<u>ForumIAS</u>



Prelims Marathon

14th to 20th Mar, 2022

HISTORY
ECONOMICS
POLITY
SCIENCE AND TECHNOLOGY
GEOGRAPHY AND ENVIRONMENT

History/Art and Culture

Q.1) Consider the following statements about Rani Kamlapati:

- 1. Recently Bhopal's Habibganj railway station is named after Rani Kamlapati.
- 2. Rani Kamalapati was the 18th Century Gond Queen.
- 3. She did great work in the area of water management and set up parks and temples.

Which of the statements given above is/are correct?

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

ANS: D

Explanation: About Rani Kamalapati:

- Madhya Pradesh Government has renamed the Bhopal's Habibganj railway station after Rani Kamlapati.
- Rani Kamalapati was the 18th Century Gond Queen of the region. She was the widow of Gond ruler Nizam Shah, chief of Ginnorgarh.
- She is known to have shown great bravery in facing aggressors during her reign after her husband was killed.
- Kamlapati is also claimed to be the "last Hindu queen of Bhopal" who did great work in the area of water management and set up parks and temples.

Source: EPIC November 2021

Q.2) Adi Shankaracharya propounded which of the following philosophy?

- a) Advaita Vedanta
- b) Vishishtadvaita
- c) Dvaita
- d) Dvaitadvaita

ANS: A

Explanation: About Adi Shankaracharya:

Adi Guru Shankaracharya was an 8th-century Indian spiritual leader and philosopher. He is said to have been born in Kaladi village on the bank of the river Periyar in Kerala.

Philosophy Advaita Vedanta:

- Adi Shankaracharya propounded the philosophy of Advaita Vedanta which articulates a
 philosophical position of radical non dualism, a revisionary worldview which it derived
 from the ancient Upanishadic texts.
- According to the philosophy, the whole world is a manifestation of the one and only God (brahman) and all diversity we see is delusion (maya) as the result of ignorance (advidya).
- Established Mathas: Shankaracharya established Mathas in Sringeri, Dwaraka, Puri, and Joshimath for the spread of Advaita Vedanta.

Source: EPIC November 2021

Q.3) The poetic works 'Maneesha Panchakam' and 'Saundaryalahiri' are authored by whom among the following?

a) Nimbarka

- b) Madhavacharya
- c) Ramanujacharya
- d) Adi Shankaracharya

ANS: D

Explanation: Major Works of Adi Shankaracharya

- He authored 116 works. Among them, the celebrated commentaries (bhashyas) are on Upanishads, the Brahma Sutra, and the Gita. His famous poetic works include Maneesha Panchakam and Saundaryalahiri.
- He authored the Vivekachudamani. It spells out the qualifications required in a student of Vedanta.
- He also composed the Kanakadhara Stotram, following which there was a rain of golden amlas which brought prosperity to the household.
- Further, he also composed texts like Shankara Smrithi which seeks to establish the social supremacy of Nambuthiri Brahmins.

Source: EPIC November 2021

Q.4) Heraka Religious movement was started by whom among the following?

- a) Rani Gaidinliu
- b) Birsa Munda
- c) Sree Narayana Guru
- d) Debendranath Tagore

ANS: A

Explanation: About Rani Gaidinliu:

Rani Gaidinliu was born on January 26, 1915, in the present-day Tamenglong district of Manipur. She belonged to the Rongmei Naga tribe.

About Heraka Movement:

- At the age of 13, Rani Gaidinliu joined the Heraka Religious movement of her cousin Haipou Jadonang.
- Heraka was a socio-religious movement that arose in the 1920s in the Zeliangrong territory. It was started by Jadonang to resist the infiltration of Christian missionaries as well as the reforms imposed by the British government.
- However, in 1931, Jadonang was arrested by the British and was hanged for opposing colonial rule. To ensure the movement does not die down, Gaidinliu took up the movement.
- She openly rebelled against British rule by telling the Zeliangrong people not to pay taxes. She also received donations from the local Nagas, many of whom also joined her as volunteers.

- She was then arrested in 1932 and was sentenced to life imprisonment by the British rulers. Between 1932 and 1947, the Naga freedom fighter was kept at several prisons across the Northeast.
- Acknowledging her role in the struggle against the British, Jawaharlal Nehru called her the "Daughter of the Hills" and gave her the title "Rani" or queen.

Source: EPIC November 2021

Q.5) Consider the following pairs:

Puppetry	State
1. Yampuri	Bihar
2. Tholpavakkoothu	Kerala
3. Kundhei	Odisha

Which of the pairs given above is/are correct?

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

ANS: B

Explanation: Tholpavakkoothu:

- For the first time, Tholpavakkoothu, the famous shadow leather puppets will tell stories of the epic Ramayana with the help of robots.
- The first robotic leather puppet was installed at the Palakkad District Heritage Museum.
- Tholpavakkoothu or shadow puppetry is a temple art form which is prevalent in the Bhagavathy temples (mother Goddess) in Palakkad district and nearby regions in Kerala.

Other puppetries

- TholuBommalata, Andhra Pradesh's shadow theatre has the richest and strongest tradition. The puppets are large in size and have jointed waist, shoulders, elbows and knees. They are coloured on both sides.
- The traditional Rod puppet of Bihar is known as Yampuri. These puppets are made of wood. Unlike the traditional Rod puppets of West Bengal and Orissa, these puppets are in one piece and have no joints.
- The string puppets of Orissa are known as Kundhei. Made of light wood, the Odisha puppets have no legs but wear long flowing skirts. They have more joints and are, therefore, more versatile, articulate and easy to manipulate.

Source: Forum IAS

Q.6) Which of the following pairs is/are correctly matched?

Portal Purpose

1.E-Medha Digitized Manuscripts and catalogues of Ayurveda

2.AMAR Catalogue of Indian Medical Heritage Books

3.SHAI Showcase inscriptions

Select the correct answer using the codes given below:

a) 1 and 2 only

b) 2 only

c) 1 and 3 only

d) 3 only

ANS: D

Explanation: Portals in India

- **E-Medha** (electronic Medical Heritage Accession) Portal- It is an online public access catalog for more than 12000 Indian medical heritage books through NIC's e-granthalaya platform.
- AMAR (Ayush Manuscripts Advanced Repository) Portal- This Portal is of immense value and it has digitized information on rare and hard to find Manuscripts and catalogues of Ayurveda, Yoga, Unani, Siddha, SowaRigpa in libraries or in individual collections across India or in other parts of the world.
- Ayurveda Dataset on Clinical Trial Registry of India (CTRI)- CTRI is a primary Register of Clinical Trials under the world health Organization's International Clinical Trials Registry Platform. Creation of Ayurveda Data Set in CTRI facilitates the usage of Ayurveda Terminologies to record clinical study based on Ayurveda interventions. This is a great step towards a worldwide visibility for Ayurveda based Clinical Trials.
- CCRAS-Research Management Information System- A collaborative effort of ICMR and CCRAS, this portal will be a one stop solution for Research and Development in Ayurveda based studies. Free of cost research guidance by experienced Scientists, Clinicians of Ayurveda can be availed through this portal. Research tools, reference material are also in place in this portal.
- SHAI (Showcase of Ayurveda Historical Imprints) Portals- This portal showcases inscriptions, Archeo-botanical Information, Sculptures, Philological sources and advanced Archeo Genetic studies. This portal will be of tremendous use in understanding of Indian Knowledge system with a focus on indigenous health care practices.

Source: Forum IAS

Q.7) Which of the following statements regarding National Mission on Cultural Mapping is/are correct?

- 1. It aims to create a National Register on Built Heritage and Sites.
- 2. It will be implemented by Indira Gandhi National Centre for the Arts (IGNCA).

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: About National Mission on Cultural Mapping

- National Mission on Cultural Mapping (NMCM) was set up by the Ministry of Culture in 2017.
- Its objective is to build a comprehensive database of artists, art forms and other resources from organisations.
- It is aimed at addressing the necessities of preserving the threads of rich Indian Art and Cultural Heritage, converting vast and widespread cultural canvas of India into an objective Cultural Mapping while creating a strong "Cultural Vibrancy" throughout the nation.
- It encompasses data mapping, demography building, formalizing the processes and bringing all cultural activities under one umbrella for better results.
- The work on creating a database for folk arts and mapping of heritage of villages would be carried out over five years (From 2017).
- Under this Mission, at broad-level, there are three important objectives as follows:
- National Cultural Awareness Abhiyan (HamariSanskritiHamariPahchanAbhiyan OR Our Culture Our Identity)
- Nationwide Artist Talent Hunt/Scouting Programme (SanskritikPratibhaKhojAbhiyan)
- National Cultural Workplace: Centralized Transactional Web Portal with database and demography of cultural assets and resources including all art forms and artists.

National Mission on Monuments and Antiquities aims to create a National Register on Built Heritage and Sites.

Source: Forum IAS

Q.8) Consider the following statements regarding Creative Cities Network:

- 1. It was created by UNESCO to promote cooperation among cities that have identified creativity as a strategic factor for sustainable urban development.
- 2. Srinagar is the first Indian city that has been added to this network.

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: UNESCO Network of Creative Cities (UCCN)

- United Nations Educational, Scientific and Cultural Organization (UNESCO) recently designated Srinagar as a Creative City of Craft and Folk Arts as part of UNESCO Creative Cities Network (UCCN).
- With this, the capital city of Jammu and Kashmir has entered the club of 295 creative cities network across the world. After Mumbai (City of Film), Chennai (City of Music), Hyderabad(City of Gastronomy), Varanasi(City of Music), and Jaipur (City of Crafts and Folk Arts), Srinagar is the sixth Indian city to achieve this distinction.
- The UNESCO Creative Cities Network (UCCN) was created in 2004 to promote cooperation with and among cities that have identified creativity as a strategic factor for sustainable urban development.
- The cities designated as creative cities work together towards a common objective of "placing creativity and cultural industries at the heart of their development plans at the local level and cooperating actively at the international level".
- UNESCO designates the creative cities in seven fields Craft, Folk Art, Media Arts, Film Design, Gastronomy, Literature, and Music.

Source: Forum IAS

Q.9) Which of the following statements regarding 'MedaramJathara' is not correct?

- a) It is a state festival of Telangana.
- b) It is the largest fair of India which is celebrated by the Koya tribal community.
- c) It is a festival with no Vedic or Brahmanic influence.
- d) Medaram is a remote place in the Eturnagaram Wildlife Sanctuary, a part of Dandakaranya, the largest surviving forest belt in the Mulugu district of Telangana.

ANS: B

Explanation: About MedaramJathara

- The MedaramJathara is the second-largest fair of India, after the KumbhMela, celebrated by the second-largest Tribal Community of Telangana the Koya tribe for four days.
- It is a tribal festival of honoring the goddesses celebrated in the state of Telangana,
- The Jathara begins at Medaram in Tadvai Mandal in Mulugu district.
- It commemorates the fight of a mother and daughter, Sammakka and Saralamma, with the reigning rulers against an unjust law. It is believed that after KumbhaMela, the MedaramJathara attracts the largest number of devotees in the country.
- Medaram is a remote place in the Eturnagaram Wildlife Sanctuary, a part of Dandakaranya, the largest surviving forest belt in the Mulugu.
- It is a State Festival of Govt. of Telangana and is a festival with no Vedic or brahmanic influence.

Source: Forum IAS

Q.10) Who among the following freedom fighter was called 'Prince among the Patriots' by Gandhi?

- a) Bhagat Singh
- b) Subhash Chandra Bose
- c) GopaldasAmbaidas Desai
- d) Jawaharlal Nehru

ANS: B

Explanation: About Subhash Chandra Bose

- Subhash Chandra Bose had always shown a militant streak and reacted violently to any insult of Indians by the Europeans. He passed the Indian Civil Services examination securing fourth position but resigned from the service in 1921 to join the struggle for freedom by becoming a member of the Congress. His political guru was Chittaranjan Das. He became mayor of Calcutta in 1923.
- Bose left Congress after he could not follow Gandhi's ways.
- Bose was arrested in July when he protested and tried to launch a Satyagraha against a proposed monument for Holwell in Calcutta. He was released from prison and placed under house arrest in December 1940 after a hunger strike. In January 1941, it was reported that Bose had escaped. On January 26, 1941, he reached Peshawar under the pseudo-name Ziyauddin, helped by Bhagat Ram.
- He was reported to have approached Russia for help in the Indian struggle for freedom from Britain. But, in June 1941, Russia joined the Allies in the war, which disappointed Bose. He then went to Germany.
- Bose met Hitler under the pseudo name, Orlando Mazzotta. With the help of Hitler, the 'Freedom Army' (MuktiSena) was formed which consisted of all the prisoners of war of Indian origin captured by Germany and Italy. Dresden, Germany was made the office of the Freedom Army. Bose came to be called 'Netaji' by the people of Germany. He gave the famous slogan, 'Jai Hind' from the Free India Centre, Germany.
- In early 1943, he left Germany and travelled by German and later by Japanese submarines to reach Japan and then Singapore in July of the same year. In July 1943, he got control of the Indian Independence League and the INA.
- In 1942, Gandhi called Bose the "Prince among the Patriots". When the death of Bose was reported, Gandhi said that Netaji's "patriotism is second to none. His bravery shines through all his actions. He aimed high and failed. But who has not failed." On another occasion Gandhi said, "Netaji will remain immortal for all time to come for his service to India."

Source: Forum IAS

Schemes/Programs/Institutions

Q.1) Consider the following statements about Vernacular Innovation Program (VIP):

- 1. It is launched by Atal Innovation Mission (AIM) and the NITI Aayog.
- 2. It will enable innovators and entrepreneurs in India to have access to the innovation ecosystem in 22 scheduled 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 Vernacular Innovation Program (VIP):

- Atal Innovation Mission (AIM) and the NITI Aayog have launched the Vernacular Innovation Program (VIP) to enable innovators and entrepreneurs in India to have access to the innovation ecosystem in 22 scheduled languages by the Government of India.
- AIM will be training a Vernacular Task Force (VTF) in each of the 22 scheduled languages with each task force consisting of vernacular language teachers, subject experts and technical writers.
- According to the 2011 census, only 10.4% of Indians speak English, most as their second, third, or fourth language. Only 0.02% of Indians spoke English as their first language.

Source: EPIC December 2021

Q.2) Innocenti Declaration is related to which of the following?

- a) Breastfeeding
- b) Breast cancer
- c) Ovarian cancer
- d) Postpartum hemorrhage

ANS: A

Explanation: About Innocenti Declaration:

- It was signed in August 1990 during the WHO and UNICEF policymakers' meeting on 'Breastfeeding in the 1990s: A Global Initiative' in Italy.
- The Innocenti Declaration says that all women should be enabled to practise exclusive breastfeeding and all infants should be fed exclusively on breastmilk up to 4-6 months of age 'as a global goal for optimal maternal and child health and nutrition'.

Q.3) Consider the following statements about Atmanirbhar Hastshilpkar Scheme:

- 1. It is launched by Ministry of Social Justice.
- 2. It aims is to develop the artisans of the SC and ST Community by providing them financial assistance in the form of term loans.

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 Atmanirbhar Hastshilpkar Scheme:

- North Eastern Development Finance Corporation Ltd. (NEDFi) has launched it for the grass root artisans in the North East Region.
- Its aim is to develop the artisans of the North Eastern Region by providing them financial assistance in the form of term loans for income-generating activities like setting up, expansion, modernization and other activities related to the sector.

Source: EPIC December 2021

Q.4) Pragati Scholarship Scheme which aims is to provide assistance for the advancement of Girls pursuing Technical Education, is launched by which of the following institutions/ministry?

- a) All India Council for Technical Education (AICTE)
- b) Ministry of women and child development
- c) NCERT
- d) Ministry of Skill Development

ANS: A

Explanation: About Pragati Scholarship Scheme:

- It was launched by All India Council for Technical Education (AICTE) in 2014-15.
- The Nodal Ministry is Ministry of Education.
- Its aims are to provide assistance for the advancement of Girls pursuing Technical Education.
- Under the scheme, a sum of Rs. 50,000/- per annum is disbursed to selected girl students based on certain criteria.

Q.5) Which of the following parameters are consists of International Monetary Fund (IMF) Quota Formula?

- 1. Weighted average of GDP.
- 2. Openness.
- 3. Contribution to IMF.
- 4. Green lending.
- 5. International reserves.

Select the correct answer using the code given below:

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

ANS: B

Explanation: When a country joins the IMF, it is assigned an initial quota in the same range as the quotas of existing members of broadly comparable economic size and characteristics.

- The IMF uses a quota formula to help assess a member's relative position.
- The current quota formula is a weighted average of GDP (weight of 50 percent), openness (30 percent), economic variability (15 percent), and international reserves (5 percent).
- For this purpose, GDP is measured through a blend of GDP—based on market exchange rates (weight of 60 percent) and on PPP exchange rates (40 percent).
- The formula also includes a "compression factor" that reduces the dispersion in calculated quota shares across members.

Source: IMF

Q.6) Consider the following statements regarding "The World Commission on Environmental Law (WCEL)":

- 1. It advances environmental law around the globe by providing specialized knowledge and assistance to strengthen the legal foundations of the conservation of nature and sustainable development.
- 2. WCEL functions as an integral part of the International Court of Justice (ICJ).

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 the World Commission on Environmental Law (WCEL):

It advances environmental law around the globe by providing specialized knowledge and assistance to strengthen the legal foundations of the conservation of nature and sustainable development through the conceptual advancement of environmental principles, norms, and laws, and by building the capacity of communities to benefit from the environmental rule of law.

• WCEL functions as an integral part of the IUCN Environmental Law Programme (ELP) that includes close collaboration with the Environmental Law Centre (ELC).

Source: UNFCCC

Q.7) Consider the following statements regarding the Agreement on Prohibition of Attacks against Nuclear Installations and Facilities:

- 1. It is a multilateral agreement between the nuclear weapon states.
- 2. It is entered into force in 1971.

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: Both India and Pakistan have exchanged their list of nuclear installations under the bilateral agreement.

- The list was handed over in accordance with Article-II of the Agreement on Prohibition of Attacks against Nuclear Installations and Facilities between Pakistan and India, signed on December 31, 1988, the Foreign Office (FO).
- The agreement was entered into force on January 27, 1991, provides, inter alia, that the two countries inform each other of nuclear installations and facilities to be covered under the agreement on the first of January of every calendar year.

Source: ForumIAS

Q.8) Consider the following statements regarding the "International Court of Justice (ICJ)":

- 1. The ICJ was established in 1945 by the same constitutive instrument as the Security Council, the UN Charter, to act as the principal judicial organ of the UN.
- 2. Judgments given in contentious cases between states are binding on the parties.

Which of the statements above given is/are correct?

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

ANS: C

Explanation: The UN Charter envisioned a symbiotic relationship between the Security Council and the International Court of Justice (ICJ), the principal judicial organ of the UN.

- However, the Council has scarcely made use of the ICJ as an instrument, or "tool", in the exercise of its responsibility for the maintenance of international peace and security.
- In its latest research report on the rule of law of 20 December 2016, Security Council Report examines the relationship between the Security Council and the ICJ, including options for enhancing that relationship to assist the Council in its work.
- The ICJ was established in 1945 by the same constitutive instrument as the Security Council, the UN Charter, to act as the principal judicial organ of the UN.

- The Statute of the Court is annexed to the Charter itself, meaning that all UN member states are automatically parties to the Statute.
- The ICJ is mandated to settle contentious legal disputes submitted by states against other states in accordance with international law.
- Judgments given in contentious cases between states are binding on the parties.
- The Court also gives advisory opinions to the Council, the General Assembly and other authorized bodies on legal questions referred to it by these entities.

Source: ICJ

Q.9) Consider the following statements regarding the objectives of Revitalizing Infrastructure and Systems in Education (RISE) by 2022:

- 1. Qualitatively upgrade the research and academic infrastructure in India to global best standards by 2022.
- 2. To create separate Institutes of National Importance for girls.
- 3. To cater to the requirements of the Kendriya Vidyalayas and Navodaya Vidyalayas, and medical institutions like AIIMSs in a faster time frame.

Which of the statements given above is/are correct?

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

ANS: B

Explanation: The RISE by 2022 is an attempt to translate the objectives into action plan by making available resources from the market. The objectives of RISE by 2022 are:

- Qualitatively upgrade the research and academic infrastructure in India to global best standards by 2022.
- Make India into an education hub by making available high quality research infrastructure in Indian higher educational institutions.
- To allow access of HEFA funding to institutions like Central Universities, AIIMS, IISERs and newly created Institutes of National Importance, without creating any additional burden to the students.
- To bring greater accountability and speed in execution of infrastructure projects and avoid all cost/time over-runs, moving from the block-grant mode to project-mode for all infrastructure projects.
- To cater to the requirements of the Kendriya Vidyalayas and Navodaya Vidyalayas, and medical institutions like AIIMSs in a faster time frame.

Source: ForumIAS

Q.10) Recently, Khadi and Village Industries Commission (KVIC) revived the 1000 year old Monpa Handmade Paper of which of the following state?

- a) Gujarat
- b) Tripura
- c) Arunachal Pradesh
- d) Odisha

ANS: C

Explanation: Due to the committed efforts of Khadi and Village Industries Commission (KVIC), the 1000-year old heritage art – the Monpa Handmade Paper of Arunachal Pradesh – which was driven to the extinction, has come to life once again.

- The art of making Monpa handmade paper originated over 1000 years ago.
- Gradually the art became an integral part of local custom and culture in Tawang in Arunachal Pradesh.
- Once produced in every household in Tawang, this handmade paper was a major source of livelihood for the locals. However, the handmade paper industry almost disappeared in the last 100 years; prompting KVIC to plan revival of this ancient art.

Source: ForumIAS



Science and Technology

Q.1) Consider the following statements about 'We Think Digital' Programme:

- 1. It is launched by Ministry of Social Justice and Empowerment.
- 2. It aims to help women in distress on issues related to online safety like cyberbullying, cyberstalking, financial fraud, etc.

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: A

Explanation: About 'We Think Digital' Programme:

- National Commission for Women (NCW) has launched an online resource center under the 'We Think Digital' programme.
- The programme is run collaboratively by the NCW, Facebook, and Cyber Peace Foundation.
- It aims to help women in distress on issues related to online safety like cyberbullying, cyberstalking, financial fraud, etc.
- The center will provide information on cyber security in the form of posters, awareness videos, quizzes, and self-learning modules.
- It will help women in the safe usage of technology and will also help them to be safe from online threats.

Source: EPIC December 2021

Q.2) Consider the following statements about Log4Shell:

- 1. The Log4Shell vulnerability is a flaw in one of the most widely used server software.
- 2. It is remote code execution (RCE) vulnerability.

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 Log4Shell:

- The Log4Shell vulnerability is a flaw in one of the most widely used server software.
- It is remote code execution (RCE) vulnerability, which means attackers can use it to remotely execute arbitrary code on a server and steal data.
- It is vulnerability in a logging library that is used by almost every big company in the world, including Apple Inc., Microsoft Corp., Amazon.com Inc., Google LLC, and more.

• Logging libraries allow developers to monitor their applications and catch bugs. The vulnerability has been given a 10/10, the highest severity rating for such vulnerabilities and is being touted as one of the worst cybersecurity flaws to have been discovered.

Source: EPIC December 2021

Q.3) Global Cybersecurity Index (GCI) is released by which of the following organisation?

- a) World Bank
- b) NASA
- c) International Telecommunication Union
- d) Both (a) and (b)

ANS: C

Explanation: About Global Cybersecurity Index (GCI):

- It is released by the ITU.
- It measures the commitment of countries to cybersecurity at a global level.
- India has secured the 10th rank in this index.

Source: EPIC December 2021

Q.4) Which of the following statements about Ramanujan Prize for Young Mathematicians is incorrect?

- a) Professor Neena Gupta, a mathematician at the Indian Statistical Institute in Kolkata has been awarded for year 2021.
- b) The prize is given to an eminent Mathematician younger than 30 years having conducted outstanding research in developing countries.
- c) The Prize has been awarded annually since 2005.
- d) The Prize is administered by the Abdus Salam International Centre for Theoretical Physics (ICTP) jointly with the Department of Science and Technology (DST), GOI and the International Mathematical Union (IMU).

ANS: B

Explanation: About Ramanujan Prize for Young Mathematicians:

- Professor Neena Gupta, a mathematician at the Indian Statistical Institute in Kolkata has been awarded the 2021 DST-ICTP-IMU Ramanujan Prize for Young Mathematicians from developing countries for solving the Zariski cancellation problem.
- The Prize has been awarded annually since 2005.
- The prize is given to an eminent Mathematician younger than 45 years having conducted outstanding research in developing countries.
- The Prize is administered by the Abdus Salam International Centre for Theoretical Physics (ICTP) jointly with the Department of Science and Technology (DST) Government of India and the International Mathematical Union (IMU).

Q.5) The term 'Alfvén critical surface' is related to which of the following?

- a) Moon
- b) Mars
- c) Sun
- d) Mercury

ANS: C

Explanation: About Alfvén critical surface:

- Unlike Earth, the Sun doesn't have a solid surface. But it does have a superheated atmosphere, made of solar material bound to the Sun by gravity and magnetic forces.
- However, as rising heat and pressure push that material away from the Sun, it reaches
 a point where gravity and magnetic fields are too weak to contain it. This point is known
 as the Alfvén critical surface.
- This point marks the end of the solar atmosphere and beginning of the solar wind.

About Parker Solar Probe:

- NASA's Parker Solar Probe has flown through the Sun's upper atmosphere the corona and sampled particles and magnetic fields there. Parker Solar Probe was launched in 2018.
- Its purpose was to explore the Sun.
- It is believed that the probe has crossed the Alfvén critical surface and finally entered the solar atmosphere.

Source: EPIC December 2021

Q.6) The term, 'ASIGMA', recently seen in news defined as?

- a) platform to meet real-time data transfer and messaging requirements
- b) surface-to-surface conventional quasi-ballistic missile
- c) system used for precise delivery of payloads up to 500 kgs at a predetermined location
- d) probe mission to sun

ANS: A

Explanation: About ASIGMA:

- The Indian Army has launched a contemporary messaging application named ASIGMA (Army Secure IndiGenous Messaging Application).
- It is web-based communication platform developed by Corps of Signals of the Army to meet real-time data transfer and messaging requirements of the Army.
- ASIGMA will replace the Army Wide Area Network (AWAN) messaging application.
- The app has a variety of features including multi-level security, message prioritisation and tracking and a dynamic global address.

Q.7) Consider the following statements about Stand-off Anti-Tank (SANT) Missile:

- 1. It is an indigenously designed and developed air-to-surface missile.
- 2. The missile is equipped with millimetre wave (MMW) seeker, which provides high precision strike capability from a safe distance of 10km.

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 Stand-off Anti-Tank (SANT) Missile:

- DRDO and the Indian Air Force (IAF) flight have successfully tested helicopter-launched Stand-off Anti-Tank (SANT) missile.
- It is an indigenously designed and developed air-to-surface missile.
- The missile is equipped with millimetre wave (MMW) seeker, which provides high precision strike capability from a safe distance of 10km.

Source: EPIC December 2021

Q.8) PANEX-21 is a military exercise organised by Indian army for which of the following?

- a) SAARC nations
- b) West Asia nations
- c) Island nations of IOR
- d) BIMSTEC nations

ANS: D

Explanation: About PANEX-21:

- The Indian Army is organizing an exercise named PANEX-21 for the member nations of Bay of Bengal Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) countries (Bangladesh, Bhutan, Nepal, Sri Lanka, Myanmar, Thailand and India).
- It is a multi-nation Humanitarian Assistance and Disaster Relief (HADR) exercise. Its aim is to foster joint planning and build regional cooperation for responding to natural disasters.

Q.9) Consider the following statements about Neurocysticercosis:

- 1. It is a zoonotic disease.
- 2. It is a neurologic infection caused when a human consumes meat from or comes in contact with a pig infected with tapeworm.

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 Neurocysticercosis (NCC):

- It is a zoonotic disease.
- It is a neurologic infection caused when a human consumes meat from or comes in contact with a pig infected with tapeworm.
- The eggs of the tapeworm invade the muscles of the human body to make cysts. Sometimes these cysts get into people's brains, triggering epileptic seizures, headaches, difficulty with balance and excess fluid around the brain.
- Those with NCC cannot spread the disease to other people.

Source: EPIC December 2021

Q.10) 'Earth's Black Box' which will soon record rising temperature trends, will be located in which of the following region?

- a) Sub-Saharan region
- b) Argentina
- c) Tasmania
- d) Siberian region

ANS: C

Explanation: About Earth's Black Box:

- A steel structure known as 'Earth's Black Box' will soon record rising temperature trends as well as other information related to climate change.
- It will be constructed in Tasmania, Australia and completed in early 2022.
- This location was chosen for its geopolitical and geological stability.
- The box will be filled with a mass of storage drives having internet connectivity, all powered by solar panels.
- It will collect daily metrics including average oceanic and land temperatures, atmospheric carbon dioxide concentration and biodiversity loss.

Location/IR/Geography

Q.1) Consider the following statements about Global Gateway Plan:

- 1. The plan aims to invest €300 billion (\$340 billion) globally in infrastructure, digital and climate projects by 2050.
- 2. The Plan will be implemented in a Team Europe approach that brings together funding by the EU, its Member States and European financial institutions.

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 Global Gateway Plan:

- The plan aims to invest €300 billion (\$340 billion) globally in infrastructure, digital and climate projects by 2027. This will help strengthen health, education and research systems across the world.
- The investment will be made in projects that can be delivered with high standards, good governance, and transparency while ensuring financial sustainability at the same time.
- Implementation of Gateway Plan: The Plan will be implemented in a Team Europe approach that brings together funding by the EU, its Member States and European financial institutions. The plan will also require buy-ins from international institutions and the private sector as well.
- The Plan is considered as an offshoot of the Build Back Better World (B3W) Initiative.
- The plan is being seen as a European effort to challenge China's Belt and Road Initiative which was launched in 2013 and funds infrastructure projects in the developing world.

Source: EPIC December 2021

Q.2) Minsk Agreements, recently seen in news is related to which of the following?

- a) Nagorno-Karabakh Region
- b) Gaza Strip
- c) Donbas region
- d) None

ANS: C

Explanation: About the Minsk Agreements:

 Minsk agreements were signed to stop the ongoing conflict between pro-Russian separatists and the Ukraine administration in the Donbas region of Ukraine. 2 Minsk Agreements signed.

- **Minsk I:** It was signed by Ukraine and the Russian-backed separatists. Its provisions included prisoner exchanges, deliveries of humanitarian aid and the withdrawal of heavy weapons. However, the agreement broke down with violations by both sides.
- **Minsk II:** It was signed by Russia, Ukraine, the Organization for Security and Cooperation in Europe (OSCE) and the leaders of pro-Russian separatist regions. The agreement set out a series of military and political steps that remain unimplemented.

Source: EPIC December 2021

Q.3) Recently Union Cabinet has approved the Treaty on Mutual Legal Assistance in Criminal Matters between the Government of the Republic of India and which of the following countries?

- a) Ukraine
- b) Poland
- c) Romania
- d) Belarus

ANS: B

Explanation: About Mutual Legal Assistance:

- Mutual Legal Assistance is a mechanism whereby countries cooperate with one another in order to provide and obtain formal assistance in prevention, suppression, investigation and prosecution of crime.
- This ensures that the criminals do not escape or sabotage the due process of law for want of evidence available in different countries.
- The Mutual Legal Assistance Treaties (MLATs) in criminal matters are the bilateral treaties entered between the countries for providing international cooperation and assistance.
- The Treaty aims to enhance effectiveness of both the countries in investigation and prosecution of crime, through cooperation and mutual legal assistance in criminal matters.
- Recently, the Union Cabinet has approved the Treaty on Mutual Legal Assistance in Criminal Matters between the Government of the Republic of India and the Republic of Poland.

Source: EPIC December 2021

Q.4) Consider the following statements about Killer Robots:

- 1. Killer Robots are semi autonomous weapons.
- 2. These weapons fall under Lethal Autonomous Weapons Systems (LAWS).

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: A

Explanation: About Killer Robots:

- Killer Robots are fully autonomous weapons that would be able to select and engage targets without meaningful human control.
- These weapons fall under Lethal Autonomous Weapons Systems (LAWS) which can include weapons that can use AI and other digital technologies to make decisions on the battlefield. It doesn't include drones, which are manned remotely by pilots.

Need for a Law on LAWS

- Allowing robots to make life-or-death decisions is inhumane and should be banned;
- Killer robots raise the concern of algorithmic bias. Data sets are typically flawed and tend to disfavour traditionally disadvantaged groups;
- Killer robots also present challenges for compliance with international humanitarian law's Proportionality Principle, which prohibits attacks in which expected civilian harm is excessive in comparison to anticipated military advantage;
- It could also reduce the threshold for war.

Source: EPIC December 2021

Q.5) Which of the following is world's newest republic?

- a) Barbados
- b) Nauru
- c) Spain
- d) Palau

ANS: A

Explanation: Barbados as the Newest Republic:

- Barbados has become a republic and has removed Queen Elizabeth II as the head of the State. Barbados first became an English colony in 1625.
- Barbados gained independence on November 30, 1966 with Elizabeth II as Queen of Barbados. It will continue to be one of the 54 Commonwealth nations.
- The terms "royal" and "crown" would now be dropped from all official references.

Source: EPIC December 2021

Q.6) Recently a new butterfly species named 'Chocolate-bordered Flitter' has been found in which of the following state/UTs?

- a) Andaman and Nicobar
- b) Uttarakhand
- c) Sikkim
- d) Kerala

ANS: C

Explanation: About 'Chocolate-bordered Flitter' Butterfly:

- A team of researchers have is covered a new butterfly species in Dzongu, North Sikkim and have named it 'Chocolate-bordered Flitter' (Zographetus Dzonguensis).
- It is a golden yellow butterfly. It has been named so as it has a chocolate coloured border around both wings.
- The closest relatives of this butterfly are found in Guangdong and Hainan, in southeastern China.

Source: EPIC December 2021

Q.7) Equator does not pass through which of the following African countries?

- a) Gabon
- b) Tanzania
- c) Kenya
- d) Uganda

ANS: B

Explanation: The Equator passes through 13 countries: Ecuador, Colombia, Brazil, Sao Tome & Principe, Gabon, Republic of the Congo, Democratic Republic of the Congo, Uganda, Kenya, Somalia, Maldives, Indonesia and Kiribati. At least half of these countries rank among the poorest in the world.

Source: Oxford Atlas

Q.8) Consider the following statements regarding Earthquake Waves:

- 1. The particles subjected to P-waves travel in the direction of the propagation of waves whereas particles subjected to S-waves move perpendicular to the direction of the propagation of waves.
- 2. The Love waves produce entirely horizontal motion and its amplitude diminishes with greater depth.

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: Earthquake Waves

P Waves

- The first kind of body wave is the P wave or primary wave.
- It is the fastest kind of seismic wave, and the first to arrive at a seismic station.
- P waves can move through solid rock and fluids, like water or the liquid layers of the Earth.
- It squishes and stretches the rock it moves through just like sound waves compress and expand the air as they move through it.
- P waves are also known as compressional waves, because they push and pull.
- Particles subjected to a P wave move in the same direction that the wave is moves in; it is the direction that the energy is traveling in, sometimes called the "direction of wave propagation."

S Waves

- The second type of body wave is the S wave or secondary wave, and is easy to remember because they're the second wave to arrive after an earthquake.
- An S wave is about 1.7 times slower than a P wave.

- The biggest difference is that S waves cannot move through liquids because S waves only move through solids, seismologists were led to conclude that the Earth's outer core is a liquid.
- S waves move rock particles up and down, or side-to-side, and are always perpendicular to the direction that the wave is traveling in (the direction of wave propagation).

Love Waves

- One kind of surface wave is called a Love wave, named after British mathematician A. E. H. Love, who worked out the mathematical model for this wave type in 1911.
- Love waves produce entirely horizontal motion. The amplitude is largest at the surface and diminishes with greater depth.

Source: NCERT

Q.9) Which of the following statements is/are correct regarding Exfoliation?

- 1. It is a chemical weathering of rocks in which pressure in a rock is released along parallel alignments near the surface of the bedrock.
- 2. It primarily occurs on intrusive igneous or metamorphosed rocks that are exposed at the Earth's 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: About Exfoliation:

- Exfoliation is a mechanical weathering process in which pressure in a rock is released (unloading) along parallel alignments (sheet joints) near the surface of the bedrock and layers or slabs of the rock along these alignments break off from the bedrock and move downhill by gravity.
- Exfoliation primarily occurs on intrusive igneous or metamorphosed rocks that are exposed at the Earth's surface.
- Exfoliation can occur both very slowly or very rapidly as a form of mass wasting.
- Large rocks characterized by exfoliation are commonly referred to as exfoliation domes.
- Table Rock Mountain in South Carolina and Enchanted Rock in Texas are both examples of exfoliation domes with large slabs of rock exfoliating from the bedrock.

Source: NCERT

Q.10) Consider the following statements about surface water resources:

- 1. Water flow in a river depends on size of its catchment area or river basin and rainfall within its catchment area.
- 2. Small creeks, Lagoons and water holes are examples of perennial surface water.

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

ANS: A

Explanation: About Surface water sources:

- There are four major sources of surface water. These are rivers, lakes, ponds, and tanks.
- The mean annual flow in all the river basins in India is estimated to be 1,869 cubic km.
- However, due to topographical, hydrological and other constraints, only about 690 cubic km (32 per cent) of the available surface water can be utilised.
- Water flow in a river depends on size of its catchment area or river basin and rainfall within its catchment area.
- There are three types of surface water: perennial, ephemeral, and man-made.
- Perennial, or permanent, surface water persists throughout the year and is replenished with groundwater when there is little precipitation.
- Ephemeral, or semi-permanent, surface water exists for only part of the year. Ephemeral surface water includes small creeks, lagoons, and water holes.
- Man-made surface water is found in artificial structures, such as dams and constructed wetlands.

Source: NCERT



Polity

Q.1) Consider the following statements about Statutory Bail:

- 1. Statutory Bail is an indefeasible right.
- 2. The stipulated period within which the charge sheet has to be filed begins from the day the accused is remanded for the first time.

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 Principles of Statutory Bail:

- Default or statutory bail is an indefeasible right', regardless of the nature of the crime;
- The stipulated period within which the charge sheet has to be filed begins from the day the accused is remanded for the first time.
- It includes days undergone in both police and judicial custody, but not days spent in house arrest;
- The right should be claimed by the person in custody.
- If the charge sheet is not filed within the stipulated period, but there is no application for bail under Section 167(2), then there is no automatic bail.

Source: EPIC December 2021

Q.2) Consider the following statements about Delimitation:

- 1. It refers to the process of demarcation of the boundaries of parliamentary or assembly constituencies.
- 2. The process is carried out every five years to ensure that each constituency has approximately an equal number of voters.

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 delimitation:

- Delimitation refers to the process of demarcation of the boundaries of parliamentary or assembly constituencies.
- The process is carried out every few years to ensure that each constituency has approximately an equal number of voters the underlying logic being that a set number of voters have one representative in the Lok Sabha as well as in the state assemblies across the country.

- Therefore, the exercise is carried out after every census. Given the political sensitivity of the exercise, no government central or state can carry it out, and after every census, Parliament enacts a Delimitation Act under Article 82 of the Constitution. Subsequently, a high-powered body known as the Delimitation Commission is constituted, which carries out the process of demarcation of constituency boundaries.
- The orders of this commission are legally binding and not subject to scrutiny of any court of law. Even Parliament cannot suggest modifications to an order issued by the commission.

Source: EPIC December 2021

Q.3) Consider the following statements about Republic of Barbados:

- 1. Barbados has removed Queen Elizabeth II as the head of the State in 2021.
- 2. It has not joined Commonwealth nations.

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 Barbados as the Newest Republic:

- Barbados has become a republic and has removed Queen Elizabeth II as the head of the State.
- Barbados first became an English colony in 1625.
- Barbados gained independence on November 30, 1966 with Elizabeth II as Queen of Barbados. It will continue to be one of the 54 Commonwealth nations.
- The terms "royal" and "crown" would now be dropped from all official references.

Source: EPIC December 2021

Q.4) Which of the following is/are features of Charter Act of 1813?

- 1. It abolished the trade monopoly of the company in India.
- 2. Act did not assert the sovereignty of the British Crown over the Company's territories in India.
- 3. It allowed the Christian missionaries to come to India for the purpose of enlightening the people.

Select the correct answer using the code given below:

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

ANS: C

Explanation: The features of Charter Act of 1813 were as follows:

• It abolished the trade monopoly of the company in India i.e., the Indian trade was thrown open to all British merchants.

- However, it continued the monopoly of the company over trade in tea and trade with China.
- It asserted the sovereignty of the British Crown over the Company's territories in India.
- It allowed the Christian missionaries to come to India for the purpose of enlightening the people.

Source: Laxmikanth.

Q.5) The Indian Constitution has been described as 'quasi-federal' by whom among the following?

- a) K.C. Wheare
- b) Morris Jones
- c) Ivor Jennings
- d) James Mill

ANS: A

Explanation: Indian Constitution has been variously described as 'federal in form but, unitary in spirit', 'quasi-federal' by K.C. Wheare, 'bargaining federalism' by Morris Jones, 'co-operative federalism' by Granville Austin, 'federation with a centralizing tendency' by Ivor Jennings and so on.

Source: Laxmikanth.

Q.6) Consider the following statements:

- 1. Article 1 of Indian Constitution describes India as a Union of States rather than a Federation of States.
- 2. There was no unanimity in the Constituent Assembly with regard to the name of the country.

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: Article 1 describes India, that is, Bharat as a 'Union of States' rather than a 'Federation of States'.

- This provision deals with two things: one, name of the country, and two, type of polity.
- There was no unanimity in the Constituent Assembly with regard to the name of the country. Some members suggested the traditional name (Bharat) while other advocated the modern name (India).
- Hence, the Constituent Assembly had to adopt a mix of both ('India, that is, Bharat')
- Secondly, the country is described as 'Union' although its Constitution is federal in structure.
- According to Dr B R Ambedkar, the phrase 'Union of States' has been preferred to 'Federation of States' for two reasons: one, the Indian Federation is not the result of an agreement among the states like the American Federation; and two, the states have no right to secede from the federation.

• The federation is a Union because it is indestructible. The country is an integral whole and divided into different states only for the convenience of administration.

Source: Laxmikanth.

Q.7) Which of the following is NOT part of Right to equality?

- a) Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth.
- b) Right to practice any profession or to carry on any occupation, trade or business.
- c) Abolition of titles except military and academic.
- d) Equality of opportunity in matters of public employment.

ANS: B

Explanation: Right to equality (Articles 14-18):

- Equality before law and equal protection of laws (Article 14).
- Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth (Article 15).
- Equality of opportunity in matters of public employment (Article 16).
- Abolition of un-touchability and prohibition of its practice (Article 17).
- Abolition of titles except military and academic (Article 18).

NOTE: Right to practice any profession or to carry on any occupation, trade or business is covers under Right to Freedom.

Source: Laxmikanth.

Q.8) Which of the following is/are functional items of "Eleventh Schedule"?

- 1. Animal husbandry, dairying and poultry.
- 2. Food processing industries.
- 3. Drinking water

Select the correct answer using the codes given below:

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

ANS: D

Explanation: Eleventh Schedule: It contains the following 29 functional items placed within the purview of panchayats:

- Agriculture, including agricultural extension
- Land improvement, implementation of land reforms, land consolidation and soil conservation.
- Minor irrigation, water management and watershed development
- Animal husbandry, dairying and poultry
- Fisheries
- Social forestry and farm forestry
- Minor forest produce
- Small-scale industries, including food processing industries

- Khadi, village and cottage industries
- Rural housing
- Drinking water
- Fuel and fodder
- Roads, culverts, bridges, ferries, waterways and other means of communication
- Rural electrification, including distribution of electricity.

Source: Laxmikanth

Q.9) The Special Police Establishment is often seen in news is associated with which of the following?

- a) Central Bureau of Investigation
- b) National Crime Records Bureau
- c) National Investigation Agency
- d) Central Vigilance Commission

ANS: A

Explanation: The Central Bureau of Investigation (CBI) was set up in 1963 by a resolution of the Ministry of Home Affairs.

- Later, it was transferred to the Ministry of Personnel and now it enjoys the status of an attached office.
- The Special Police Establishment (which looked into vigilance cases) setup in 1941 was also merged with the CBI.

Source: ForumIAS

Q.10) The right to information movement in India began with which of the following movement?

- a) Mazdoor Kisan Shakti Sangathan (MKSS) movement
- b) Appiko movement
- c) Chipko movement
- d) Narmada Bachao Andholan (NBA)

ANS: A

Explanation:

- The right to information movement in India began with the Mazdoor Kisan Shakti Sangathan (MKSS) movement to bring in transparency in village accounts through the demand for minimum wages in rural India.
- False entries in wage rolls were a sign of increasing corruption in the system, which encouraged MKSS to demand official information recorded in government files.

Source: ForumIAS

Economy

Q.1) Consider the following statements about Fintech:

- 1. It refers to any business that uses technology to enhance or automate financial services and processes.
- 2. Fintech technologies cover a range of services including digital delivery of banking, investment, insurance, trading and risk management services.

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 Fintech:

- Fintech is derived from Financial Services and Technology.
- Fintech refers to any business that uses technology to enhance or automate financial services and processes.
- Fintech uses technology to make the financial services more accessible to the general public.
- Fintech technologies cover a range of services including digital delivery of banking, investment, insurance, trading and risk management services.

Source: EPIC December 2021

Q.2) Consider the following statements about e-RUPI:

- 1. It is a cashless and contactless instrument for digital payment based on Unified Payment Interface (UPI) platform.
- 2. It has been developed by the National Informatics Centre.

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 e-RUPI:

- It is a cashless and contactless instrument for digital payment based on Unified Payment Interface (UPI) platform.
- It has also been developed by the National Payments Corporation of India (NPCI).
- No internet is required to undertake transactions through e-RUPI.
- The Government has universalised bank accounts with 430 million Jan Dhan accounts in the last seven years from less than 50% of Indians having bank accounts in 2014.
- PM Svanidhi enabled access to credit for small vendors across the country.

Q.3) Consider the following statements about the Periodic Labour Force Survey (PLFS):

- 1. Its objective is to estimate the key employment and unemployment indicators.
- 2. It is released by Ministry of labour.

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 the Periodic Labour Force Survey (PLFS):

- The Periodic Labour Force Survey (PLFS) was launched in April 2017 by the National Statistical Office (NSO).
- The objectives of PLFS are twofold.
 - > One is to estimate the key employment and unemployment indicators (viz. Worker Population Ratio (WPR), Labour Force Participation Rate (LFPR), Unemployment Rate (UER)) in the short time interval of three months for the urban areas only in the 'Current Weekly Status' (CWS);
 - The other purpose is to estimate employment and unemployment indicators in both 'Usual Status' and CWS in both rural and urban areas annually.

Source: EPIC December 2021

Q.4) "The section of the working population in the age group of 16-64 in the economy, currently employed or seeking employment". Which of the following is term is defined in the above statement?

- a) Unemployment Rate (UER)
- b) Working Population Ratio (WPR)
- c) Labour force participation rate (LFPR)
- d) Employment rate

ANS: C

Explanation:

- **Labour force participation rate (LFPR)** is defined as the section of the working population in the age group of 16-64 in the economy currently employed or seeking employment.
- The Worker-Population Ratio (WPR) is the proportion of the population that is working.
- The Unemployment Rate (UER) is the percentage of people in the labour force who do not get employment.

Q.5) Harsh Kumar Bhanwala Committee is related to which of the following?

- a) Banks Board Bureau
- b) Social Stock Exchange
- c) InFinity Forum
- d) Bharat Bill Pay System

ANS: B

Explanation: About Social Stock Exchange (SSE):

- There is lack of information in the public domain about for-profit social enterprises or non-profit organisations (social enterprises).
- Investors interested in contributing to social enterprises are dissuaded by lack of knowledge about these enterprises.
- The Social Stock Exchange will operate like any other stock exchange.
- Relevant securities of social enterprises (SEs) will be listed on a dedicated exchange and can be traded by public.
- It would provide a new investment avenue for socially conscious investors.
- The listed SEs will have to make appropriate financial and social impact disclosures so that investors are aware of their activities.
- SEBI has announced the setting up of Social Stock Exchange, on the basis of proposals from the working group under Ishaat Hussain, and a technical advisory committee under Harsh Kumar Bhanwala.

Source: EPIC December 2021

Q.6) Consider the following statements about New Warehousing Policy:

- 1. The Policy aims to reduce logistic cost and ease transportation by developing exclusive warehousing zones in public-private partnership (PPP) model.
- 2. The policy will be framed and implemented by the National Highways Authority of India (NHAI).

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 Warehousing:

- Warehousing can be defined as the systematic process of storing and preserving goods on a large scale in a warehouse and making them available when they are demanded, i.e. for sale, distribution and consumption.
- The e-commerce sector has been driving the demand for logistics and warehousing across global markets.
- It has emerged as the most prominent driver of Indian warehousing market volumes, along with the third party logistics sector.

About the Policy:

- The Policy aims to reduce logistic cost and ease transportation by developing exclusive warehousing zones in public-private partnership (PPP) model.
- The policy will be framed and implemented by the National Highways Authority of India (NHAI).
- The warehouses will be located outside city centres, especially around the land available with NHAI along highways and expressways.
- These warehouses will house coldstorage chains and will be able to store all kinds of cargo—wet and dry.
- As warehouses are expected to come up outside city centres, large trucks carrying the cargo will not need to enter the city to unload their goods.
- This will also help boost bulk carrying capacity and save fuel. These large vehicles can also transport more goods compared to the smaller trucks.

Source: EPIC December 2021

Q.7) A report on India's Coal Sector has been released by which of the following?

- a) NITI Aayog
- b) Ministry of Power
- c) Ministry of Coal
- d) Both (a) and (c)

ANS: A

Explanation: NITI Aayog has released a report on India's Coal Sector.

Key findings of the NITI Aayog's report:

- Coal will remain India's mainstay energy source, and the country will shape global demand this decade.
- The demand for coal will be led by usage from the electricity sector.
- Coal-based thermal power generation will grow in absolute terms for the next decade.
- However, its share in the total power generation mix of the country will decline to a 50-55% (from current 72%) in the next 10 years. This would be due to increasing share of renewable energy.

Key findings of the IEA's coal report:

- The iron and steel sector will continue to use coal, as there are not many technologies to replace it immediately.
- India's push to domestic coal mining through both Coal India and auction of coal blocks to private companies will increase as it plateaus in other parts of the world, including China.
- India is set to overtake China as the world's largest metallurgical coal importer.
- Metallurgical coal or coking coal is a grade of coal that can be used to produce goodquality coke.
- Coke is an essential fuel and reactant in the blast furnace process for primary steelmaking.

Q.8) Consider the following statements about Plant Varieties and Farmers' Rights (PPV&FR) Authority:

- 1. It grants Intellectual Property Rights to plant breeders, researchers and farmers who have developed plant varieties.
- 2. Plant Varieties and Farmers' Rights (PPV&FR) Authority is a statutory body.

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 Plant Varieties and Farmers' Rights (PPV&FR) Authority:

- Protection of Plant Varieties and Farmers' Rights (PPV&FR) Authority has been established under PPV&FR (Protection of Plant Varieties and Farmers' Rights) Act, 2001 to grant Intellectual Property Rights to plant breeders, researchers and farmers who have developed plant varieties (new and existing).
- Protection of Plant Varieties and Farmers' Rights Act was enacted in 2001 to comply with the World Trade Organization's requirements on laws to protect IPRs (Intellectual property rights) in agriculture.
- To remove the apprehensions of the farming community in India regarding the Act, the authority included a chapter making the rights of farmers' paramount over those of breeders.

Source: EPIC December 2021

Q.9) Consider the following statements about the Land Port Authority of India:

- 1. The Land Port Authority of India is a statutory body.
- 2. It functions under Ministry of Shipping.
- 3. The Land Port Authority of India is responsible for managing border infrastructure.

Which of the above given statement is/are correct?

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

ANS: C

Explanation: About the Land Port Authority of India:

- The Land Port Authority of India is a statutory body.
- It was established under Land Ports Authority of India Act, 2010.
- Under the act, it has powers to undertake joint ventures to discharge its functions.
- It functions under Ministry of Home Affairs.
- The Land Port Authority of India is responsible for managing border infrastructure.
- It creates upgrades and maintains the integrated check posts and also border infrastructure.

- The Authority works to provide secure and efficient systems of cargo and passenger movements across international borders.
- It also works to reduce the dwell time and trade transaction time and costs.
- It promotes people-to-people contact.
- The Inland Custom Ports and Kartarpur Sahib Corridor were also constructed by Land Port Authority of India.

Source: ForumIAS

Q.10) Consider the following statements about Urja Dakshata Information Tool (UDIT):

- 1. It is an initiative taken by BEE with World Resources Institute (WRI).
- 2. It is an online platform that explains the energy efficiency platform in India.

Which of the above given statement is/are correct?

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

ANS: C

Explanation: About Urja Dakshata Information Tool (UDIT):

- Urja Dakshata Information Tool (UDIT) (www.udit.beeindia.gov.in), a first ever initiative taken by BEE with World Resources Institute (WRI), to facilitate a database on energy efficiency was launched.
- UDIT is a user-friendly platform that explains the energy efficiency landscape of India across industry, appliances, building, transport, municipal and agriculture sectors.
- UDIT will also showcase the capacity building and new initiatives taken up by the Government across the sectors in the increase energy efficiency domain.

Source: ForumIAS

Environment

Q.1) Which of the following has released a Resource Book on Springshed Management in the Indian Himalayan Region (IHR)?

- a) Ministry of Environment, Forest and Climate Change
- b) UNEP
- c) National Disaster Management Authority
- d) NITI Aayog

ANS: D

Explanation: NITI Aayog has released a Resource Book on Springshed Management in the Indian Himalayan Region (IHR). This Resource Book is a summarised guiding document on best practices in Springshed management in the IHR.

About Springs:

- Springs are groundwater discharge points in the mountains where the water-bearing layers (aquifer) intersect with the ground surface and water seeps out of rock pores, fissures, fractures, or depressions.
- **Importance of Springs:** Springs are the primary water source for millions of people in the mid-hills of the Hindu Kush Himalayas (HKH) and supply over 90% of water needs for domestic uses.

Recommendations by the Report

- Formation of National Springs Mission (NSM): A National Mission will facilitate improved coordination, efficient execution and scaling up of springshed management initiatives in India
- **Create a national digital database on spring**-related data collected by various agencies. This will improve ease of access and academic research.
- Create support for existing, state and national-level science-policy-practice consortiums. This will facilitate experience sharing, complementary knowledge generation, transfer, and capacity building of all stakeholders.

Source: EPIC December 2021

Q.2) Consider the following statements about Project RE-HAB:

- 1. It is launched by Khadi and Village Industries Commission (KVIC).
- 2. The project is a cost-effective way of reducing human-wild conflicts without causing any harm to the animals.

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 Project RE-HAB:

• Project RE-HAB is a sub-mission of KVIC's National Honey Mission.

- Under this Project, "Bee-fences" are created by setting up bee boxes in the passageways of elephants to block their entrance to human territories.
- The boxes are connected with a string so that when elephants attempt to pass through, a tug or pull causes the bees to swarm the elephant herds and dissuade them from progressing further.

Project Launch

• Project RE-HAB was earlier launched in Kodagu district of Karnataka in March 2021. In just 6 months, this project has reduced elephant attacks by over 70%.

Significance of the Project

- The project is a cost-effective way of reducing human-wild conflicts without causing any harm to the animals.
- It is scientifically recorded that elephants are annoyed by the honey bees.
- Elephants also fear that the bee swarms can bite their sensitive inner side of the trunk and eyes.
- Hence, this project will force elephants to return and prevent Elephant Human Conflicts.

Source: EPIC December 2021

Q.3) Which of the statements given below is/are correct?

- 1. DALY is a measure of overall disease burden, expressed as the number of years lost due to ill-health, disability or early death.
- 2. Fine particulate air pollution from plastic production does not impact disability-adjusted life years (DALY).

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: A study conducted by ETH Zurich (a public research university in Switzerland) has shown that the impact of plastic on climate and health is greater than previously thought due to the increased use of coal.

Key findings of report

- (1) Plastic production accounted for the 96% of the Particulate matter health footprint. Health Footprint is the amount of health resources that are consumed by a particular process or substance:
- (2) Global carbon footprint of plastic has doubled since 1995, accounting for 4.5% of global greenhouse gas emissions;
- (3) Developing countries like China, Indonesia and South Africa, were among the major producers of plastic and thus suffered from 75 percent of particulate matter-related health impacts;
- (4) Study also showed that about half of this emission comes from coal used during the production of plastic;

(5) Fine particulate air pollution from plastic production caused approximately 2.2 million disability-adjusted life years (DALY). DALY is a measure of overall disease burden, expressed as the number of years lost due to ill-health, disability or early death.

Impact of plastic production on health

- Coal burned during plastic production produces particulate matter that accumulates in the air.
- Particulate pollution is a mixture of soot, smoke, and tiny particles formed in the atmosphere from sulfur dioxide (SO2), nitrogen oxides (NOx) and ammonia (NH3).
- It is highly harmful and can cause asthma, bronchitis and cardiovascular disease.

Source: EPIC December 2021

Q.4) Consider the following statements about pollution:

- 1. Problem of indoor pollution is limited to the NCR and winter alone.
- 2. Biomass burning by households for cooking and heating needs in winters is responsible for up to 40% air pollution in the NCR.

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: Biomass burning as a major polluter

- Biomass burning by households for cooking and heating needs in winters is responsible for up to 40% air pollution in the NCR.
- Problem of indoor pollution is not limited to the NCR and winter alone.
- Various databases show that indoor pollution has a 27 to 49% share in India's total annual PM2.5 emissions.
- Analysis by think tanks like TERI shows that the household emissions are the largest contributor to PM 2.5.

Impact on health

According to Global Burden of Disease Study 2019, biomass burning kills around 6 Lakh Indians prematurely every year, by far the most for a country. Household air pollution causes 36% of all deaths due to air pollution.

Q.5) Consider the following statements about Global Methane Initiative:

- 1. It is an international public-private initiative launched in 2004.
- 2. India is its one of the newest member 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: A

Explanation: About Global Methane Initiative:

- It is an international public-private initiative launched in 2004.
- Its aim is to achieve a global reduction in anthropogenic methane emission through a partnership among developed and developing countries.
- It is a voluntary Government and an informal international partnership having members from 45 countries including the United States and Canada.
- India has been one of the members since its inception. India has taken up Vice-Chairmanship for the first time in the Steering Leadership along with the USA.

Source: EPIC December 2021

Q.6) Consider the following statements about Indian Desert Cat:

- 1. It has been spotted for the first time in Gujarat's Kutch.
- 2. It has been classified as Vulnerable under the IUCN Red List.

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 Indian Desert Cat:

- An Indian desert cat has been spotted for the first time in Madhya Pradesh's Panna Tiger Reserve (PTR).
- Indian Desert Cat is also known as the Asian steppe wildcat and Asiatic Wildcat.
- The cat is considered as a subspecies of African Wildcat.
- It is mostly found in Kazakhstan, Western India (Thar Desert), China and Mongolia.
- The cat has also been found in Nauradehi Wildlife Sanctuary in Madhya Pradesh and Mirzapur forests.
- It has been classified as Least Concern under the IUCN Red List.

Q.7) Recently, researchers have unearthed two well-preserved dinosaur skulls of Issi saaneq Species from which of the following place?

- a) Greenland
- b) Iceland
- c) Nigeria
- d) Gujarat's Kutch

ANS: A

Explanation: About Issi saaneq Species of Dinosaurs:

- Researchers have unearthed two well-preserved dinosaur skulls during an excavation in East Greenland.
- They have named the species as Issi saaneq.
- It lived about 214 million years ago in what is now Greenland.
- It was a medium-sized, long-necked herbivore and a predecessor of the sauropods.
- The name means means "coldbone" in Greenland's Inuit language.
- This is the first evidence of a distinct Greenlandic dinosaur species.

Source: EPIC December 2021

Q.8) Consider the following statements about Physella acuta:

- 1. It is a Highly Invasive Species.
- 2. It is a Fish species.
- 3. It is native to North America, but now found in all continents except Antarctica.

Which of the statements given above is/are correct?

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

ANS: C

Explanation: About Physella acuta:

- It is a snail species.
- Although native to North America, it is now found in all continents except Antarctica.
- It is also known as acute bladder snail.
- It has been found in Edappally canal in Kochi, Kerala.
- This snail species is a Highly Invasive Species.
- It is believed to have reached Kerala through the aquarium trade, a major vector for invasive species.

Q.9) Consider the following statements about Indian flapshell turtle:

- 1. It is brackish water turtle species found in South Asia.
- 2. They are known to be omnivorous.

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 Indian flapshell turtle (Lissemys punctata):

- It is a freshwater species of turtle found in South Asia.
- They are found in Pakistan, India, Sri Lanka, Nepal, Bangladesh (Indus and Ganges drainages), and Myanmar (Irrawaddy and Salween Rivers).
- They live in rivers, streams, marshes, ponds, lakes and irrigation canals, and tanks.
- They are also well adapted to drought conditions.
- They are known to be omnivorous. Their IUCN Status is Vulnerable.

Source: EPIC December 2021

Q.10) Consider the following statements about Wildlife Crime Control Bureau (WCCB):

- 1. It has been created under the Wild Life (Protection) Amendment Act, 2006.
- 2. It assists the Customs authorities in inspection of the consignments of flora & fauna as per the provisions of the Wild Life Protection Act, CITES and EXIM Policy governing such an item.

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 Wildlife Crime Control Bureau (WCCB):

- Between 2018 and 2020, about 2,054 cases were registered for killing or illegal trafficking of wild animals in India.
- The cases have been registered by the Wildlife Crime Control Bureau (WCCB).
- It is a statutory body established by the Government of India under MoEFCC to combat organized wildlife crime in the country.
- It assists the Customs authorities in inspection of the consignments of flora & fauna as per the provisions of the Wild Life Protection Act, CITES and EXIM Policy governing such an item.
- It has been created under the Wild Life (Protection) Amendment Act, 2006.