

ForumIAS

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Prelims Marathon

11th Apr to 17th April, 2022

HISTORY

ECONOMICS

POLITY

SCIENCE AND TECHNOLOGY

GEOGRAPHY AND ENVIRONMENT

History/ Art and Culture

Q.1) Consider the following statements about Theyyam:

1. Theyyam is a popular ritual form of dance worship in Kerala and Karnataka.
2. Theyyam is performed by females, except the Devakoothu theyyam which is the only Theyyam ritual performed by men.

Which of the statements given above is/are correct?

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

ANS: A

Explanation: About Theyyam:

- Theyyam is a popular ritual form of dance worship in Kerala and Karnataka. It consists of thousand-year-old traditions, rituals and customs.
- The people consider Theyyam itself as a channel to a god, and they thus seek blessings from Theyyam.
- There are about 456 types of Theyyam.
- Theyyam is performed by males, except the Devakoothu theyyam which is the only Theyyam ritual performed by women. It is performed only in the Thekkumbad Kulum temple (Kerala).
- The dance or invocation is generally performed in front of the village shrine. It is also performed in the houses as ancestor worship with elaborate rites and rituals.

Some popular Theyyams

- Vishnumoorthi: It is the most popular Vaishnava Theyyam. This theyyam narrates and performs the story of Hiranyakashipu's death by Lord Vishnu in his avatar of Narasimham.
- Sree Muthappan Theyyam: It is considered as the personification of two divine figures— the Thiruvappana or Valiya Muttapan (Vishnu) and the Vellatom or Cheriya Muttapan (Shiva).
- Gulikan: Gulikan represents Yama, the Hindu god of death. The Benkanakavu in Nileshtar is the most famous temple dedicated to Gulikan.

Source: EPIC March 2022

Q.2) Consider the following statements about Sohrai Art Form:

1. It is practised by tribal women in the Hazaribagh district of Jharkhand.
2. Sohrai Khovar painting received the Geographical Indication (GI) tag in 2020.

Which of the statements given above is/are correct?

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

ANS: C

Explanation: About Sohrai Art Form:

- Sohrai painting is an indigenous art form practised by tribal women in the Hazaribagh district of Jharkhand.
- The paintings are done on mud walls to welcome the harvest and to celebrate the cattle. The women clean their houses and decorate their walls with murals of Sohrai arts.

- This art form has continued since 10,000-4,000 BC. It was prevalent mostly in caves, but shifted to houses with mud walls. Sohrai Khovar painting received the Geographical Indication (GI) tag in 2020.

Key Features of Sohrai Art Form

- The Sohrai art form can be monochromatic or colourful. The people coat the wall with a layer of white mud, and while the layer is still wet, they draw with their fingertips on it.
- Their designs range from flowers and fruits to various other nature-inspired designs. The cow dung is used to add colour.
- The artists are spontaneous in their drawings. The designs are usually drawn from the artist's memory. The personal experience of the artist and their interaction with nature are the biggest influence.

Source: EPIC March 2022

Q.3) The term Blue Shield, recently seen in news is related to which of the following?

- a) Shield system to recognise ageing dams around the world
- b) Organization to protect heritage during armed conflicts and disasters across the world.
- c) Shielding of earth outer space with a network of satellites
- d) None

ANS: B

Explanation: About the 1954 Hague Convention:

- The Convention for the Protection of Cultural Property in the Event of Armed Conflict also known as the Hague Convention was adopted in 1954 under the auspices of UNESCO.
- Its aims is to protect cultural properties such as monuments of architecture, art or history, archaeological sites, works of art, manuscripts, books and other objects of artistic, historical or archaeological interest, as well as scientific collections of any kind regardless of their origin or ownership.
- It is the first and the most comprehensive multilateral treaty dedicated exclusively to the protection of cultural heritage in times of peace as well as during an armed conflict.
- India is a party to this convention.

About Blue Shield

- Blue Shield was founded in 1996. It is an independent, neutral, non-governmental, non-profit, international organization which strives to protect heritage during armed conflicts and disasters across the world.
- This includes all forms of cultural property including museums, monuments, archaeological sites, archives, libraries and audio-visual material, and significant natural areas, as well as intangible heritage.
- The 1954 Hague Convention designates an emblem for a cultural property that should be protected, and for identification of those working to protect it. The Blue Shield organization took up the emblem of the Convention as a symbol of their protective work, set in a blue circular background.



Source: EPIC March 2022

Q.4) Pal-Dadhvav Massacre took place in 1922 in which of the following region?

- a) Punjab
- b) Bihar
- c) Gujarat
- d) Jharkhand

ANS: C

Explanation: About Pal – Dadhvav Massacre:

- Pal – Dadhvav massacre took place on March 7, 1922 in Pal-Chitariya and Dadhvaav villages of Sabarkantha district, then part of Idar state (present-day Gujarat).
- The villagers from Pal, Dadhvav, and Chitariya had gathered on the banks of River Heir as part of the 'Eki movement' led by Motilal Tejawat.
- The movement was to protest against the land revenue tax (lagaan) imposed on the peasants by the British and feudal lords.
- However, the British Paramilitary force reached the spot and fired on them. Nearly 1,000 tribals (Bhils) died.
- But Tejawat was taken safely from there, and later he returned to the spot to christen it 'Veer Bhumi'.

Recognition of Pal-Dadhvav Massacre

- The Pal-Dadhvav massacre was brought into focus at the Republic Day parade this year.
- The Republic Day tableau featured a seven-ft statue of Tejawat, inspired by the statue at the memorial.

Source: EPIC March 2022

Q.5) Perini Dance, an ancient dance form, belongs to which of the following state?

- a) Telangana
- b) Assam
- c) Kerala
- d) Manipur

ANS: A

Explanation: About Perini Dance:

- Perini is an ancient dance form from Telangana. This dance form prospered during the Kakatiya dynasty.
- This dance form is also called 'Dance of Warriors'. It is believed that in ancient times, this dance form was performed before the soldiers were sent to war.
- It is usually performed by males in honour of Lord Shiva. The evidence of this dance is found in the sculptures near Garbha Gudi (Sanctum Sanctorum) of the Ramappa Temple at Warangal.
- This dance form was almost forgotten until the early 1970s. However, Padma Shri Dr. Nataraja Ramakrishna revived this art form.

Source: EPIC March 2022

Q.6) Which of the following ministry has announced 'Dhara, an Ode to Indian Knowledge System' as a part of the Science Week Vigyan Sarvatra Pujiyate?

- a) Ministry of Culture
- b) Ministry of Science and technology
- c) Ministry of Education
- d) NITI Aayog

ANS: A

Explanation: About Dhara, an Ode to Indian Knowledge System:

- The Ministry of Culture has announced 'Dhara, an Ode to Indian Knowledge System' as a part of the Science Week Vigyan Sarvatra Pujiyate.
- Dhara comprises a series of lecture demonstrations by eminent scholars across the world to revisit history and celebrate the achievements of India and the contribution of great scholars, mathematicians, scientists, and leaders to its heritage.
- The lectures commenced with 'Mathematics in India' which will focus on India's contribution to Mathematics through the ages.

Source: EPIC March 2022

Q.7) Consider the following statements about Nathdwara Paintings:

1. Nathdwara school is a subset of the Mewar school of painting.
2. Most paintings revolve around the figure of Shrinathji as a manifestation of Krishna and refer to the incident of him holding the Govardhan hill on his last finger.

Which of the statements given above is/are correct?

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

ANS: C

Explanation: About Nathdwara Paintings:

- Nathdwara Painting refers to a painting tradition and school of artists that emerged in Nathdwara, Rajasthan.
- Nathdwara school is a subset of the Mewar school of painting and is seen as an important school in the 17th and 18th-century miniature paintings.
- Most works produced in this style revolve around the figure of Shrinathji as a manifestation of Krishna and refer to the incident of him holding the Govardhan hill on his last finger.
- A new book has been recently released on Nathdwara Paintings.

Source: EPIC March 2022

Q.8) Consider the following statements about Bhasha Sangam App:

1. It is a mobile application developed by the Ministry of Education.
2. Its aim is to foster the spirit of Ek Bharat Shreshtha Bharat by enabling people across India to learn different languages of India.

Which of the statements given above is/are correct?

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

ANS: C

Explanation: About Bhasha Sangam App:

- It is a mobile application developed by the Ministry of Education in collaboration with MyGov India.

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- Its aim is to foster the spirit of Ek Bharat Shreshtha Bharat by enabling people across India to learn different languages of India and come closer to their culture.
- Using the app, people can learn 100+ sentences of daily use in as many as 22 scheduled Indian languages.

Source: EPIC March 2022

Q.9) Which among the following is not part of Subsidiary Alliance?

- a) Hyderabad
- b) Tanjore
- c) Bhagat
- d) Awadh

ANS: C

Explanation: Subsidiary Alliance of Wellesley: Subsidized States are:

- Hyderabad (1798; 1800)
- Mysore (1799)
- Tanjore (October 1799)
- Awadh (November 1801)
- Peshwa (December 1801)
- Bhonsle of Berar (December 1803)
- Sindhia (February 1804)
- Jodhpur (1818)
- Jaipur (1818)
- Macheri (1818)
- Bundi (1818)
- Bharatpur (1818)

Doctrine of Lapse: Lapsed States under Lord Dalhousie (1848-56)

- Satara (1848)
- Sambhalpur (1849)
- Bhagat (1850)
- Udaipur (1850)
- Nagpur (1854)
- Jhanshi (1855)
- Awadh (1856; on charge of mal-administration)

Source: Spectrum's A Brief History of Modern India.

Q.10) Which of the following Governor – General of India was considered as the father of local self-government in India?

- a) Lord Mayo
- b) Lord Ripon
- c) Lord Dufferin
- d) Lord Curzon

ANS: B

Explanation: Ripon's Resolution of 1882:

- The Government of Ripon desired the provincial governments to apply in case of local bodies the same principle of financial decentralization which Lord Mayo's Government had begun towards them.
- For his contributions, Lord Ripon is called father of local self-government in India.

Source: Spectrum's A Brief History of Modern India.

Scheme/Programs/Institutions

Q.1) Consider the following statements about PM 15 Point Programme for the welfare of Minority Communities:

1. It aims to ensure that the underprivileged and weaker sections of six centrally notified minority communities have equal opportunities for availing of the various Government welfare Schemes.

2. Ministry of Social Justice and Empowerment is implementing this programme.

Which of the statements given above is/are correct?

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

ANS: A

Explanation: About PM 15 Point Programme for the welfare of Minority Communities:

- It is an overarching programme covering various schemes/initiatives of the participating Ministries/Departments and is implemented throughout the country.
- Aim of the Programme: To ensure that the underprivileged and weaker sections of six centrally notified minority communities have equal opportunities for availing of the various Government welfare Schemes.
- To ensure that wherever possible, 15% of targets and outlays under various schemes should be earmarked for minorities.
- However, the schemes of the Ministry of Minority Affairs are exclusively meant for notified minorities.

Objectives of the Programme: The programme has the following broad objectives:

- Enhancing opportunities for education,
- Ensuring an equitable share for minorities in economic activities and employment,
- Improving the conditions of living of minorities by ensuring an appropriate share for them in infrastructure development schemes and
- Prevention and control of communal disharmony and violence.

Source: ForumIAS

Q.2) Consider the following statements about Bharatiya Prakritik Krishi Paddhati (BPKP) Scheme:

1. It is launched by Ministry of Agriculture & Farmers Welfare during 2020-21.

2. It aims to promote traditional indigenous practices which give freedom to farmers from externally purchased inputs.

Which of the statements given above is/are correct?

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

ANS: C

Explanation: About Bharatiya Prakritik Krishi Paddhati(BPKP) Scheme:

- **Launched by:** Ministry of Agriculture & Farmers Welfare during 2020-21
- **Parent Scheme:** It is a sub-mission under the centrally sponsored scheme- Paramparagat Krishi Vikas Yojana(PKVY).

Aim:

- To promote traditional indigenous practices which give freedom to farmers from externally purchased inputs.

- Main Focus of the Scheme: The scheme mainly focuses on the exclusion of all synthetic chemical inputs and promotes on-farm biomass recycling with major stress on biomass mulching, use of cow dung-urine formulations and other plant-based preparations.
- Financial Assistance: Under BPKP, financial assistance of Rs. 12200/ha for 3 years is provided for cluster formation, capacity building and continuous handholding by trained personnel, certification and residue analysis.
- Achievements of the Scheme: Until now, under natural farming, an area of 4.09 lakh ha area has been covered. The Government of Andhra Pradesh is leading in terms of 1.0 lakh ha area under natural farming under BPKP.

Source: ForumIAS

Q.3) What is 'Igla-S system' which is seen in news recently?

- a) Man-portable air defense system capable of engaging all types of visually observable aircraft and helicopters.
- b) First indigenously built long range artillery gun.
- c) High-speed Expendable Aerial Target (HEAT) that offers a realistic threat scenario for practice of weapon systems.
- d) Third generation fire and forget class anti-tank guided missile (ATGM) system

ANS: A

Explanation: About Igla-S Systems

- It is a man portable air defence system (MANPADS) developed by Russia.
- It is a Very Short Range Air Defence System (VSHORAD) weapon.
- "Igla-S" man-portable air defense system is designed to defeat all types of visible fixed- and rotary-winged aircraft on head-on and in pursuit courses as well as small aerial targets like cruise missiles around the clock under induced thermal and background noise.
- It implements the principle of "shoot-and-forget", high survivability and stealth of combat work.
- It is designed in a way for countering low-flying aircraft, as it forms the last line of defense against flying objects in a multi-layered air defense system.
- The Igla-S is capable of engaging all types of visually observable aircraft and helicopters as well as identifying air targets such as cruise missiles and UAVs, both head-on and receding, at any time of day, against background clutter and decoy flares (jamming).

Source: ForumIAS

Q.4) Consider the following statements about National Institute of Nutrition (NIN):

1. It is an Indian Public health, Nutrition and Translational research center located in Hyderabad.
2. It was founded by Sir Robert McCarrison in the year 1918 as 'Beri-Beri' Enquiry Unit.

Which of the statements given above is/are correct?

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

ANS: C

Explanation: About National Institute of Nutrition:

- The National Institute of Nutrition (NIN) is an Indian Public health, Nutrition and Translational research center located in Hyderabad.

- The institute is one of the oldest research centers in India, and the largest center, under the Indian Council of Medical Research, located in the vicinity of Osmania University.
- It was founded by Sir Robert McCarrison in the year 1918 as 'Beri-Beri' Enquiry Unit in a single room laboratory at the Pasteur Institute, Coonoor, Tamil Nadu.
- Within a short span of seven years, this unit blossomed into a "Deficiency Disease Enquiry" and later in 1928, emerged as full-fledged "Nutrition Research Laboratories" (NRL) with Dr. McCarrison as its first Director.
- It was later shifted to Hyderabad in 1958.
- At the time of its golden jubilee in 1969, it was renamed as National Institute of Nutrition (NIN).

Source: ForumIAS

Q.5) Consider the following statements regarding the Broadcast Seva Portal:

1. It is an online portal solution for speedy filing and processing of applications for various kinds of licences, permissions and payment of fee.
2. It has been jointly developed by National Informatics Centre (NIC).

Which of the statements given above is/are correct?

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

ANS: A

Explanation: About Broadcast Seva Portal:

- It is an online portal solution for speedy filing and processing of applications for various kinds of licences, permissions and registrations among other services.
- The portal is expected to provide a 360-degree solution to over 900 Satellite TV channels, over 70 teleport operators, over 1,750 multi-service operators, over 350 community radio stations (CRS) and over 380 private FM channels.
- It would provide online facilities to the applicants for seeking permissions, subsequent change in permissions and payment of fee. It will also provide faceless communication between the applicant and different stakeholders for faster processing of applications.
- It would bring transparency, accountability and responsiveness in the ecosystem and it would soon be linked to the government's flagship 'National Single Window System'.
- The Broadcast Seva Portal will reduce the turnaround time of applications and at the same time will help applicants track the progress. This portal will reduce the human interface that was required earlier and thus add to capacity building of the Ministry and will be a major step towards Ease of Doing Business.
- The portal has been developed in cooperation with Broadcast Engineering Consultants India Ltd, a Mini-Ratna PSU, and Tata Consultancy Services Ltd.

Source: ForumIAS

Q.6) Which of the following statements regarding the India Semiconductor Mission (ISM) is/are correct?

1. ISM is a specialized and independent business division of Digital India Corporation.
2. The scheme would provide fiscal support of up to 50% of the project cost for setting up semiconductor and display fabrication units.
3. Design Linked Incentive (DLI) Scheme is not a component of this programme.

Select the correct answer using the code given below:

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

ANS: B

Explanation: About India Semiconductor Mission (ISM)

- India Semiconductor Mission (ISM) has been setup as an Independent Business Division within Digital India Corporation having administrative and financial autonomy to formulate and drive India's long term strategies for developing semiconductors and display manufacturing facilities and semiconductor design ecosystem. Envisioned to be led by global experts in the Semiconductor and Display industry, ISM will serve as the nodal agency for efficient, coherent and smooth implementation of the schemes.
- Following four schemes have been introduced under the aforesaid programme:
 - Scheme for setting up of Semiconductor Fabs in India provides fiscal support to eligible applicants for setting up of Semiconductor Fabs which is aimed at attracting large investments for setting up semiconductor wafer fabrication facilities in the country.
 - Scheme for setting up of Display Fabs in India provides fiscal support to eligible applicants for setting up of Display Fabs which is aimed at attracting large investments for setting up TFT LCD / AMOLED based display fabrication facilities in the country. The Scheme provides fiscal support of up to 50% of Project Cost subject to a ceiling of INR 12,000 crore per Fab.
 - Scheme for setting up of Compound Semiconductors / Silicon Photonics / Sensors Fab and Semiconductor Assembly, Testing, Marking and Packaging (ATMP) / OSAT facilities in India: The Scheme provides a fiscal support of 30% of the Capital Expenditure to the eligible applicants for setting up of Compound Semiconductors / Silicon Photonics (SiPh) / Sensors (including MEMS) Fab and Semiconductor ATMP / OSAT facilities in India.
 - Design Linked Incentive (DLI) Scheme offers financial incentives, design infrastructure support across various stages of development and deployment of semiconductor design for Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductor linked design. The scheme provides "Product Design Linked Incentive" of up to 50% of the eligible expenditure subject to a ceiling of ₹15 Crore per application and "Deployment Linked Incentive" of 6% to 4% of net sales turnover over 5 years subject to a ceiling of ₹30 Crore per application.
- The Vision of ISM is to build a vibrant semiconductor and display design and innovation ecosystem to enable India's emergence as a global hub for electronics manufacturing and design.
- The total fiscal outlay of the proposed schemes is INR 76,000 crore which is fungible across different schemes.

Source: ForumIAS

Q.7) Which of the following statements regarding the United Nations Human Rights Council (UNHRC) are not correct?

1. It makes recommendations on situations of human rights violations and can discuss all thematic human rights issues and situations.
2. Members of the Council serve for a period of three years and are not eligible for immediate re-election.
3. The Council can hold a special session to address human rights emergencies on request of half of the member states.

Select the correct answer using the code given below:

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

ANS: C

Explanation:

Human Rights Council

- The Human Rights Council is an inter-governmental body within the United Nations system, which is responsible for strengthening the promotion and protection of human rights around the world.
- It also addresses and makes recommendations on situations of human rights violations, and can discuss all thematic human rights issues and situations.
- The Human Rights Council replaced the former UN Commission on Human Rights.
 - It was created by the UNGA on March 15, 2006, and the body met in its first session in June, 2006.
- In 2007, the Council adopted an “institution-building package” to set up its procedures and mechanisms.
- Among these were the mechanism of Universal Periodic Review to assess the human rights situations in all UN Member States, the Advisory Committee that serves as the Council’s think tank providing it with expertise and advice on thematic human rights issues, and the Complaint Procedure, which allows individuals and organisations to bring human rights violations to the Council’s attention.

Membership of the Council

- The Council, which meets at the UN Office in Geneva, Switzerland, is made up of 47 UN Member States who are elected by majority vote through a direct and secret ballot at the UNGA.
- According to the Council’s website, the UNGA takes into account the candidate States’ contribution to the promotion and protection of human rights, as well as their voluntary pledges and commitments in this regard.
- The membership of the Council is based on equitable geographical distribution.
 - African and Asia-Pacific states have 13 seats each, Latin American and Caribbean states have 8 seats, Western European and other states 7 seats, and Eastern European states 6 seats.
- The members serve for three years and are not eligible for immediate re-election after serving two consecutive terms.
- With membership on the Council comes a responsibility to uphold high human rights standards.
 - This is a criteria insisted on by States themselves when they adopted resolution 60/251 in March 2006 to create the Human Rights Council.

Meetings of the Council

- The Human Rights Council holds no fewer than three regular sessions a year, for a total of at least 10 weeks.
- If a third of the Member states requests, the Council can decide at any time to hold a special session to address human rights violations and emergencies.
- Under the presidency of Nazhat S Khan of Fiji, the Council held a record five special sessions in 2021 — on Myanmar, the Occupied Palestinian Territory and Israel, Afghanistan, Sudan, and Ethiopia.

Source: ForumIAS

Q.8) Consider the following statements about Pradhan Mantri Adi Adarsh Gram Yojana:

1. It seeks to develop Adarsh Gram villages by improving the living conditions of these villages, providing them better education healthcare facilities.
2. The villages selected under this will have a tribal population of more than 5000 and 25% will be tribals.

Which of the statements given above is/are correct?

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

ANS: A

Explanation: About Pradhan Mantri Adi Adarsh Gram Yojana:

- It seeks to develop Adarsh Gram villages by improving the living conditions of these villages, providing them better education healthcare facilities and facilitating their products to be linked directly with the market.
- The villages selected under this will have a tribal population of more than 500 and 50% will be tribals.

Source: ForumIAS

Q.9) Consider the following statements about Nav Bharat (New India) Literacy Programme:

1. It is a Central sector scheme.
2. The scheme aims to cover 5 crore non-literates during the implementation period from 2022-23 to 2026-27.

Which of the statements given above is/are correct?

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

ANS: B

Explanation: About Nav Bharat Literacy Programme:

Nodal Ministry: Ministry of Education

Type: Centrally Sponsored Scheme

Aim: To support the States and Union Territories in promoting literacy among non-literates in the age group of 15 and above across the country.

Target: The scheme aims to cover 5 crore non-literates during the implementation period from 2022-23 to 2026-27.

Components: The scheme has five components namely 1) Foundational Literacy and Numeracy, 2) Critical Life Skills 3) Vocational Skills Development, 4) Basic Education and 5) Continuing Education.

Salient Features of the Scheme

- Involvement of school students, pre-service students of Higher Education Institutions (HEIs), school teachers, Anganwadi and ASHA workers,
- School to be unit for implementation of the scheme,
- Use of ICT and online implementation of the scheme through 'Online Teaching Learning and Assessment System' (OTLAS),
- Providing material and resources through digital modes, viz, TV, radio, cell phone-based free/open-source Apps/portals, etc,
- Assessment tests to be conducted in schools by State/UTs and evaluation of learners by NIOS/SIOS,
- Sample achievement survey and Online Management Information Systems (MIS).

Source: ForumIAS

Q.10) Consider the following statements about PM-Daksh Yojana:

1. It is being implemented by Ministry of Social Justice & Empowerment.
2. It is a National Action Plan for skilling marginalized persons covering SCs, OBCs, EBCs, DNTs, Sanitation workers including waste pickers.

Which of the statements given above is/are correct?

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

ANS: C

Explanation: About PM-Daksh Yojana:

Nodal Ministry: Ministry of Social Justice & Empowerment.

Full Form: Pradhan Mantri-Dakshta Aur Kushalta Sampann Hitgrahi Yojana (PM-DAKSH)

Purpose: It is a National Action Plan for skilling marginalized persons covering SCs, OBCs, EBCs, DNTs, Sanitation workers including waste pickers.

Aim: To increase the skill levels of the target youth by providing them short term and long term skills, followed by assistance in wage/self-employment.

Implementation: It is being implemented through 3 Corporations: National Scheduled Castes Finance and Development Corporation (NSFDC), National Backward Classes Finance & Development Corporation (NBCFDC) and National Safai Karamcharis Finance & Development Corporation (NSKFDC).

Salient Features of PM-Daksh

Training Institutions:

- The training is provided through Government Sector training institutions and reputed institutions enabling them to take up suitable job/self-employment opportunities.
- Age of the candidates for undergoing skill training: Beneficiaries between the age of 18-45 years are considered for Skill Development Training.
- Stipend to the trainees: Stipend is provided to the eligible candidates based on their attendance through DBT.

Source: ForumIAS

Science and Technology

Q.1) Consider the following statements about Daylight Harvesting Technology:

1. Daylight Harvesting works on the simple premise that facilities can optimally utilize natural light.
2. The Technology Development Board (TDB) under the Ministry of new and renewable energy will provide Rs 5 crore as support to a start-up called Skyshade Daylight Private Limited for developing Daylight Harvesting Technologies.

Which of the statements given above is/are correct?

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

ANS: A

Explanation: About Daylight Harvesting Technology:

- The Ministry of Science & Technology has decided to promote a unique Start-up in Daylight Harvesting Technology.
- Daylight Harvesting works on the simple premise that facilities can optimally utilize natural light where available and cut down on the use of artificial light during daylight hours.

Its benefits include

- Reduced carbon footprint;
- Improve building energy efficiency;
- Reduced electrical lighting energy consumption.
- The Technology Development Board (TDB) under the Ministry of Science and Technology will provide Rs 5 crore as support to a start-up called Skyshade Daylight Private Limited for developing Daylight Harvesting Technologies.

Source: ForumIAS

Q.2) Consider the following statements about Corbevax Vaccine:

1. Drugs Controller General of India (DCGI) has given emergency use authorization to Corbevax vaccine for use in children between 12 and 18 years of age.
2. Corbevax is the first vaccine approved by the DCGI for children's use.

Which of the statements given above is/are not correct?

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

ANS: B

Explanation: About Corbevax Vaccine:

- Drugs Controller General of India (DCGI) has given emergency use authorisation to Corbevax vaccine for use in children between 12 and 18 years of age.
- Corbevax is India's first indigenously developed Receptor Binding Domain (RBD) protein subunit vaccine.
- It is being manufactured by the Hyderabad-based Biological E. Corbevax is the third vaccine approved by the DCGI for children's use after Covaxin and Zydus Cadila's ZyCoV-D.

Source: ForumIAS

Q.3) Chandra's Atmospheric Composition Explorer-2 (CHACE-2), a payload onboard Chandrayaan-2, has recently detected which of the following gas in Moon's atmosphere?

- a) Oxygen
- b) Argon-40
- c) Hydrogen
- d) Methane

ANS: B

Explanation: Argon-40 in Moon's Atmosphere:

- Chandra's Atmospheric Composition Explorer-2 (CHACE-2), a payload onboard Chandrayaan-2, has detected Noble Gas Argon-40 in Moon's atmosphere.
- Argon-40 (Ar-40) is known to exist in the lunar exosphere. But the knowledge on its distribution at higher latitudes is lacking.
- Now, the CHACE-2 payload has detected the presence of Argon in the equatorial and mid-latitude regions of the Moon.

Source: ForumIAS

Q.4) Physicist Professor Deepak Dhar has become the first Indian to be awarded with which one of the following award?

- a) Abel Prize
- b) Fields Medal
- c) Boltzmann Medal
- d) Wigner Medal

ANS: C

Explanation: About Boltzmann Medal:

- Boltzmann Medal was initiated in 1975. It is awarded by the Commission on Statistical Physics (C3) of the International Union of Pure and Applied Physics.
- The award is given to physicists that obtain new results concerning statistical mechanics. The award is given only once to a person and on the condition that that person has not won the Nobel prize so far.
- It has been named after Austrian Physicist Ludwig Boltzmann who gave statistical explanation of the second law of thermodynamics.
- Physicist Professor Deepak Dhar has become the first Indian to be awarded the Boltzmann Medal.
- He shares the medal with John J Hoefield of Princeton University.

Source: ForumIAS

Q.5) Touchless touch screen technology has been developed by which of the following?

- a) CSIR
- b) Centre for Nano and Soft Matter Sciences (CeNS)
- c) ISRO
- d) DRDO

ANS: B

Explanation: About Touchless Screens:

- Scientists at the Centre for Nano and Soft Matter Sciences (CeNS), Bengaluru have developed touchless touch screen technology.
- This touch sensor senses a proximal or hovers touch even from a distance of 9 cm from the device.
- The technology will help reduce the risk of spreading of viruses particularly in public touchscreens like on self-service kiosks, ATMs and vending machines.

Source: ForumIAS

Q.6) Consider the following statements about SARAS 3 radio telescope:

1. It has been invented and built by the astronomers at Raman Research Institute, Bengaluru.
2. The telescope has been designed, built and deployed in backwaters of Shravati River.

Which of the statements given above is/are not correct?

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

ANS: D

Explanation: About SARAS 3 Experiments and Radio Telescope:

- The SARAS 3 radio telescope has been invented and built by the astronomers at Raman Research Institute, Bengaluru.
- The telescope has been designed, built and deployed in backwaters of Shravati river to detect extremely faint radio wave signals from the earliest times of the Universe when the first stars and galaxies were formed.

Source: ForumIAS

Q.7) Consider the following statements about DDoS Attack:

1. Floods a website with countless frivolous requests for information, eventually leading it to paralyze or crash.
2. It uses bots to send these queries that bombard the site, leaving it inaccessible to legitimate users.

Which of the statements given above is/are correct?

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

ANS: C

Explanation: About DDoS Attack:

- Ukraine's largest commercial bank was hit by a distributed denial-of-service attack or DDoS. A DDoS attack floods a website with countless frivolous requests for information, eventually leading it to paralyze or crash.
- It uses bots to send these queries that bombard the site, leaving it inaccessible to legitimate users. Such attacks, in a conflict situation, can damage critical digital infrastructure, disable government communication and the information ecosystem in a country.

Source: ForumIAS

Q.8) Consider the following statements about PARAM Ganga Supercomputer:

1. It has been established at Allahabad University.
2. It is designed by the Centre for Development of Advanced Computing (C-DAC).

Which of the statements given above is/are correct?

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

ANS: B

Explanation: About PARAM Ganga Supercomputer:

- A Supercomputer named 'PARAM Ganga' has been established at IIT Roorkee. PARAM Ganga is a supercomputer designed by the Centre for Development of Advanced Computing (C-DAC) under Phase 2 of the National Supercomputing Mission (NSM)

- It has a supercomputing capacity of 1.66 Petaflops (1 petaflop equals a quadrillion or 10¹⁵ operations per second).

Source: ForumIAS

Q.9) Consider the following statements about AI Research SuperCluster (RSC):

1. It is an AI Supercomputer being built by Facebook-parent Meta.
2. It can perform tasks like translating text between languages.

Which of the statements given above is/are correct?

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

ANS: C

Explanation: About AI Research SuperCluster (RSC):

- It is an AI Supercomputer being built by Facebook-parent Meta.
- The company has claimed that this will be the fastest supercomputer in the world once fully built by mid-2022.
- It can perform tasks like translating text between languages and help identify potentially harmful content on Meta's platform.

Source: ForumIAS

Q.10) Consider the following statements about HANSA-NG:

1. It is India's first indigenous Flying Trainer aircraft.
2. It has been developed by CSIR-National Aerospace Laboratories, Bangalore.

Which of the statements given above is/are not correct?

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

ANS: D

Explanation: About HANSA-NG:

- HANSA-NG aircraft has successfully completed the sea level trials at Puducherry. It is India's first indigenous Flying Trainer aircraft.
- It has been developed by CSIR-National Aerospace Laboratories, Bangalore.
- The aircraft is designed to meet the Indian flying club needs, and it is an ideal aircraft for Commercial Pilot Licensing (CPL) due to its low cost and low fuel consumption.

Source: ForumIAS

Location/IR/Geography

Q.1) Consider the following statements about World Food Price Index:

1. It is released by Food and Agriculture Organization (FAO) since 1996.
2. The index is a measure of the weekly change in international prices of a basket of food commodities.

Which of the statements given above is/are correct?

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

ANS: A

Explanation: About World Food Price Index:

Released by: Food and Agriculture Organization (FAO) since 1996.

Aim: To help in monitoring the developments in the global agricultural commodity markets.

Purpose: The index is a measure of the monthly change in international prices of a basket of food commodities.

Commodities: It consists of the average of five commodity group price indices. Such as cereal, vegetables, dairy, meat and sugar. Also, these five indices are given weightage based on the average export shares.

Base Year: 2014-16.

Source: ForumIAS

Q.2) Consider the following statements about UN Human Rights Council (UNHRC):

1. United Nations General Assembly (UNGA) has suspended Russia from the UNHRC.
2. This is the first time the UNGA has suspended a country from the 47-member UN Human Rights Council after its formation in 2006.

Which of the statements given above is/are not correct?

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

ANS: B

Explanation:

The United Nations General Assembly (UNGA) has voted to suspend Russia from the UN Human Rights Council (UNHRC).

Note: This is only the second time the UNGA has suspended a country from the 47-member UN Human Rights Council after its formation in 2006. In 2011, Libya was thrown out through a resolution adopted by UNGA through consensus.

Why was Russia suspended?

The resolution titled 'Suspension of the rights of membership of the Russian Federation in the Human Rights Council' was first moved by the United States over Russia's military aggression in Ukraine.

About- The Human Rights Council is an inter-governmental body within the 'United Nations' system.

- The UNHRC replaced the former United Nations Commission on Human Rights.
- The Council was created by the United Nations General Assembly in 2006 by a resolution.

Headquarters: Geneva, Switzerland.

Mandate:

- It is responsible for strengthening the promotion and protection of human rights around the globe.
- It addresses situations of human rights violations and make recommendations on them.

Membership:

The Council is made of 47 Member States, elected by the General Assembly of the UN through direct and secret ballot.

- The General Assembly takes into account the candidate States' contribution to the promotion and protection of human rights, as well as their voluntary pledges and commitments in this regard.
- The Council's Membership is based on equitable geographical distribution. Seats are distributed as follows:

African States: 13 seats

Asia-Pacific States: 13 seats

Latin American and Caribbean States: 8 seats

Western European and other States: 7 seats

Eastern European States: 6 seats

Members of the Council serve for a period of 3 years and are not eligible for immediate re-election after serving two consecutive terms.

The Bureau of the Council consists of five people – one President and four Vice-presidents – representing the five regional groups. They serve for a year, in accordance with the Council's annual cycle.

Source: ForumIAS

Q.3) Which of the following statement about Exercise Varuna is/are correct?

1. It is a bilateral exercise between the Indian and French Air Force.
2. It was first conducted in the year 2011.

Which of the statements given above is/are correct?

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

ANS: D

Explanation: About Exercise Varuna:

Type: Bilateral Naval Exercise

Countries Involved: India and France.

Started in: 1993.

The exercise was named 'VARUNA' in 2001.

Aim: To develop interoperability between the two navies. Further, it aims to foster mutual cooperation by learning from each other's best practices to conduct joint operations.

What are the other exercises between India and France?

Exercise Garuda: It is a bilateral exercise between the Indian and French Air Force. The first edition of the exercise was held in 2003.

Exercise SHAKTI: It is a biennial military exercise conducted between India and France. It was first conducted in the year 2011.

Exercise La Pérouse: It is a multilateral maritime exercise led by the French Navy. The Indian Navy participated in this exercise for the first time in 2021.

Source: ForumIAS

Q.4) Which of the following statement is /are correct?

1. National Snow and Ice Data Centre (NSIDC) is an Indian information and referral centre in support of polar and cryospheric research.
2. Sea ice reflects 80% of the sunlight that strikes its surface.

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

ANS: B

Explanation:

Arctic sea ice has appeared to have hit its annual maximum extent on February 25, 2022, after growing through the fall and winter. According to National Snow and Ice Data Centre(NSIDC), this year's Arctic sea ice wintertime extent is the 10th-lowest in the satellite record.

Note: NSIDC is a United States information and referral centre in support of polar and cryospheric research.

What is Sea Ice?

Sea ice is essentially frozen ocean water. All stages of winter sea ice – formation, growth and melting – occur in the ocean, unlike icebergs, glaciers and ice shelves that originate on land.

Why is polar sea ice important?

Polar sea ice is important to maintain global temperatures. This is because sea ice reflects 80% of the sunlight that strikes its surface, thus keeping the polar regions cool.

- Once the ice melts in the summer, the dark surface of the ocean is exposed, and it absorbs 90% of the sunlight that falls on it. This causes a rise in the temperature of the polar region.
- Moreover, small temperature changes at the poles can lead to greater warming over time, making polar regions extremely sensitive to climate change. The loss of sea ice can accelerate global warming.

Source: ForumIAS

Q.5) Consider the following statements regarding “Satpura range”:

1. It stretches through Maharashtra, Madhya Pradesh and Andhra Pradesh.
2. It forms the watershed between the Narmada and Godavari rivers.

Which of the statements given above is/are **NOT** correct?

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

ANS: C

Explanation: Satpura Range, range of hills, part of the Deccan plateau, western India.

- The hills stretch for some 560 miles (900 km) across the widest part of peninsular India, through Maharashtra, Madhya Pradesh, and Gujarat and Chhattisgarh states.
- The range, the name of which means “Seven Folds,” forms the watershed between the Narmada (north) and Tapti (south) rivers.

Source: NCERT XI India Physical Environment

Q.6) Consider the following statements regarding “River Godavari”:

1. It originates from Trimbakeshwar, Nasik District in Western Ghats.

2. The biggest city on the river banks of the Godavari is Vijayawada.
3. Kaleshwaram project was built on Godavari River in the state of Andhra Pradesh.

Which of the statements given above is/are correct?

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

ANS: B

Explanation: The River Godavari is an important stream in central India, rising in the Western Ghats Mountain Range.

- The name of the origin is Trimbakeshwar and it is situated in the Nashik District or Subdivision in the state of Maharashtra and runs towards the east over the Deccan terrain through the Maharashtra state. The river is also named as Southern Ganges or Dakshin Ganga.
- The river moves into Andhra Pradesh at Kandhakurthi in Nizamabad district of Andhra Pradesh, moves past the Deccan terrain and subsequently bends to run according to a southeasterly course till it pours into the Bay of Bengal via two mouths.
- An important place of attraction on the riverbanks is Basara in Adilabad District.
- It houses a popular place of worship for Goddess Saraswati. It is also the second oldest temple for the deity in India.
- The biggest city on the riverbanks of the Godavari is Rajahmundry.
- In this place, the river has the maximum breadth (about 5 km from Rajahmundry to the other bank at Kovvur).
- The Kaleshwaram Lift Irrigation Project or KLIP is a multi-purpose irrigation project on the Godavari River in Kaleshwaram, Bhoopalpally, Telangana, India.

Source: NCERT – XI Indian Physical Environment and The Hindu

Q.7) “Rainfall occurs in winter from the retreating monsoon and summer is dry” - above statement best describes which of the following regions?

- a) North East
b) Konkan coast
c) Lakshadweep Islands
d) Coromandel Coast

ANS: D

Explanation:

- The Ganga delta and the coastal plains of Orissa are hit by strong rain-bearing storms almost every third or fifth day in July and August while the Coromandal coast, a thousand km to the south, goes generally dry during these months.
- Most parts of the country get rainfall during June-September, but on the coastal areas of Tamil Nadu, it rains in the beginning of the winter season.

Source: NCERT – India Physical Environment

Q.8) Which of the following Soils is/are zonal Soil?

1. Desert Soils
2. Red Soils
3. Laterite Soils

Select the correct answer using the codes given below:

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

ANS: D

Explanation: The Soils can be classified on the basis of dominating factors:

Zonal Soil – These soils occur in broad geographical areas or zones.

- They are influenced more by the climate and vegetation of the area rather than the rock-type.
- They are mature, as a result of stable conditions over a long period of time.
- For example – red soils, black soils, laterite soils, desert soils etc.

Azonal Soil – It is that soil which has been developed by the process of deposition by the Agents of erosion.

- It means that it has been made by the fine rocky particles transported from the far-off regions.
- These are immature soils and lack well-developed soil profiles.
- This may be due to the non-availability of sufficient time for them to develop fully or due to the location on very steep slopes which prohibits profile development.
- For Example – alluvial and loess soils.

Source: G C Leong

Q.9) Consider the following statements regarding “Eastern Ghats”:

1. It is spread across Tamil Nadu, Kerala and Karnataka.
2. Highest percentage of geographical spread of Eastern Ghats is located in Andhra Pradesh.

Which of the following codes below given is/are correct?

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

ANS: B

Explanation: Despite being older than the Himalayas and the Western Ghats, the Eastern Ghats, an ancient discontinuous low mountain range that spreads along the East coast of the Indian Peninsula, never got its due.

- The geographical extent of the Eastern Ghats is about 75,000 kilometres, spread over the states of Odisha (25 %), Andhra Pradesh (40%), Telangana (5%), Karnataka (5%) and Tamil Nadu (25%).
- Though it is bestowed with rich bio-diversity and is home to different tribal communities, there has never been a clear policy in place for its conservation.

Source: ForumIAS

Q.10) “Rushikulya River” is often seen in news is flows through which of the following state?

- a) Kerala
- b) Karnataka
- c) Odisha
- d) Andhra Pradesh

ANS: C

Explanation: The Rushikulya River is one of the major rivers in the state of Odisha and covers entire catchment area in the districts of Kandhamal and Ganjam of Odisha.

- The Rushikulya originates at an elevation of about 1000 metres from Daringbadi hills of the Eastern Ghats range.
- The place from where the river originates, Daringbadi is called the ' Kashmir of Odisha '. The river meets the Bay of Bengal at Puruna Bandha in Ganjam.
- Its tributaries are the Baghua, the Dhanei, Badanadi etc. It has no delta as such at its mouth.
- Gahirmatha marine sanctuary and Rushikulya rookery coast in Ganjam district are main Olive Ridley Nesting sites in Odisha.

Source: ForumIAS

Economy

Q.1) Consider the following statements regarding Viability Gap Funding (VGF):

1. VGF is provided with the objective of making a PPP project commercially viable.
2. The total Viability Gap Funding cannot exceed twenty percent of the Total Project Cost (TPC).
3. VGF is limited to projects concerning economic infrastructure.

Which of the above statements is/are correct?

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

ANS: C

Explanation: About Revamped Viability Gap Funding Scheme:

The Cabinet Committee on Economic Affairs has approved Continuation and Revamping of the Scheme for Financial Support to Public Private Partnerships (PPPs) in Infrastructure Viability Gap Funding (VGF) Scheme till 2024-25 with a total outlay of Rs. 8,100 crore.

The new scheme will have two components:

- The sub-scheme-1 would cater to social sectors such as waste water treatment, water supply, solid waste management, health and education sectors, which often face bankability issues on account of poor revenue streams.
- The projects eligible under the sub-scheme-1 should have at least 100 per cent operational cost recovery.
- The central government will provide a maximum of 30% of the total project cost (TPC) of the project as VGF. State government, sponsoring central ministry or statutory entity may provide an additional support up to 30% of TPC.
- The sub scheme-2 will support demonstration or pilot social sectors projects. The projects may be from health and education sectors where there is at least 50% operational cost recovery.
- In such projects, central and state governments together will provide up to 80 per cent of capital expenditure and up to 50 per cent of operation and maintenance (O&M) costs for the first five years.
- The Centre will provide a maximum of 40% of the TPC of the project.
- The government has revamped the viability gap funding (VGF) scheme for encouraging investment in social as well as economic infrastructure projects.

Source: ForumIAS

Q.2) 'Sahakar Pragya', recently seen in news is related to which of the following?

- a) Enabling rural people to set-up micro-enterprises.
- b) Assisting cooperatives in creation of healthcare infrastructure in the country.
- c) Involvement of youth in cooperative movement.
- d) Imparting training to primary cooperative societies in rural areas.

ANS: D

Explanation: About Sahakar Pragya:

- Agriculture Minister recently unveiled 'Sahakar Pragya' to impart training to primary cooperative societies in rural areas.
- The National Cooperative Development Corporation (NCDC) will train farmers in primary cooperatives in rural areas of India through its newly launched programme, Sahakar Pragya.

- The 45 new training modules of Sahakar Pragya of the National Cooperative Development Corporation (NCDC) will impart training to primary cooperative societies in rural areas of the country along with LakshmanraoInamdar National Cooperative Research and Development Academy. The academy is fully funded by NCDC.

Source: ForumIAS

Q.3) Consider the following statements:

1. Minimum Age Convention of ILO is the only labor convention to have achieved universal ratification.
2. India has ratified all of ILO's 8 core conventions.

Which of the statements given above is/are correct?

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

ANS D

Explanation: Convention 182 of ILO:

- Convention No. 182 on the Worst Forms of Child Labor has recently achieved universal ratification, following ratification by the Kingdom of Tonga.
- For the first time in the ILO's history, an International Labor Convention has been ratified by all member States.
- The Convention is the most rapidly ratified Convention in the history of the Organization, since its adoption 21 years ago by the International Labor Conference.
- Universal ratification of Convention 182 is an historic first that means that all children now have legal protection against the worst forms of child labor.
- The two ILO Conventions on child labor are Convention No.138 on Minimum Age and Convention No. 182 on the Worst Forms of Child Labor. These Conventions are "fundamental" Conventions.
- This means that, under the ILO Declaration on Fundamental Principles and Rights at Work, all ILO member States have an obligation to respect, promote and realize the abolition of child labor, even if they have not ratified the Conventions in question.
- India has ratified 6/8 core conventions of ILO (Freedom of Association and Protection of Right to Organized Convention (No.87) and Right to Organize and Collective Bargaining Convention (No.98) are not yet ratified by India).

Source: ForumIAS

Q.4) Consider the following statements regarding Unique Document Identification Number (UDIN):

1. UDIN is mandatory for every kind of certificate/tax audit report.
2. Director Identification Number (DIN) system is being executed in both direct and indirect tax administration in India.

Which of the above statements is/are correct?

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

ANS: C

Explanation: About Unique Document Identification Number (UDIN):

- Finance Ministry has said, CBDT will validate Unique Document Identification Number (UDIN) generated from ICAI portal at the time of upload of Tax Audit Reports.

- Unique Document Identification Number (UDIN) is a unique number given to documents attested by Chartered Accountants. It is an 18 digits system generated unique number which shall generated separately for each document.
- Institute of Chartered Accountants of India (ICAI), in its gazette notification dated 2nd August, 2019, had made generation of UDIN from ICAI website mandatory for every kind of certificate/tax audit report and other attests made by their members as required by various regulators.
- This was introduced to curb fake certifications by non-CAs misrepresenting themselves as Chartered Accountants.
- This measure would create a digital directory for maintaining a proper audit trail of such communication. Importantly, it would provide the recipients of such communication a digital facility to ascertain their genuineness.
- Though DIN is mandatory requirement, still in exceptional circumstances communication may be issued without an auto generated DIN. However, this exception is to be made only after recording the reasons in writing.

Source: ForumIAS

Q.5) RBI recently extended currency swap facility to Sri Lanka. In this regard, consider the following statements:

1. A currency swap involves the exchange of interest and principal in one currency for the same in another currency.
2. It is considered to be a foreign exchange transaction and is not shown on a company's balance sheet.
3. These swap operations carry exchange rate risks as transaction terms are set in advance.

Which of the above statements is/are correct?

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

ANS: B

Explanation: About Currency Swap:

- The Reserve Bank of India (RBI) has recently signed an agreement for extending a \$400-million currency swap facility under SAARC framework to Sri Lanka to boost the foreign reserves and ensure financial stability of the country, which is badly hit by the COVID-19 pandemic.
- In the swap arrangement, a country provides dollars to a foreign central bank, which, at the same time, provides the equivalent funds in its currency to the former, based on the market exchange rate at the time of the transaction. The parties agree to swap back these quantities of their two currencies at a specified date in the future, which could be the next day or even two years later, using the same exchange rate as in the first transaction.
- These swap operations carry no exchange rate or other market risks, as transaction terms are set in advance. The absence of an exchange rate risk is the major benefit of such a facility. This facility provides the country, which is getting the dollars, with the flexibility to use these reserves at any time in order to maintain an appropriate level of balance of payments or short-term liquidity.
- A currency swap typically involves the exchange of interest and sometimes of principal in one currency for the same in another currency. Interest payments are exchanged at fixed dates through the life of the contract. It is considered to be a foreign exchange transaction and is not required by law to be shown on a company's balance sheet.

Source: ForumIAS

Q.6) With reference to Chief Compliance Officer (CCO) in banking industry, consider the following statements:

1. CCO has a fixed tenure of not less than 3 years.
2. He/she is appointed or removed by Department of Supervision, RBI.
3. He/she must be a senior executive of the bank.

Which of the above statements is/are not correct?

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

ANS: C

Explanation: About Chief Compliance Officer (CCO):

- The Reserve Bank of India (RBI) recently directed banks to set up an independent corporate compliance function headed by a designated chief compliance officer (CCO) selected through a suitable process with an appropriate 'fit and proper' selection criteria to effectively manage compliance risk.
- It said the CCO should be appointed for a fixed tenure of not less than three years. The CCO may be transferred or removed before completion of the tenure only in exceptional circumstances with the explicit prior approval of the board after following a well-defined and transparent internal administrative procedure.
- The person should be a senior executive of the bank, preferably in the rank of a general manager or an equivalent position or he could also be recruited from outside.
- According to the RBI, the bank should also develop and maintain a quality assurance and improvement programme covering all aspects of the compliance function.
- The quality assurance and improvement programme shall be subject to independent external review periodically (at least once in three years).
- A prior intimation to the Department of Supervision, RBI, should be provided before appointment, premature transfer or removal of the CCO.
- As per RBI guidelines on appointment of CCO, CCO should be appointed for a fixed tenure of not less than three years. The audit committee of the board (ACB) and managing director and CEO of the bank should factor this requirement while appointing CCO.
- The person should be a senior executive of the bank, preferably in the rank of a general manager or an equivalent position or he could also be recruited from outside.

Source: ForumIAS

Q.7) Rajiv Mehrishi Committee, constituted recently is related to which of the following?

- a) One-time restructuring of corporate loans
- b) Improving quality of statistical data
- c) Assessment of relief to bank borrowers
- d) Suggesting parameters to cope up with the COVID-19 related stressed assets

ANS: C

Explanation: About Rajiv Mehrishi Committee:

- Government has recently constituted a three member expert committee to assist in the assessment of relief to bank borrowers.
- The committee chaired by former CAG Rajiv Mehrishi will measure the impact on the national economy and financial stability of waiving of interest and COVID-19 related moratorium. It will also give suggestions to mitigate financial constraints of various sections of society in this respect and measures to be adopted in this regard.
- The panel will submit its report within one week.
- The move came as various concerns have been raised during the ongoing hearing in the Supreme Court in the matter regarding relief sought in terms of waiver of interest and waiver of interest on interest and other related issues.

Source: ForumIAS

Q.8) New York Convention, recently seen in news is related to which of the following?

- a) Safe and environmentally sound recycling of ships.
- b) International settlement of agreements resulting from mediation.
- c) Recognition and enforcement of foreign arbitral awards.
- d) International trade in endangered species of wild fauna and flora.

ANS: C

Explanation: About New York Convention:

- Recently, Cairn Energy has filed a case, in accordance with the New York Convention, in the USA district court to enforce a USD 1.2 billion arbitration award it won in a tax dispute against India.
- The Convention on the Recognition and Enforcement of Foreign Arbitral Awards, also known as the "New York Arbitration Convention" or the "New York Convention", is one of the key instruments in international arbitration.
- The Convention's principal aim is that foreign and non-domestic arbitral awards should not be discriminated against by courts asked to enforce them.
- It applies to the recognition and enforcement of foreign arbitral awards and the referral by a court to arbitration.
- The Convention was adopted by the United Nations (UN) following a diplomatic conference held in May and June 1958 at the UN Headquarters in New York, and entered into force on 7th June, 1959.
- The Convention has 166 state parties (Countries). India is a party to the Convention.

Source: ForumIAS

Q.9) Consider the following statements regarding Singapore Convention on Mediation:

1. The Convention allows for direct enforcement of mediated settlement agreements.
2. It can be resorted to only in cases international commercial disputes.
3. India is not a party to this convention.

Which of the above statements is/are correct?

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

ANS: B

Explanation: About Singapore Convention on Mediation:

- The Singapore Convention on Mediation came into force recently and will provide a more effective way for enforcing mediated settlements of corporate disputes involving businesses in India and other countries that are signatories to the Convention.
- Also known as the United Nations Convention on International Settlement Agreements Resulting from Mediation, this is also the first UN treaty to be named after Singapore.
- With the Convention in force, businesses seeking enforcement of a mediated settlement agreement across borders can do so by applying directly to the courts of countries that have signed and ratified the treaty, instead of having to enforce the settlement agreement as a contract in accordance with each country's domestic process.
- The Singapore Convention can be resorted to only in case of an international commercial dispute, and specifically excludes disputes arising from personal, family, inheritance or employment matters.
- The Convention has 53 signatories, including India, China and the U.S.

Source: ForumIAS

Q.10) Consider the following statements about Broadcast Seva Portal:

1. It is an online portal aimed at improving the ease of doing business in the broadcast industry.
2. It has been launched by Ministry of Information and Broadcasting (I&B).

Which of the following statement is/are correct?

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

ANS: C

Explanation:

What is Broadcast Seva Portal?

Launched by: Ministry of Information and Broadcasting (I&B).

Purpose: It is an online portal aimed at improving the ease of doing business in the broadcast industry.

Features: The portal can be used by broadcasters for speedy filing and processing of applications, various kinds of licences, permissions, registrations, tracking applications, calculating fees and executing payments.

Significance of the Portal: The portal will reduce the turnaround time of applications and at the same time will help applicants track their progress.

- It will also reduce the human interface that was required earlier and thus add to the capacity building of the Ministry and will be a major step towards ease of doing business.

Source: ForumIAS

Polity

Q.1) Consider the following statements with respect to Qualifications of Supreme Court Judge:

1. He should be a citizen of India
2. He should have been a Judge of a High Court for 7 years
3. He should have been an Advocate of a High Court for 10 years

Which of the statements given above is/are correct?

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

ANS: D

Explanation: A person to be appointed as a judge of the Supreme Court should have the following qualifications:

1. He should be a citizen of India.
 2. (A) He should have been a judge of a High Court (or high courts in succession) for five years; or (B) He should have been an advocate of a High Court (or High Courts in succession) for ten years; or (C) He should be a distinguished jurist in the opinion of the president.
- From the above, it is clear that the Constitution has not prescribed a minimum age for appointment as a judge of the Supreme Court.

Source: Laxmikant

Q.2) Which of the following statement is/are Basic Structure of the Indian Constitution?

1. Supremacy of the Constitution
2. Federal character of the Constitution
3. Judicial Review

Select the correct answer using the codes given below:

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

ANS: D

Explanation: The present position is that the Parliament under Article 368 can amend any part of the Constitution including the Fundamental Rights but without affecting the 'basic structure' of the Constitution. However, the Supreme Court is yet to define or clarify as to what constitutes the 'basic structure' of the Constitution. From the various judgments, the following have emerged as 'basic features' of the Constitution or elements / components / ingredients of the 'basic structure' of the constitution:

1. Supremacy of the Constitution
2. Sovereign, democratic and republican nature of the Indian polity
3. Secular character of the Constitution
4. Separation of powers between the legislature, the executive and the judiciary
5. Federal character of the Constitution
6. Unity and integrity of the nation
7. Welfare state (socio-economic justice)
8. Judicial review
9. Freedom and dignity of the individual

Source: Laxmikant

Q.3) Consider the following statements with respect to Merits of Parliamentary System:

1. Harmony between legislatures
2. Continuity of policies
3. Wide representation

Which of the statements given above is/are correct?

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

ANS: C

Explanation: The parliamentary system of government has the following merits:

1. Harmony between legislature and executive.
2. Responsible government.
3. Prevents despotism.
4. Wide representation.

Source: Laxmikant

Q.4) Which of the following is/are features of Federal Government?

1. Dual Government
2. Written Constitution
3. No division of powers

Select the correct answer using the codes given below:

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

ANS: B

Explanation: The Constitution establishes a dual polity consisting of the Union at the Centre and the states at the Periphery. Each is endowed with sovereign powers to be exercised in the field assigned to them respectively by the Constitution. The Constitution is not only a written document but also the lengthiest Constitution of the world. Originally, it contained a Preamble, 395 Articles (divided into 22 Parts) and 8 Schedules. At present (2013), it consists of a Preamble, about 465 Articles (divided into 25 Parts) and 12 Schedules. It specifies the structure, organization, powers and functions of both the Central and state governments and prescribes the limits within which they must operate. The Constitution divided the powers between the Centre and the states in terms of the Union List, State List and Concurrent List in the Seventh Schedule. The Union List consists of 100 subjects (originally 97), the State List 61 subjects (originally 66) and the Concurrent List 52 subjects (originally 47). Both the Centre and the states can make laws on the subjects of the concurrent list, but in case of a conflict, the Central law prevails. The residuary subjects (ie, which are not mentioned in any of the three lists) are given to the Centre.

Source: Laxmikant

Q.5) National Legal Services Authority (NALSA) established in which year?

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

ANS: C

Explanation: Article 39A of the Constitution of India provides for free legal aid to the poor and weaker sections of the society and ensures justice for all. Articles 14 and 22(1) of the

Constitution also make it obligatory for the State to ensure equality before law and a legal system which promotes justice on the basis of equal opportunity to all. In the year 1987, the Legal Services Authorities Act was enacted by the Parliament which came into force on 9th November, 1995 to establish a nationwide uniform network for providing free and competent legal services to the weaker sections of the society on the basis of equal opportunity. The National Legal Services Authority (NALSA) has been constituted under the Legal Services Authorities Act, 1987 to monitor and evaluate implementation of legal aid programmes and to lay down policies and principles for making legal services available under the Act.

Source: Laxmikant

Q.6) Fazl Ali Commission identified four major factors that can be taken into account in any scheme of reorganization of states:

1. One-Language One-State
2. Preservation and strengthening of the unity and security of the country
3. Financial, economic and administrative considerations
4. Planning and promotion of the welfare of the people in each state as well as of the nation as a whole

Which of the statements given above is/are correct?

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

ANS: D

Explanation: The creation of Andhra state intensified the demand from other regions for creation of states on linguistic basis. This forced the Government of India to appoint (in December 1953) a three-member States Reorganisation Commission under the chairmanship of Fazl Ali to re-examine the whole question. Its other two members were K M Panikkar and H N Kunzru. It submitted its report in September 1955 and broadly accepted language as the basis of reorganisation of states. But, it rejected the theory of 'one language- one state'. Its view was that the unity of India should be regarded as the primary consideration in any redrawing of the country's political units. It identified four major factors that can be taken into account in any scheme of reorganisation of states:

- a) Preservation and strengthening of the unity and security of the country.
- b) Linguistic and cultural homogeneity.
- c) Financial, economic and administrative considerations.
- d) Planning and promotion of the welfare of the people in each state as well as of the nation as a whole.

Source: Laxmikant

Q.7) Consider the following statements with respect to Cantonment Board:

1. It is established for municipal administration for civilian population in the cantonment area
2. It is set up under the provisions of the Cantonments Act of 2004
3. It works under the administrative control of the defense ministry of the Central government

Which of the following below given codes are correct?

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

ANS: D

Explanation: A cantonment board is established for municipal administration for civilian population in the cantonment area. It is set up under the provisions of the Cantonments Act of 2006—a legislation enacted by the Central government. It works under the administrative control of the defense ministry of the Central government. Thus, unlike the above four types of urban local bodies, which are created and administered by the state government, a cantonment board is created as well as administered by the Central government.

Source: Laxmikant

Q.8) Consider the following statements with respect to features of Fifth Schedule:

1. The Governor is empowered to declare an area to be a scheduled area
2. Each state having scheduled areas has to establish a tribes advisory council to advise on welfare and advancement of the scheduled tribes

Which of the statements given above is/are correct?

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

ANS: B

Explanation: The scheduled areas are treated differently from the other areas in the country because they are inhabited by 'aboriginals' who are socially and economically rather backward, and special efforts need to be made to improve their condition. Therefore, the whole of the normal administrative machinery operating in a state is not extended to the scheduled areas and the Central government has somewhat greater responsibility for these areas'.

The president is empowered to declare an area to be a scheduled area. He can also increase or decrease its area, alter its boundary lines, rescind such designation or make fresh orders for such re-designation on an area in consultation with the governor of the state concerned. Each state having scheduled areas has to establish a tribe's advisory council to advice on welfare and advancement of the scheduled tribes. It is to consist of 20 members, three-fourths of whom are to be the representatives of the scheduled tribes in the state legislative assembly.

Source: Laxmikant

Q.9) Consider the following statements about National Legal Services Authority (NALSA):

1. It is a constitutional body under Article 39A of the constitution.
2. It was constituted to monitor and evaluate implementation of legal aid programmes.

Which of the statement given above is/are correct?

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

ANS: B

Explanation: Article 39A of the Constitution of India provides for free legal aid to the poor and weaker sections of the society and ensures justice for all. Articles 14 and 22(1) of the Constitution also make it obligatory for the State to ensure equality before law and a legal system which promotes justice on the basis of equal opportunity to all. In the year 1987, the Legal Services Authorities Act was enacted by the Parliament which came into force on 9th November, 1995 to establish a nationwide uniform network for providing free and competent legal services to the weaker sections of the society on the basis of equal opportunity. The National Legal Services Authority (NALSA) is a statutory body that has been constituted under the Legal Services Authorities Act, 1987 to monitor and evaluate implementation of legal aid programmes and to lay down policies and principles for making legal services available under the Act.

Source: Laxmikant

Q.10) The Constituent Assembly appointed a number of committees to deal with different tasks of constitution making. Consider the given below pairs:

Committee	Headed by
1. Union powers committee	Jawaharlal Nehru
2. Union constitution committee	B R Ambedkar
3. Rules of procedure committee	Sardar patel

Which of the above pairs is/are correctly matched?

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

ANS: A

Explanation: The Constituent Assembly appointed a number of committees to deal with different tasks of constitution-making. Out of these, eight were major committees and the others were minor committees. The names of these committees and their chairmen are given below:

Major Committees

- Union Powers Committee – Jawaharlal Nehru
- Union Constitution Committee – Jawaharlal Nehru
- Provincial Constitution Committee – Sardar Patel
- Drafting Committee – Dr. B.R. Ambedkar
- Advisory Committee on Fundamental Rights, Minorities and Tribal and Excluded Areas – Sardar Patel. This committee had the following five sub-committees:
 - Fundamental Rights Sub-Committee – J.B. Kripalani
 - Minorities Sub-Committee – H.C. Mukherjee
 - North-East Frontier Tribal Areas and Assam Excluded & Partially Excluded Areas Sub-Committee – Gopinath Bardoloi

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- Excluded and Partially Excluded Areas (Other than those in Assam) Sub-Committee – A.V. Thakkar
- North-West Frontier Tribal Areas Sub-Committee
- Rules of Procedure Committee – Dr. Rajendra Prasad
- States Committee (Committee for Negotiating with States) – Jawaharlal Nehru
- Steering Committee – Dr. Rajendra Prasad.

Source: Laxmikant



Environment

Q.1) Which of the following is/are constitutes of “photochemical smog”?

1. Volatile organic compound (VOC)
2. Sunlight
3. Sulfur dioxide

Choose the correct code from below given options:

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

ANS: B

Explanation: Today, most of the smog we see is photochemical smog. Photochemical smog is produced when sunlight reacts with nitrogen oxides and at least one volatile organic compound (VOC) in the atmosphere. Nitrogen oxides come from car exhaust, coal power plants, and factory emissions. VOCs are released from gasoline, paints, and many cleaning solvents. When sunlight hits these chemicals, they form airborne particles and ground-level ozone—or smog.

Ozone can be helpful or harmful. The ozone layer high up in the atmosphere protects us from the sun’s dangerous ultraviolet radiation. But when ozone is close to the ground, it is bad for human health. Ozone can damage lung tissue, and it is especially dangerous to people with respiratory illnesses like asthma. Ozone can also cause itchy, burning eyes.

Source: ForumIAS

Q.2) Which of the following is/are “pioneer species” of ecological succession?

1. Lichens
2. Fungi
3. Bacteria

Choose the correct code from below given options:

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

ANS: D

Explanation: Ecological succession is a series of progressive changes in the species that make up a community over time. Primary succession occurs when new land is formed or bare rock is exposed, providing a habitat that can be colonized for the first time. What happens to this land during primary succession? First, weathering and other natural forces break down the substrate, rock, enough for the establishment of certain hearty plants and lichens with few soil requirements, known as pioneer species. Algae, fungi, bacteria, lichens colonize on the bare rocks and provide organic materials for further higher level of colonization, while the planktons i.e., phytoplankton’s, zooplanktons provide base at the shallow water for further higher levels of succession in hydro sere.

Source: ForumIAS

Q.3) “Global Drylands Initiative” is launched by which of the following?

- a) UNEP
- b) Global Environment Facility
- c) World Bank
- d) IUCN

ANS: D

Explanation: Drylands are found in tropical and temperate latitudes and account for 41.3% of the global terrestrial area. They can be classified into four types - dry sub-humid, semi-arid, arid and hyper-arid lands - encompassing a variety of ecosystems. The goal of the Global Drylands Initiative is to restore, sustainably manage and protect dryland ecosystems for multiple environmental, economic and social benefits. The Initiative supports countries to adapt ecosystem management policy and practice to the unique conditions of the drylands and to the evolving challenges that the drylands face. Further, as the IUCN Focal Point to the United Nations Convention to Combat Desertification, the Global Drylands Initiative leads IUCN's efforts to influence the global discourse on Land Degradation and Sustainable Land Management. In this case, the Initiative supports countries to implement their commitments to the Convention by demonstrating good practices on the ground, influencing the science-policy interaction of the Convention itself and working with other stakeholders to achieve Land Degradation Neutrality.

Source: ForumIAS

Q.4) Consider the following statements with respect to World Network of Biosphere Reserves (WNBR):

1. WNBR consists of 20 trans-boundary sites.
2. WNBR is the part of Man and Biosphere (MAB) programme.

Which of the following codes below given is/are NOT correct?

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

ANS: D

Explanation: Composed of 686 biosphere reserves in 122 countries, including 20 transboundary sites, the WNBR of the MAB Programme promotes North-South and South-South collaboration and represents a unique tool for international co-operation through sharing knowledge, exchanging experiences, building capacity and promoting best practices. The World Network of Biosphere Reserves of the MAB Programme consists of a dynamic and interactive network of sites of excellence. It fosters the harmonious integration of people and nature for sustainable development through participatory dialogue; knowledge sharing; poverty reduction and human well-being improvements; respect for cultural values and society's ability to cope with change - thus contributing to the Millennium Development Goals. Accordingly, the WNBR is one of the main international tools to develop and implement sustainable development approaches in a wide array of contexts.

Source: ForumIAS

Q.5) “Velavadar National Park” is located in which of the following state?

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

ANS: C

Explanation: Velavadar is situated in the Bhal region of Saurashtra in Gujarat. It is a unique grassland ecosystem and perhaps the only tropical grasslands in India to be deemed a

National Park. It is most renowned for its enchanting blackbuck population. The elegant blackbuck is endemic to India and Velavadar is one of its prime home territories. Wolves are the main predators of blackbuck in the park. It is highly recommended for any birdwatcher, with several birds like the Lesser Florican visiting the area. Besides, Velavadar has also earned fame as the world's largest roosting site of the harrier.

Source: ForumIAS

Q.6) Consider the following statements with respect to “Global Environment Outlook”:

1. Global Environment Outlook (GEO) is a series of reports on the environment issued periodically by the World Economic Forum.
2. The report is based on integrated environmental assessment (IEA) methodology.

Which of the following codes below given is/are correct?

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

ANS: B

Explanation: Global Environment Outlook (GEO) is a series of reports on the environment issued periodically by the United Nations Environment Programme (UNEP). The sixth edition of the Global Environment Outlook (GEO-6) provides a clear assessment of the current state of the environment, the challenges that we face and how well we have dealt with them, with due consideration given to gender, indigenous knowledge and cultural dimensions. The assessment lays the foundation for continued socio-environmental assessments across relevant scales, with a thematic as well as an integrated focus, enabling and informing societal transitions and the tracking of Sustainable Development Goal targets and goals as well as previously agreed internationally environmental goals. Using the integrated environmental assessment (IEA) methodology, UNEP has produced five GEO reports thus far, and the first edition of regional assessments which have analyzed environmental state and trends at the global and regional scales, described plausible outlooks for various time frames and formulated policy options.

Source: ForumIAS

Q.7) Gothenburg Protocol is related to which among the following?

- a) Protocol to Abate Acidification, Eutrophication and Ground-level Ozone
- b) Protocol aimed to reduce green house gases.
- c) Protocol on the Transboundary Movement of Hazardous Wastes and their Disposal
- d) Protocol for the protection of migratory birds

ANS: A

Explanation: Gothenburg Protocol aims to Abate Acidification, Eutrophication and Ground-level Ozone and is a part of the Convention on Long-Range Transboundary Air Pollution. It aims to control and reduce emissions of sulphur dioxide, nitrogen oxides, ammonia, volatile organic compounds (VOCs) and particulate Matter (PM) that are caused by human activities.

Source: ForumIAS

Q.8) Syngas is a mixture of:

1. Carbon Monoxide (CO)
2. Hydrogen (H₂)
3. Methane (CH₄)
4. Carbon Dioxide (CO₂)

Select the correct code:

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

ANS: C

Explanation: Synthesis gas or briefly, syngas, is a mixture of carbon monoxide, carbon dioxide and hydrogen. Syngas can be produced from many sources, including natural gas, coal, biomass, or virtually any hydrocarbon feedstock, by reaction with steam or oxygen. Syngas is a crucial intermediate resource for production of hydrogen, ammonia, methanol, and synthetic hydrocarbon fuels.

The formation of syngas is strongly endothermic and requires high temperatures. Steam reforming of natural gas (or shale gas) proceeds in tubular reactors that are heated externally. The process uses nickel catalyst on a special support that is resistant against the harsh process conditions. Waste heat from the oven section is used to preheat gases and to produce steam. This plant generates syngas with H₂/CO ratios in the range of 3-4, and is suitable for hydrogen production.

Source: ForumIAS

Q.9) The Global Carbon Project report was published by which of the following?

- a) World Economic Forum
- b) UNEP
- c) IUCN
- d) Future Earth

ANS: D

Explanation: The Global Carbon Project is a Global Research Project of Future Earth and a research partner of the World Climate Research Programme. It was established in 2001. The project seeks to work with the international science community to establish a common and mutually agreed knowledge base to support policy debate and action to slow down and ultimately stop the increase of greenhouse gases in the atmosphere.

Source: ForumIAS

Q.10) Consider the following statements with respect to Zero Tillage:

1. Zero tillage is the process where the crop seed will be sown through drillers without prior land preparation
2. Residual moisture can be effectively utilized in Zero Tillage

Which of the following below given codes are correct?

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

ANS: C

Explanation: Zero tillage is the process where the crop seed will be sown through drillers without prior land preparation and disturbing the soil where previous crop stubbles are present. Zero tillage not only reduce the cost of cultivation it also reduces the soil erosion,

crop duration and irrigation requirement and weed effect which is better than tillage. Zero Tillage (ZT) also called No Tillage or Nil Tillage.

- Advantages of Zero Tillage: Reduction in the crop duration and thereby early cropping can be obtained to get higher yields.
- Reduction in the cost of inputs for land preparation and therefore a saving of around 80%.
- Residual moisture can be effectively utilized and number of irrigations can be reduced.
- Dry matter and organic matter get added to the soil.
- Environmentally safe - Greenhouse effect will get reduced due to carbon sequestration.
- No tillage reduces the compaction of the soil and reduces the water loss by runoff and prevents soil erosion.
- As the soil is intact and no disturbance is done, No Till lands have more useful flora and fauna.

Source: ForumIAS