and, uniquely, how ready they are to adapt.

- Vulnerability is considered in six life-supporting sectors namely food, water, health, ecosystem service, human habitat and infrastructure.
- Overall readiness is measured by considering three components – economic readiness, governance readiness and social readiness.
- According to the scores for 2018, India ranked 122 and is the 48th most vulnerable country and the 70th least ready country.

4. c

E-2025 Initiative

- In 2017, WHO launched the E-2020 initiative to support a group of countries to achieve zero indigenous cases of malaria by 2020.
- Some 21 countries across five regions were identified as having the potential to reach the milestone of eliminating malaria.
- The report 'Zeroing in on malaria elimination' brings out the progress made through the E-2020 initiative of WHO.
- Building on the successes of the E-2020, WHO has identified a new group of 25 countries that have the potential to stamp out malaria within a 5-year timeline.
- The E-2025 countries will receive technical and on-the-ground support by WHO and its partners.
- In return, they are expected to audit their elimination programmes annually, participate in elimination forums, conduct surveillance assessments, and share malaria case data periodically.
- The new countries were selected based on four criteria:
 1. The establishment of a government-endorsed elimination plan;
 2. Meeting the threshold of malaria case reductions in recent years;
 3. Having the capacity of malaria surveillance and a designated governmental agency responsible for malaria elimination; and
 4. Being selected by the WHO Malaria Elimination Oversight Committee.

5. d

Tissue Chips

- It is a small device that contains human cells in a 3D matrix represents a giant leap in the ability of scientists to test how those cells respond to stresses, drugs and genetic changes.
- About the size of a thumb drive, the devices are known as tissue chips or organs on chips.
- Tissue Chips are small models of human organs that contain multiple cell types that behave similarly to the human body.
- According to NASA, these chips can potentially speed up the process of identifying safe and effective drugs and vaccines.
- Scientists can use these tissue chips in space to study diseases that affect specific human organs, which would take months or years to develop on Earth.

Crew-2 Mission

- It is the second crew rotation of the SpaceX Crew Dragon and the first with international partners.
- Out of the four astronauts, two are from NASA and two are from the Japan Aerospace Exploration Agency (JAXA) and the European Space Agency (ESA).
- Their central focus during this time will be to continue a series of Tissue Chips in Space studies.

27-04-2021

1) Consider the following statements with respect to *Varuna - 2021*

1. It is a bilateral maritime exercise between Indian and French Navy.
2. The 19th edition of Varuna 2021 will be conducted in the Arabian Sea.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

2) *Project DANTAK*, often seen in the news recently, is associated with?

- a. Border Roads Organisation
- b. Indian Space Research Organization
- c. Defence Research and Development Organization
- d. Council for Scientific and Industrial Research

3) Consider the following statements

1. India is the second-largest producer of wheat in the world.
2. Some of the important winter crops are wheat, barley, mustard and peas.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

4) *Mission Oxygen Express*, is an Indian mission to render oxygen support to?

- a. Bhutan
- b. Maldives
- c. Sri Lanka
- d. None of the above

5) With respect to *Thotlakonda*, consider the following statements:

1. It is an ancient Buddhist site found at Andhra Pradesh.
2. The site housed remnants of a flourishing monastery, practising Hinayana Buddhism.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2

d. Neither 1 nor 2

6) Which of the following statement(s) is/ are correct with respect to *Unicorn Blackhole*?

1. It is roughly three times the mass of Sun found in milkyway galaxy.
2. It is type of stellar mass black hole, which is formed by the gravitational collapse of a single star.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

7) Consider the following statements with respect to *Road Trains*?

1. A road-train is a trucking vehicle that consists of two or more trailers or semi-trailers hauled by a prime mover.
2. Ministry of Road Transport and Highways has proposed new Road Train networks between Delhi-Lucknow and Pune-Mumbai.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 1 & 2 only
- c. 1 & 3 only
- d. All of the above

8) Consider the following statements with respect to investments instruments *InvITs and REITs*?

1. In REITs investor own a share of property, and he receives an appropriate share of the income from it, after deducting an appropriate share of expenses.
2. InvITs are similar to REIT but invest in infrastructure projects such as roads or

highways which take some time to generate steady cash flows.

Which of the statement(s) given above is/are incorrect?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

9) Which of the following African countries fall within the *Sahel Region*?

1. *Senegal*
2. *Mauritania*
3. *Cameroon*
4. *Egypt*
5. *Ethiopia*
6. *Kenya*

Select the correct answer using the codes given below:

- a. 1, 2,3 4only
- b. 2,4,5,6 only
- c. 1,2,3,5 only
- d. All of the above

10) Which of the following space agencies announced *Zhurong Mars rover*?

- a. Japan Aerospace Exploration Agency (JAXA)
- b. Roscosmos Russia
- c. China National Space Administration (CNSA)
- d. Korea Aerospace Research Institute (KARI)

Answers

1. c

- The 19th edition of the Indian and French Navy bilateral exercise 'VARUNA-2021' is scheduled to be conducted in the Arabian Sea from 25th to 27th April 2021.

Varuna 2021

- The Indian and French Navies have been conducting bilateral maritime exercises since 1993.
- Since 2001, these exercises have been called 'VARUNA'.
- The three day exercise will see high tempo-naval operations at sea, including advanced air defence and anti-submarine exercises, intense fixed and rotary wing flying operations, tactical manoeuvres, surface and anti-air weapon firings, underway replenishment and other maritime security operations.
- Units of both navies will endeavour to enhance and hone their war-fighting skills to demonstrate their ability as an integrated force to promote peace, security and stability in the maritime domain.

2. a

- *Border Roads Organization's Project DANTAK is commemorating its Diamond Jubilee in Bhutan.*
- Indian Ambassador to Bhutan laid a floral wreath at the DANTAK Memorial in Simtokha.
- It was a fitting tribute to the sacrifices made by personnel of DANTAK in strengthening the bonds of friendship between India and Bhutan.

Project DANTAK

- It was established on April 24, 1961 as a result of the visionary leadership of his Majesty the Third King and then Prime Minister Jawahar Lal Nehru.
- Identifying the utmost importance of connectivity in spurring the socio-economic development and growth of Bhutan, DANTAK was tasked to construct the pioneering motorable roads in the Kingdom.

3. c

- India is the second-largest producer of wheat in the world, with over 30 million hectares in the country dedicated to producing this crop.
- But with severe groundwater depletion, the cropping intensity or the amount of land planted in the winter season may decrease by up to 20% by 2025.
- Some of the important winter crops are wheat, barley, mustard and peas.

- The international team studied India's three main irrigation types on winter cropped areas: dug wells, tube wells, canals, and also analysed the groundwater data from the Central Ground Water Board.
- They found that 13% of the villages in which farmers plant a winter crop are located in critically water-depleted regions.
- The team writes that these villages may lose 68% of their cropped area in future if access to all groundwater irrigation is lost.
- The results suggest that these losses will largely occur in northwest and central India.

4. d

- As part of the nation's fight against COVID 19, Indian Navy ships under Headquarters, Southern Naval Command at Kochi are progressing with the mission of OXYGEN EXPRESS in order to render support to the local administration of the **Union Territory of Lakshadweep** (UTL).

5. c

Thotlakonda Buddhist Site

- Historians and biologists campaign to protect the ancient Buddhist site of Thotlakonda - Home to around 90 species of birds.
- The site is found at a hill of Mangamaripeta Village, Bheemunipatnam Taluka of Visakhapatnam District, Andhra Pradesh.

Background

- In 1976, during a helicopter survey by the Indian Navy to set up a naval facility, ruins of the Buddhist site were spotted.
- Subsequently, the entire hill was declared as an area comprising a protected monument under the Andhra Pradesh Ancient and Historical Monument and Archaeological Sites and Remains Act, 1960.
- The area housed remnants of a flourishing monastery, practising Hinayana Buddhism, which was most active for 400 years from 200 BCE to 200 CE.

6. c

Unicorn Black hole

- The black hole is located about 1,500 light years - the distance light travels in a year, 5.9 trillion miles (9.5 trillion km) - from Earth.
- While it may be the closest one to us, it is still far away, by way of comparison, the closest star to our solar system, Proxima Centauri, is 4 light years away.
- There are three categories of black holes.
 1. The smallest, like 'the Unicorn,' are so-called stellar mass black holes formed by the gravitational collapse of a single star.
 2. There are gargantuan 'supermassive' black holes like the one at our galaxy's center, 26,000 light years from Earth, which is four million times the sun's mass.
 3. A few intermediate-mass black holes also have been found with masses somewhere in between.

7. a

Road Trains

- Road-Train is a motor vehicle wherein the traction is provided by the puller, which is connected to a serial combination of trailers or semi-trailers.
- These shall ply on select stretches to reduce congestion, save fuel and reduce noise & air-pollution.
- To revolutionize the transport of goods and reduce the overall logistic costs, the Automotive Industry Standards Committee has amended its AIS-113 Standard to include the safety requirements of Road-Trains.
- The standards have been prepared after examining European benchmarks, keeping in mind Indian operating conditions.
- The Automotive Industry Standards Committee has representatives from the relevant Ministries, Testing Agencies, Industry stakeholders, BIS etc.

8. d

InvITs and REITs

- **Infrastructure Investment Trusts (InvIT)** - It is like a mutual fund, which enables direct investment of small amounts of money from possible individual/institutional

investors in infrastructure to earn a small portion of the income as return.

- InvITs can be treated as the modified version of REITs designed to suit the specific circumstances of the infrastructure sector.
- They are similar to REIT but invest in infrastructure projects such as roads or highways which take some time to generate steady cash flows.
- **Real Estate Investment Trusts (REIT)** - A REIT is roughly like a mutual fund that invests in real estate although the similarity doesn't go much further.
- Essentially, it's like a group of people pooling their money together and buying real estate except that it's on a large scale and is regulated.
- Recently Insurance Regulatory and Development Authority of India (Irdai) allowing insurers to invest in debt securities issued by infrastructure investment trusts (InvITs) and real estate investment trusts (REITs).

9. c

Sahel Region

- The Sahel is the Eco climatic and biogeographic realm of transition in Africa between the Sahara to the north and the Sudanian savanna to the south.
- Having a semi-arid climate, it stretches across the south-central latitudes of Northern Africa between the Atlantic Ocean and the Red Sea.
- The Sahel part of Africa includes following nations
 1. Senegal,
 2. Mauritania,
 3. Mali,
 4. Burkina Faso,
 5. Algeria,
 6. Niger,
 7. Nigeria,
 8. Cameroon
 9. Central African Republic,

10. Chad,
 11. Sudan,
 12. Eritrea,
 13. Ethiopia.
- Historically, the western part of the Sahel was sometimes known as the Sudan region.
 - This belt was roughly located between the Sahara and the coastal areas of West Africa.

10. c

Zhurong Mars Rover

- Recently, CNSA has announced that it will name its first Mars rover as 'Zhurong'.
- By this China would become the third country after the former Soviet Union and the United States to put a robot rover on Mars.
- It is China's first Mars rover aboard the Tianwen-1 probe that arrived in Mars orbit in February 2020.
- The rover is part of Chinese space plans that include launching a crewed orbital station and landing a human on the moon.
- The top candidate for the landing site is Utopia Planitia, a rock-strewn plain where the U.S. lander Viking 2 touched down in 1976.

28-04-2021

1) Which of the following countries are part of Net Zero Producers Forum?

1. India
2. Norway
3. Venezuela
4. United Arab Emirates
5. United States of America

Select the correct answer using the codes given below:

- a. 2 and 5 only
- b. 1, 3 and 4 only
- c. 3, 4 and 5 only
- d. All of the above

2) Supply Chain Resilience Initiative (SCRI) which aims to build resilient supply chains in the Indo-Pacific region was launched by which of the following countries?

1. India
2. China
3. Australia
4. Sri Lanka
5. New Zealand

Select the correct answer using the codes given below:

- a. 1 and 3 only
- b. 1, 2 and 4 only
- c. 1, 2 and 4 only
- d. All of the above

3) Consider the following statements

1. Organic products are currently exported from India only if they are produced, processed, packed and labelled as per the requirements of Paramparagat Krishi Vikas Yojana.
2. The National Programme for Organic Production (NPOP) has been implemented by APEDA since its inception in 2001 as notified under the Foreign Trade (Development and Regulations) Act, 199

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

4) Karen and Kachin are two of the bigger minority groups located in?

- a. Nepal
- b. Myanmar
- c. Sri Lanka
- d. Burkina Faso

5) Consider the following statements with respect to Aditya-L1 Support Cell (AL1SC)

1. It is a community service centre to make data from India's first solar space mission Aditya-L1 accessible for analysis.
2. It is a joint effort of Indian Space Research Organisation (ISRO) and Aryabhata Research Institute of Observational Sciences (ARIES).

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answers

1. a

- Saudi Arabia will join the United States, Canada, Norway, and Qatar in forming 'Net Zero Producers Forum' for oil and gas producers.

Net Zero Producers Forum

- The forum will discuss on how they can support the implementation of the Paris Agreement on climate change.
- The platform will discuss ways to achieve net zero carbon emission targets to limit global warming.
- President Joe Biden has recently unveiled a target to halve the carbon emissions of the US – the world's largest producer of oil and gas – by 2030 from its 2005 levels.
- Mr Biden also announced that by 2024, the US would double its annual assistance to help developing countries cope with the effects of climate change.
- Saudi Arabia plans to add gas and renewables capacity equating to one million barrels of oil per day by 2030, according to the country's Crown Prince Mohammed bin Salman.

- The kingdom is looking to green its power mix and export more barrels of oil.
- It is also committing to lowering emissions and the energy impact of fossil fuels as part of its diversification strategy for 2030.

2. a

- Trade ministers of India, Japan and Australia has formally launched the Supply Chain Resilience Initiative (SCRI) in a virtual trilateral ministerial meeting recently.

Supply Chain Resilience Initiative

- It aims to create a virtuous cycle of enhancing supply chain resilience with a view to eventually attaining strong, sustainable, balanced and inclusive growth in the Indo-pacific region
- It was also seen as a move to counter China's dominance of supply chain in the Indo-Pacific region.

3. b

- India's export of Organic food products rose by 51% in terms of value, to USD 1040 million (Rs 7078 crores) during financial year 2020-21 compared to the previous fiscal (2019-20).
- Organic products are currently exported from India only if they are produced, processed, packed and labelled as per the requirements of the National Programme for Organic Production (NPOP).
- The NPOP has been implemented by APEDA since its inception in 2001 as notified under the Foreign Trade (Development and Regulations) Act, 1992.
- The NPOP certification has been recognised by the European Union and Switzerland which enables India to export unprocessed plant products to these countries without the requirement of additional certification.

4. b

- Ethnic Karen guerrillas has recently said they captured a Myanmar army base near the border with Thailand.
- There is a similar situation in northern Myanmar, where the Kachin minority claims to have captured several government outposts and been the target of air attacks.



- The Karen and the Kachin are two of the bigger minority groups that have been seeking greater autonomy for decades, during which there have been periods of armed conflict punctuated by ceasefires.

5. c

- A community service centre has been set up recently to bring all data on board India's first dedicated solar space mission to a single web-based interface enabling the users to quickly look at the data and identify the interesting science cases.

Aditya-L1 Support Cell (AL1SC)

- The service centre called "Aditya-L1 Support Cell (AL1SC)" is a joint effort of Indian Space Research Organisation (ISRO) and Aryabhata Research Institute of Observational Sciences (ARIES).
- It is an autonomous institute of the Department of Science & Technology, Government of India will be used by the guest observers in analyzing science data and preparing science observing proposals.
- AL1SC set up at the transit campus of ARIES at Haldwani, Uttarakhand, will jointly work with ISRO to maximize utilization of science data from Aditya-L1 and facilitate India's first dedicated solar space mission- Aditya-L1.

29-04-2021

1) Consider the following statements with respect to Python-5 Missile

- It is a fifth generation infra-red air-to-air missile.
- It have a range of around 20km.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

2) With respect to Navigation with Indian Constellation (NaviC), consider the following statements:

- It is an autonomous regional satellite navigation system established and maintained by ISRO.
- It covers India and a region extending up to 1500 km beyond Indian mainland.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

3) Which of the following are the pillars of Global Gender Gap Index?

- Health
- Education attainment
- Political empowerment
- Economic participation

Select the correct answer using the codes given below:

- 1 and 2 only
- 3 and 4 only
- 2, 3 and 4 only
- All of the above

4) Consider the following statements with respect to Agriculture Infrastructure Fund

- It is a pan India central sector scheme to inject formal credit into farm and farm-processing based activities.
- It is a medium-long term debt financing facility for investment in post-harvest management infrastructure through interest subvention and credit guarantee.

Which of the statement(s) given above is/are correct?

- 1 only



- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

5) Consider the following statements:

1. It is a constitutional body
2. It is a staff agency
3. It works under the direction of the Prime Minister.
4. It is a creation of the Cabinet.

Which of the given above statements is/are correctly relates to the Cabinet Secretariat?

- a. 1 and 4 only
- b. 2 and 3 only
- c. 3 and 4 only
- d. 2, 3 and 4 only

6) Which of the following statement(s) is/ are correct with respect to *Report on Military Expenditure and Arms Trade*?

1. It is prepared and released annually by Amnesty International.
2. The civil defence and current expenditure on previous military activities, and military involvement in non-military activities are excluded in the report.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

7) Consider the following statements with respect to '*Large Area Certification*' (LAC) Scheme?

1. It is launched by department of Agriculture and Farmers Welfare under its flagship scheme of Paramparagat Krishi Vikas Yojna.

2. Areas in Arunachal Pradesh is first to get certified as organic under this scheme.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

8) Consider the following statements with respect to investments instruments *Ct value in a Covid-19 Test*?

1. It refers to the number of cycles after which the virus can be detected.
2. It tells about the viral load in the throat and not in the lungs.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

9) *World Happiness Report 2021* is released by which of the following organizations?

- a. Institute for Sustainable Development and International Relations
- b. International Institute for Sustainable Development
- c. UN- Sustainable Development Solutions Network (UN-SDSN)
- d. UN- Global Compact

10) Which of the following International organisations have released the *Global Forest Goals Report 2021*?

- a. World Wide Fund for Nature (WWF)
- b. The Nature Conservancy
- c. United Nations Environment Programme (UNEP)

d. UN- Department of Economic and Social Affairs

Answers

1. c

- The indigenous Tejas light combat aircraft (LCA) has recently fired the Israeli-origin Python-5 air-to-air missile (AAM) for the first time.

Python-5

- It is a fifth generation infra-red guided air-to-air missile (AAM) manufactured by Rafael Advanced Defense Systems.
- It have a range of around 20 km, will add to the air-to-air combat capability of Tejas.
- The Israeli Derby beyond visual range missiles, with a 50km range, had earlier been integrated with the fighter.

2. c

NavIC (Navigation with Indian Constellation)

- It is an autonomous regional satellite navigation system established and maintained by ISRO.
- It is an indigenous positioning system that is under Indian control.
- There is no risk of the service being withdrawn or denied in a given situation.
- It covers India and a region extending up to 1,500 km beyond Indian mainland (primary coverage area).
- It provides position accuracy better than 20 m (20) and timing accuracy better than 50 ns (20).
- The actual measurements demonstrate accuracy better than 5 m and 20 ns respectively.
- NavIC based applications are being used in various civilian sectors, including, transport, map applications, and timekeeping.

3. d

- In the recently released Global Gender Gap index by World Economic Forum (WEF) for 2021, India falls 28 spots and is placed at 140th position.

- The Index has four pillars- education attainment, health, political empowerment and economic participation.
- In Asia region, only Pakistan and Afghanistan are behind India.
- India has suffered mainly in political empowerment and economic participation.
- India fell from 18 to 51 in political empowerment of women, despite women having a great opportunity to get better participation in political decision-making.
- As against a global average of 50%, India has just 12 % participation, which clearly is an issue of political will, as local self-government body elections have shown good participation.
- The labour participation of women is 22%, one of the lowest in the world (comparable countries have 50%).
- Educational attainment and economic participation are closely linked and the gender gap issue in India is stark here.
- The big drop in enrolment of girls in primary (93%), secondary (62%) and tertiary (29%) education which is alarming.
- The pandemic has affected more women than men.

4. c

Agriculture Infrastructure Fund

- It is a medium - long term debt financing facility for investment in viable projects for post-harvest management infrastructure and community farming assets through interest subvention and credit guarantee.
- The duration of the scheme is from FY2020 to FY2029 (10 years).
- Under the scheme, Rs. 1 Lakh Crore will be provided by banks and financial institutions as loans with interest subvention of 3% per annum and credit guarantee coverage under CGTMSE for loans up to Rs. 2 Crores.
- Eligible beneficiaries include farmers, FPOs, PACS, Marketing Cooperative Societies, SHGs, Joint Liability Groups (JLG), Multipurpose Cooperative Societies, Agri-entrepreneurs, Start-ups, and Central/State agency or Local

Body sponsored Public-Private Partnership Projects.

5. b

6. b

Report on Military Expenditure and Arms Trade

- Stockholm International Peace Research Institute (SIPRI) has released the report on military expenditure and arms trade globally.
- The US accounted for 39 per cent of the money spent on military globally, China accounted for 13 per cent, and India accounted for 3.7 per cent of the globe's share.
- India's spending since 2019 grew by 2.1 per cent but the increase for China was more moderate, at 1.9 per cent, India's military spending was 2.9% of its GDP.
- The five biggest spenders in 2020 were the United States, China, India, Russia and the United Kingdom, which together accounted for 62 per cent of world military spending.

SIPRI Military Expenditure Database

- It provides military expenditure data by country for the years 1949–2020 in local current prices, constant US dollars, current US dollars, as a share of gross domestic product, per capita and as a share of general government expenditure.
- The SIPRI military expenditure data includes all current and capital expenditure on the:
 1. Armed forces, including peacekeeping forces;
 2. Defence ministries and other government agencies engaged in defence projects;
 3. Paramilitary forces, when judged to be trained and equipped for military operations; and
 4. Military space activities

7. a

Large Area Certification' Scheme

- It provides organic certification under the Large Area Certification (LAC) Scheme of the PGS-India (Participatory Guarantee System) certification programme.
- Department of Agriculture and Farmers Welfare under its flagship scheme of

Paramparagat Krishi Vikas Yojna (PKVY) has launched this unique quick certification programme to harness these potential areas for organic farming.

- All farmers with their farmland and livestock need to adhere to the standard requirements and on being verified get certified en-mass without the need to go under conversion period.
- Certification is renewed on annual basis through annual verification by a process of peer appraisals as per the process of PGS-India.
- As per the established norm of organic production systems, the areas having chemical input usage history are required to undergo a transition period of minimum 2-3 years to qualify as organic.
- During this period, farmers need to adopt standard organic agriculture practices and keep their farms under the certification process.
- On successful completion, such farms can be certified as organic after 2-3 years.
- The certification process also requires elaborate documentation and time to time verification by the certification authorities.
- Whereas under LAC requirements are simple and the area can be certified almost immediately.
- Area in Andaman and Nicobar has been certified as organic, the first large contiguous territory to be done under LAC Scheme

8. c

Ct value in a Covid-19 Test

- The cycle threshold or Ct is a value that emerges during RT-PCR tests, which is the gold standard for detection of the SARS-CoV-2 coronavirus.
- According to the ICMR advisory, the Ct value of an RT-PCR reaction is the number of cycles at which fluorescence of the PCR product is detectable over and above the background signal.
- If a higher number of cycles are required, it implies that the virus went undetected when the number of cycles was lower.

- The lower the Ct value, the higher the viral load because the virus has been spotted after fewer cycles.
- The ICMR has said that all patients with a Ct value less than 35 may be considered as positive while those with a Ct value above 35 may be considered as negative.
- The Ct values may differ between nasal and oropharyngeal specimens collected from the same individual.
- The temperature of transportation, as well as the time taken from collection to receipt in the lab, can also adversely impact Ct values.
- The globally accepted cut-off for Ct value for Covid-19 ranges between 35 and 40 which depend on instructions from the respective manufacturers of testing equipment.
- The ICMR has arrived at the Ct value of 35 based on laboratory experiences and inputs taken from several virology labs.

9. c

World Happiness Report

- It is published by the United Nations Sustainable Development Solutions Network (UN-SDSN).
- It is powered by data from the Gallup World Poll and Lloyd's Register Foundation.
- It ranks the world's 149 countries on "how happy their citizens perceive themselves to be".
- According to the recently published report Finland has been ranked as the happiest country in the world.
- It is followed by Iceland, Denmark, Switzerland, The Netherlands, Sweden, Germany and Norway.
- India's ranking has been improved to 139 as compared to 144 in 2020 and 140 in 2019.
- The United States ranks at 19th place for happiness, despite being one of the richest countries in the world.

10. d

Global Forest Goals Report 2021

- The report draws upon 52 voluntary national reports and 19 voluntary national

contributions, representing 75 per cent of forests in the world.

- It provides an initial overview of progress towards achieving the six Global Forest Goals and their 26 associated targets as contained within the United Nations Strategic Plan for Forests 2030.
- The United Nations Strategic Plan for Forests 2017-2030 was created with a mission to promote sustainable forest management and enhance the contribution of forests and trees to the 2030 Agenda for Sustainable Development.
- The Plan recognizes that in order to create a world in which forests could provide economic, social, environmental and cultural benefits for present and future generations, they will be needed by humanity in the first place.

30-04-2021

1) MACS 1407, sometimes seen in the news recently, is?

- a. The first-ever electric Tractor developed indigenously in India
- b. A high-yielding and pest-resistant variety of soybean
- c. An indigenously developed Oxygen Enrichment Technology
- d. A device which converts Nitrogen Generator into Oxygen Generator

2) Consider the following statements with respect to AYUSH 64

- 1. It is a poly herbal formulation useful in the treatment of asymptomatic, mild and moderate COVID-19 infection as an adjunct to standard care.**
- 2. It was developed by the Central Council for Research in Ayurvedic Sciences (CCRAS), Ministry of Ayush.**

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only

- c. Both 1 and 2
d. Neither 1 nor 2

3) Heavenly Harmony, sometimes seen in the news recently, is?

- a. A part of Permanent Space Station of China
b. The NASA's Mission to study outer solar space
c. The ESA's Mission to study climate change in Earth
d. The ESA's and JAXA's joint mission to the planet Mercury

4) With respect to Mono Pile Technology in Coastal Roads, consider the following statements:

- In mono pile technology, one single pile is used instead of four piles for supporting one pillar.
- Generally, any bridge on a sea or river is built using group pile technology.

Which of the statement(s) given above is/are correct?

- a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

5) Most living beings require oxygen to breathe and grow. Organisms that do not require oxygen are called anaerobes. Which of the following statements about anaerobes is incorrect?

- a. Clostridium is an anaerobe
b. Over 99% of bacteria in the gut are anaerobic
c. Obligate anaerobes need oxygen without which they cannot respire
d. None of the above

6) Which of the following statement(s) is/are incorrect with respect to South Asian Climate Outlook Forum (SASCOF)?

- It is a forum of climate experts representing Afghanistan, Pakistan, India, Sri Lanka, Bangladesh, Nepal and Bhutan.
- Recent report of SASCOF states that above normal rainfall is likely along the Himalayan foothills, central and western India.

Select the correct answer using the codes given below:

- a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

7) Consider the following statements with respect to GNCT of Delhi (Amendment) Act 2021?

- It states that the "government" in the National Capital Territory of Delhi meant the elected government in the city.
- It empowers Lieutenant Governor (L-G) of Delhi, he/she is not obliged to give his opinion to the State government within a time frame.

Which of the statement(s) given above is/are correct?

- a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

8) Consider the following statements with respect to Himalayan Front Thrust (HFT)?

- It is also known as Main Boundary Thrust (MBT), which is found along the boundary of Indian and Australian tectonic plates.
- It demarcates a sharp physiographic and tectonic boundary between the Himalayan foothills and the Indo-Gangetic Alluvial Plains.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

9) Which of the following statement(s) is/ are correct with respect to *Bio Capacity*?

- It is expressed in terms of global hectares per person, thus is dependent on human population.
- It is directly proportional to human population, i.e. when human population increases it can result in increase in bio capacity.
- It can be used together with Ecological Footprint as a method of measuring Human impact on the environment.

Select the correct answer using the codes given below:

- 1 and 2 only
- 1 and 3 only
- 2 and 3 only
- All of the above

10) Consider the following statements with respect to *Oldest Water on Earth*?

- It has been discovered from Kidd Creek mine, located on the Canadian Shield.
- The water is highly saline, ten times saltier than sea water and Chemolithotrophic microbes can survive in this water.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answers

1. b

- Indian Scientists have recently developed a high-yielding and pest-resistant variety of soybean named MACS 1407.

MACS 1407

- Scientists from MACS-Agharkar Research Institute (ARI), Pune, an autonomous institute of the Department of Science & Technology, Government of India in collaboration with Indian Council of Agricultural Research (ICAR), New Delhi have developed MACS 1407.
- Using the conventional cross breeding technique they developed MACS 1407 which gives 39 quintals per hectare making it a high yielding variety and is also resistant to major insect-pests like girdle beetle, leaf miner, leaf roller, stem fly, aphids, white fly and defoliators.
- Its thick stem, higher pod insertion (7 cm) from ground, and resistance to pod shattering make it suitable even for mechanical harvesting.
- It is suitable for rain-fed conditions of North-East Indian states, Assam, West Bengal, Jharkhand and Chhattisgarh.
- Its seeds will be made available to farmers for sowing during the 2022 Kharif season.

Background

- In 2019, India produced around 90 million tons of soybean, widely cultivated as oil seeds as well as a cheap source of protein for animal feed and many packaged meals and is striving to be among the world's major producers of soybean.
- High-yielding, disease resistant varieties of the legume can help achieve this target.

2. c

- The scientists of reputed research institutions of the country have found that AYUSH 64 is useful in the treatment of asymptomatic, mild and moderate COVID-19 infection as an adjunct to standard care.

AYUSH 64

- It is a poly herbal formulation developed by the Central Council for Research in Ayurvedic Sciences (CCRAS), Ministry of Ayush.
- It is worthwhile to mention that initially the drug was developed for Malaria in the year 1980 and now is repurposed for COVID-19.
- AYUSH 64 comprises of *Alstonia scholaris* (aqueous bark extract), *Picrorhiza kurroa* (aqueous rhizome extract), *Swertia chirata* (aqueous extract of whole plant) and *Caesalpinia crista* (fine-powdered seed pulp).
- It is extensively studied, scientifically developed, safe and effective Ayurveda formulation.
- This medicine is also recommended in National Clinical Management Protocol based on Ayurveda and Yoga which is vetted by National Task Force on COVID-19 Management of ICMR.

3. a

- *China has recently launched the main module of its first permanent space station that will host astronauts for the long term.*
- ***Tianhe or the Heavenly Harmony module*** blasted into space atop a Long March 5B rocket from the Wenchang Launch Center on the southern island province of Hainan.
- The launch kicks off the first of 11 missions necessary to complete, supply and crew the station by the end of next year.

Background

- China has launched two experimental modules over the past decade in preparation for a permanent station.
- One, *Tiangong-1*, which means “Heavenly Palace-1” was abandoned and burned up during an uncontrolled loss of orbit.
- Its successor, *Tiangong-2*, was successfully taken out of orbit in 2018.
- China began preparations for a space station in the early 1990s as its space programme gained momentum.
- It was excluded from the International Space Station largely due to US objections over the Chinese programme’s secretive nature and close military ties.

4. c

- *The Brihanmumbai Municipal Corporation (BMC) has decided to introduce mono pile technology, for the first time in the country, in the under-construction Coastal Road that connects south Mumbai to western suburbs.*
- Generally, any bridge on a sea or river is built using group pile technology.
- But in mono pile technology, one single pile is used instead of four piles for supporting one pillar.
- This will save the space to construct pillars and also environment friendly.
- The number of piles has come down to 176 from 704 due to the introduction of this new technology.

5. c

- Anaerobes are organisms such as bacterium, which can live in the absence of free oxygen.
- ***Obligate anaerobes*** are killed when exposed to oxygen of the concentrations present in air.
- Obligate aerobes need oxygen because they cannot ferment or respire anaerobically.

6. d

South Asian Climate Outlook Forum (SASCOF)

- It consists of expertise from members of the World Meteorological Organisation, Regional Integrated Multi-Hazard Early warning System, Japan Meteorological Agency and Korea Meteorological Administration.
- It is conducted by South Asian nations and the World Meteorological Organisation (WMO) since 2010.
- It prepares consensus seasonal climate information on a regional scale that provides a consistent basis for preparing national level outlooks.
- It serves to interface with user sectors to understand and enhance the use of climate information as orchestrated and supported by the Global Framework for Climate Services (GFCS).

- Recently, the consensus report SASCOF-19 was prepared and released by the South Asian Climate Outlook Forum (SASCOF).
- The report has made a forecast of normal to above normal rainfall over most South Asian countries during the upcoming monsoon season.

7. b

GNCT of Delhi (Amendment) Act 2021

- The Government of National Capital Territory (GNCT) of Delhi (Amendment) Act, 2021, which gives primacy to the Lieutenant Governor (L-G) over the elected government in the city, has come into force.
- It amended the Sections 21, 24, 33 and 44 of the 1991 Act.
- States that the “government” in the National Capital Territory of Delhi meant the Lieutenant-Governor of Delhi.
- It gives discretionary powers to the L-G even in matters where the Legislative Assembly of Delhi is empowered to make laws.
- It seeks to ensure that the L-G is “necessarily granted an opportunity” to give her or his opinion before any decision taken by the Council of Ministers (or the Delhi Cabinet) is implemented.
- It bars the Assembly or its committees from making rules to take up matters concerning day-to-day administration, or to conduct inquiries in relation to administrative decisions.

8. b

Himalayan Front Thrust (HFT)

- It is also known as the Main Frontal Thrust (MFT), a geological fault along the boundary of the Indian and Eurasian tectonic plates.
- It represents a discontinuous zone of active faulting between the Sub-Himalaya and the alluvial plain.
- Recently, several houses and buildings were damaged after an earthquake of magnitude 6.4 on the Richter scale hit Assam.

- The preliminary analysis shows that the events are located near to Kopili Fault closer to Himalayan Frontal Thrust (HFT).

Main Boundary Thrust (MBT)

- The Main Boundary Thrust (MBT) is another major thrust fault in the Himalaya orogenic wedge that was active in the Cenozoic.
- It runs parallel to the MFT with a spacing distance of about 20 km.

Kopili Fault

- The Kopili is the main river of the Kopili Valley.
- Kopili Valley area comprises Neogene-Quaternary sediments which were deposited directly over the Archean basement.
- The Kopili Fault is a 300-km northwest-southeast trending fault from the Bhutan Himalaya to the Burmese arc.
- The Kopili Fault is a NW–SE trending strike-slip fault where intense seismic activity occurs down to a depth of about 50 km beneath the Kopili Fault, and the activity continues to the Main Central Thrust (MCT) in the Bhutan Himalaya.

9. b

Bio Capacity

- The bio capacity or biological capacity of an ecosystem is an estimate of its production of certain biological materials such as natural resources, and its absorption and filtering of other materials such as carbon dioxide from the atmosphere.
- A global hectare is an adjusted unit that represents the average biological productivity of all productive hectares on Earth in a given year (because not all hectares produce the same amount of ecosystem services).
- An increase in global population can result in a decrease in Biocapacity.
- This is usually due to the fact that the Earth’s resources have to be shared, therefore, there becomes little to supply the increasing demand of the increasing population.
- Unsustainability occurs if the area’s ecological footprint exceeds its biocapacity.

- Biocapacity and Ecological Footprint are tools created by the Global Footprint Network, used in sustainability studies around the world.

10. c

Oldest Water on Earth

- It was extracted in 2009, from a Canadian mine the water that is 1.6 billion years old, the oldest to be found on our planet.
- Canadian Shield, one of the world's largest continental shields and the oldest and least tectonically active parts of the Earth's crust.
- Chemolithotrophic microbe bacteria can thrive in the most extreme surroundings had been able to survive in the subterranean liquid.
- Researchers found that the microbes had been feeding on nitrogen and sulphate, and that the chemistry that supported them bore resemblance to ocean beds that are known to support similar such extreme life forms.
- Being a continental shield, which suffers the least from plate tectonic activity, the Canadian Shield is the closest analogue on Earth to the subsurface of Mars, researchers believe.
- Scientists argue that if life-supporting water can be found 2.4 km below the Earth, it may be possible that the same could be true in the case of the Red Planet.
- This hypothesis provides an impetus for missions like Perseverance, which are looking for signs of present or past life on Mars.