

ForumIAS

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Prelims Marathon

August, 2021

*HISTORY
ECONOMICS
POLITY
SCIENCE AND TECHNOLOGY
GEOGRAPHY AND ENVIRONMENT*

Science

Q.1) Consider the following statements regarding the Aerosols:

1. Their scattering of sunlight can reduce visibility (haze) and redden sunrises and sunsets.
2. Its concentrations in the atmosphere rise and fall with climate.

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: Aerosols are minute particles suspended in the atmosphere. When these particles are sufficiently large, we notice their presence as they scatter and absorb sunlight.

- Their scattering of sunlight can reduce visibility (haze) and redden sunrises and sunsets. Aerosols interact both directly and indirectly with the Earth's radiation budget and climate.
- As a direct effect, the aerosols scatter sunlight directly back into space.
- As an indirect effect, aerosols in the lower atmosphere can modify the size of cloud particles, changing how the clouds reflect and absorb sunlight, thereby affecting the Earth's energy budget
- Aerosols come from both natural and human sources—and sometimes both at once. Dust, for example, is scoured from deserts, the dried-out edges of rivers, dry lakebeds, and more.
- Its concentrations in the atmosphere rise and fall with climate; in cold, dry, periods in the planet's history like the last ice age, more dust filled the atmosphere than during warmer stretches of Earth's history.

Source: NCERT

Q.2) Consider the following statements regarding the nucleotide of DNA:

1. It is an organic molecule that is the building block of DNA and RNA.
2. It is made up of phosphate group and a nitrogenous base with no carbon sugar.

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 nucleotide is an organic molecule that is the building block of DNA and RNA.

- They also have functions related to cell signaling, metabolism, and enzyme reactions.
- A nucleotide is made up of three parts: a phosphate group, a 5-carbon sugar, and a nitrogenous base.
- The four nitrogenous bases in DNA are adenine, cytosine, guanine, and thymine.
- RNA contains uracil, instead of thymine.
- A nucleotide within a chain makes up the genetic material of all known living things.

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- They also serve a number of functions outside of genetic information storage, as messengers and energy moving molecules.

Source: NCERT

Q.3) Hydro-dynamic trapping, Solubility trapping and Mineral trapping is related to which of the following?

- a) Carbon sequestration
- b) Coal mining
- c) Off shore drilling
- d) Mineral exploration measurements

ANS: A

Explanation: In recent years, fundamental research has focused increasingly on the short and long term effects of CO₂ injection into reservoirs to assess the feasibility of CO₂ storage on a commercial scale.

- Sequestration processes involve different trapping mechanisms according to the hydrodynamic, physical and chemical conditions in the formation.
- It is common to divide these mechanisms into four different categories: hydrodynamic trapping, residual trapping, solubility trapping, and mineral trapping.

Source: Indian Express

Q.4) Consider the following statements regarding the composite materials:

1. It is better than traditional materials is because they improve the properties of their base materials and are applicable in many situations.
2. They are used in the development of Agni missile and Light Combat Aircraft - Tejas.

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: A composite material is a combination of two materials with different physical and chemical properties.

- When they are combined they create a material which is specialized to do a certain job, for instance to become stronger, lighter or resistant to electricity.
- They can also improve strength and stiffness.
- The reason for their use over traditional materials is because they improve the properties of their base materials and are applicable in many situations.
- Use of composite materials in indigenously developed aircraft (Tejas), missiles (Agni) and in defense and civilian sectors is poised for big growth, where Indian companies are set to get into manufacturing mode.

Source: The Hindu

Q.5) Consider the following statements regarding the Neutrino:

1. The neutrino is a tiny elementary particle which is not part of the atom.
2. Neutrino has a very tiny mass and with no electrical charge.

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: Proton, neutron, and electron are tiny particles that make up atoms.

- The neutrino is also a tiny elementary particle, but it is not part of the atom. Such particles are also found to exist in nature.
- Neutrino has a very tiny mass and no charge. It interacts very weakly with other matter particles.
- So weakly that every second trillions of neutrinos fall on us and pass through our bodies unnoticed.
- Neutrinos come from the sun (solar neutrinos) and other stars, cosmic rays that come from beyond the solar system, and from the Big Bang from which our Universe originated.
- They can also be produced in the lab.

Source: The Hindu

Q.6) The “Founder effect” is related to which of the following?

- a) Genetic drift
- b) Glacial lakes
- c) Geographical discoveries
- d) Chemical bonding

ANS: A

Explanation: Genetic drift can have major effects when a population is sharply reduced in size by a natural disaster (bottleneck effect) or when a small group splits off from the main population to found a colony (founder effect).

- The founder effect is another extreme example of drift, one that occurs when a small group of individuals breaks off from a larger population to establish a colony.
- The new colony is isolated from the original population, and the founding individuals may not represent the full genetic diversity of the original population.
- That is, alleles in the founding population may be present at different frequencies than in the original population, and some alleles may be missing altogether.
- The founder effect is similar in concept to the bottleneck effect, but it occurs via a different mechanism (colonization rather than catastrophe).
- Genetic studies done on the people of the Lakshwadeep archipelago by a team, led by K. Thangaraj at CSIR-Centre for Cellular and Molecular Biology (CCMB), for the first time have shown that a majority of human ancestry in Lakshadweep is largely derived from South Asia with minor influences from East and West Eurasia.
- And, there was no evidence of early human migration through the Lakshadweep islands.
- “We found a strong founder effect for both paternal and maternal lineages — a sign that the island population had limited genetic mixing”, said by scientists.

Source: The Hindu

Q.7) Which year is designated as the International Year of the Periodic Table of the Chemical Elements?

- a) 2018
- b) 2019
- c) 2020
- d) 2021

ANS: B

Explanation: The United Nations announced 2019 as the International Year of the Periodic Table of the Chemical Elements to highlight its first publication in 1869.

- The periodic table as we know it today was first designed by the Russian scientist Dmitri Ivanovich Mendeleev.
- This year marks the 150th anniversary of the first publication of the periodic table by Mendeleev.
- Since its creation, the periodic table has been at the centre of a lot of vivid debates and is now considered as “one of the most important and influential achievements in modern science reflecting the essence not only of chemistry, but also of physics, biology and other disciplines.”
- Mendeleev’s genius lies in the acknowledgement that at the time, not all the elements were known yet, so he left gaps in the table for undiscovered elements.
- At that time, only 63 elements had been identified. Still the properties of five other elements (the gaps brilliantly added to complete the table) could already been determined using the table.

Source: NCERT and Indian Express

Q.8) Recently Scientists discovered the world’s largest known subterranean fish in a cave in which of the following state?

- a) Andhra Pradesh
- b) Kerala
- c) Meghalaya
- d) Tripura

ANS: C

Explanation: Scientists have discovered the world’s largest known subterranean fish in a cave in Meghalaya.

- It is nearly five times the mean length (8.5 cm) for all known subterranean fish to date.
- It is closely related to a surface-dwelling fish known as the golden mahseer.
- The cavefish lack pigmentation and their eyes are poorly developed or even non-existent.

Source: The Hindu

Q.9) The maximum residue limit (MRL) is sometimes seen in news is related to which of the following?

- a) Pesticides level
- b) Pollution level
- c) Water toxicity
- d) Crude exploration

ANS: A

Explanation: The traces pesticides leave in treated products or those left by veterinary drugs in animals are called "residues".

- The traces pesticides leave in treated products or those left by veterinary drugs in animals are called "residues".
- A study of fruits and vegetables grown in the Nilgiris has found that some of the produce might be harbouring high levels of pesticide, beyond what is considered advisable. This was mainly true of potato and carrot.

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- While the Food Safety and Standards Authority of India (FSSAI) prescribes a maximum residual level (MRL) for some of the organophosphate pesticides used, it does not prescribe it for some other pesticides used in the cultivation of fruit and vegetables.

Source: NCERT

Q.10) The terms “Rani Rashmoni, Rani Abbakka, Rani Avanti Bai, Rani Durgavati and Rani Gaidinliu” often seen in news is related to which of the following?

- a) Deep sea research vessels
- b) Patrolling vessels
- c) Corvettes
- d) Diesel submarines

ANS: B

Explanation: Rani Rashmoni is a fast patrol vessel, indigenously built by Hindustan Shipyard.

- It is built under the Fast Patrol Vessel (FPV) project of Indian Coast Guard.
- Under the first phase of the project, 5 FPV's has been built.
- The first four such ships are ICGS Rani Abbakka, ICGS Rani Avanti Bai, ICGS Rani Durgavati and ICGS Rani Gaidinliu.

Source: The Hindu

Science

Q.1) Which of the following is/are examples of van der Waals materials?

1. Graphite
2. Antimony
3. Selenium

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: Until six years ago, such materials did not exist but today, researchers believe that they hold the key to 'post-silicon' electronics.

- VdW materials are made of piles of ultra-thin layers that are held together by weak van der Waals bonds, which arise when atoms are in close proximity.
- The success of graphene — a well known vdW material — stimulated scientists to look for other 2D crystals, where layers can be changed, added or removed in order to introduce new physical properties such as magnetism.
- Controlling magnetism, as is typical of such materials, could replace the current hard drive assemblies in computers and even become the key to quantum computing.
- Other examples of natural elemental van der Waals materials, although much less abundant than graphite, are native bismuth, antimony, selenium, and tellurium.

Source: The Hindu and Nature publications

Q.2) The term "Quadrantids" often seen in news is related to which of the following?

- a) Meteor showers
- b) Asteroid belt
- c) Saturn Satellites
- d) Earth like planets

ANS: A

Explanation: The Quadrantids, which peak during early-January each year, are considered to be one of the best annual meteor showers.

- Most meteor showers have a two day peak, which makes catching sight of these other meteors much more possible.
- The Quadrantids peak, on the other hand, is much shorter—only a few hours. (The reason the peak is so short is due to the shower's thin stream of particles and the fact that the Earth crosses the stream at a perpendicular angle.)
- During its peak, 60 to as many as 200 Quadrantid meteors can be seen per hour under perfect conditions.
- Quadrantids are also known for their bright fireball meteors. Fireballs are larger explosions of light and color that can persist longer than an average meteor streak.
- This is due to the fact that fireballs originate from larger particles of material. Fireballs are also brighter, with magnitudes brighter than -3.

Source: The Hindu

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Q.3) The term “Ingenuity of NASA” often seen in news is related to which of the following?

- a) Venus mission
- b) Mars mission
- c) Jupiter mission
- d) Moon mission

ANS: B

Explanation: NASA is hoping to make history early on Monday when the Ingenuity Mars Helicopter attempts the first powered, controlled flight on another planet.

- The space agency had originally planned the flight for April 11 but postponed it over a software issue that was identified during a planned high-speed test of the aircraft's rotors.
- The issue has since been resolved, and the 1.8 kilograms drone could achieve its feat by around 7.30 GMT.

Source: The Hindu

Q.4) The “Skai” sometimes seen in news is related to which of the following?

- a) Solar powered flight
- b) Oxygen powered flight
- c) Hydrogen powered flying car
- d) Helium powered flying drone

ANS: C

Explanation: Massachusetts startup Alaka'i has designed a flying car - Skai - that the company touts as the “first air mobility vehicle powered by hydrogen fuel cells”.

- The hydrogen fuel cells give the five-passenger Skai a maximum range of 400 miles (640 km) with a flight time of up to four hours.
- Like a drone, the Skai takes off and lands vertically. It's one of many similar electric flying crafts in production, including prototypes from Boeing and Airbus that made successful test flights this year, according to Vertical Flight Society, an industry group.
- Most are powered by batteries, which can add a lot of weight. The Skai instead uses very light hydrogen fuel cells to run its rotors, giving it a range of 644 km and the capacity to carry 454 kilograms in people or freight, the company says.

Source: ForumIAS factly

Q.5) Neanderthal Fossil is often seen in news is mostly found in which of the following continent?

- a) North America
- b) South America
- c) Australia
- d) Europe

ANS: D

Explanation: Neanderthal fossils from a cave in Belgium believed to belong to the last survivors of their species ever discovered in Europe are thousands of years older than once thought, a new study said.

- Previous radiocarbon dating of the remains from the Spy Cave yielded ages as recent as approximately 24,000 years ago, but the new testing pushes the clock back to between 44,200 to 40,600 years ago.

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- The research appeared in the Proceedings of the National Academy of Sciences and was carried out by a team from Belgium, Britain and Germany.

Source: The Hindu

Q.6) The term “Dickinsonia” is often seen in news is related to which of the following?

- a) Humanoid (robot) Artist
- b) Earliest known living animal
- c) Artificial Intelligence (AI) based calculator
- d) Space travelling robot

ANS: B

Explanation: Researchers have discovered three fossils of the earliest known living animal — the 550-million-year-old ‘Dickinsonia’ — on the roof of the Bhimbetka Rock Shelters, about 40 km from Bhopal.

- One can identify the fossils from the white leaf-like patches with a central vertebra (central midrib) and connecting veins.
- While one fossil is 17 inches long, the other two are much smaller.
- The new discoveries, published in a journal, Gondwana Research, can be seen right at the beginning of the ‘Auditorium Cave’, the first of such caves at Bhimbetka, a UNESCO heritage site, located about 3.5 metres above the ground.

Source: The Hindu

Q.7) The “Washi paper” is sometimes seen in news is famous in which of the following country?

- a) Philippines
- b) Indonesia
- c) Myanmar
- d) Japan

ANS: D

Explanation: Once an indispensable part of daily life in Japan, ultra-thin washi paper was used for everything from writing and painting to lampshades, umbrellas, and sliding doors, but demand has plunged as lifestyles have become more westernized.

- Despite its 1,300-year history and UNESCO Intangible Cultural Heritage status, washi paper is struggling to attract consumers and the market value has dropped by more than 50% in the past two decades.
- The world’s thinnest paper has helped save historical documents at major museums and libraries — including the Louvre in Paris, the British Museum and Washington’s Library of Congress — from decay.
- The traditional hand-made paper is manufactured from plants called kozo, or mulberry, which has fibres that are much longer than materials used for paper in the west such as wood and cotton.

Source: The Hindu

Q.8) Recently, a mars space probe named “Hope” sent pictures of mars planet was launched by which of the following country?

- a) Malaysia
- b) Japan
- c) United Arab Emirates
- d) South Africa

ANS: C

Explanation: The UAE's "Hope" probe sent back its first image of Mars, the national space agency said on Sunday, days after the spacecraft successfully entered the Red Planet's orbit.

- The picture "captured the largest volcano in the solar system, Olympus Mons, emerging into the early morning sunlight".
- The image was taken from an altitude of 24,700 kilometres (15,300 miles) above the Martian surface on Wednesday, a day after the probe entered Mars' orbit.

Source: The Hindu

Q.9) The Experimental Advanced Superconducting Tokamak (EAST) nuclear fusion reactor is recently in news was developed by which country?

- a) Russia
- b) Australia
- c) Britain
- d) China

ANS: D

Explanation: Scientists around the world have been trying for decades to recreate the unfathomable power of the sun here on Earth, and a team in China has managed to best our local star. Not for very long, though.

- The team operating the Experimental Advanced Superconducting Tokamak (EAST) managed to heat the reactor's internal plasma to 100 million degrees Celsius (212 million Fahrenheit).
- That's six times hotter than the sun, but it doesn't have any net power generation. In stars, hydrogen fuses into helium, and eventually into heavier elements.
- The fusion process releases large amounts of energy, and the byproducts of fusion aren't radioactive.
- The only nuclear power we've managed to utilize on Earth is fission, which requires dangerous radioactive materials and comes with the risk of a reactor meltdown.

Source: The Hindu

Q.10) The "Mission Shakti" is recently launched by Government is related to which of the following?

- a) Promote Women welfare
- b) Promote girl child rights
- c) Promote religious rights
- d) To contain space debris

ANS: D

Explanation: Mission Shakti which was launched recently was done in a low orbit of less than 300 kilometres and at a particular angle to ensure that minimal debris was disbursed above into space to avoid damage to other satellites or the International Space Station (ISS).

Source: The Hindu

Science

Q.1) The Joint Enterprise Defense Infrastructure, or JEDI, project was associated with which of the following country?

- a) China
- b) France
- c) USA
- d) Britain

ANS: C

Explanation: In October 2019, the U.S. Defense Department (DoD) awarded a controversial contract to Microsoft.

- As part of the deal, the Windows-maker would set up large cloud-computing systems for the Pentagon.
- The Joint Enterprise Defense Infrastructure, or JEDI, project was worth about \$10 billion to Microsoft over a decade.
- The deal was a huge setback for another top bidder - - Amazon Inc - - which disputed the award saying that the Pentagon unfairly evaluated its cloud service and Microsoft's proposals.
- It also noted that the former U.S. president Donald Trump's criticism of Amazon and its founder Jeff Bezos had influenced Pentagon's decision.
- Trump had earlier criticised Bezos for coverage of his administration in the Washington Post, which is owned by Bezos.
- The award was fraught with conflict-of-interest allegations and legal challenges for the Pentagon and Microsoft.
- Some Pentagon officials raised concerns over contracting with just one single-source vendor for a military unit.
- In January, the Pentagon said in a statement that "regardless of the JEDI Cloud litigation outcome, the Department [DoD] continues to have an urgent, unmet requirement for enterprise-wide, commercial cloud service."

Source: The Hindu

Q.2) Consider the following statements regarding the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES):

1. It is an independent intergovernmental body.
2. It is not a United Nations 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: The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is an independent intergovernmental body established by States to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development.

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- It was established in Panama City, on 21 April 2012 by 94 Governments. It is not a United Nations body.
- However, at the request of the IPBES Plenary and with the authorization of the UNEP Governing Council in 2013, the United Nations Environment Programme (UNEP) provides secretariat services to IPBES.

Source: <https://ipbes.net/about>

Q.3) “Truenat” is often seen in news is related to which of the following?

- a) CoVID – 19 testing kit
- b) Tuberculosis (TB) testing kit
- c) Malaria testing kit
- d) Japan encephalitis testing kit

ANS: B

Explanation: In a Rapid Communication published on January 14 – 2020, the World Health Organization (WHO) had mentioned that the India-made Truenat MTB, a molecular diagnostic test to diagnose pulmonary and extrapulmonary TB and rifampicin-resistant TB, has high diagnostic accuracy.

- Truenat MTB has “high diagnostic accuracy as initial test to diagnose TB and to sequentially detect rifampicin resistance”, says the WHO Communication.
- Truenat MTB will be used as an initial test to diagnose TB thus replacing sputum smear microscopy.
- Truenat is developed by the Goa-based Molbio Diagnostics.
- The company was provided with technical assistance and resources by the Foundation for Innovative New Diagnostics (FIND) to help commercialize Truenat. Indian Council of Medical Research (ICMR) had assessed and validated the diagnostic tool.

Source: Indian Express

Q.4) The Earth’s oldest known mineral is found in which of the following Continent?

- a) Antarctica
- b) North America
- c) Africa
- d) Australia

ANS: D

Explanation: A meteorite that crashed into rural southeastern Australia in a fireball in 1969 contained the oldest material ever found on Earth, stardust that predated the formation of our solar system by billions of years, scientists said on January 13 – 2020.

- The oldest of 40 tiny dust grains trapped inside the meteorite fragments retrieved around the town of Murchison in Victoria state dated from about 7 billion years ago, about 2.5 billion years before the sun, Earth and rest of our solar system formed, the researchers said.
- Scientists previously had found a pre-solar grain in the Murchison meteorite that was about 5.5 billion years old, until now the oldest-known solid material on Earth.
- The oldest-known minerals that formed on Earth are found in rock from Australia's Jack Hills that formed 4.4 billion years ago, 100 million years after the planet formed.

Source: The Hindu

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Q.5) According to the World Health Organization (WHO), which of the following disease (s) is/are considered as Neglected Tropical Disease (NTD)?

1. Buruli Ulcer
2. Dengue fever
3. AIDS

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: Neglected tropical diseases (NTDs) – a diverse group of communicable diseases that prevail in tropical and subtropical conditions in 149 countries – affect more than one billion people and cost developing economies billions of dollars every year.

Populations living in poverty, without adequate sanitation and in close contact with infectious vectors and domestic animals and livestock are those worst affected.

As of 2017, the World Health Organization categorizes the following communicable diseases as neglected tropical diseases (NTDs):

- Buruli Ulcer
- Chagas Disease
- Chromoblastomycosis
- Cysticercosis
- Dengue Fever
- Dracunculiasis (Guinea Worm Disease)
- Echinococcosis
- Fascioliasis
- Human African Trypanosomiasis (African Sleeping Sickness)
- Leishmaniasis
- Leprosy (Hansen’s Disease)
- Lymphatic Filariasis
- Mycetoma
- Onchocerciasis
- Rabies
- Schistosomiasis
- Soil-transmitted Helminths (STH) (Ascaris, Hookworm, and Whipworm)
- Trachoma
- Yaws

Source: WHO

Q.6) The term “Apophis” is often seen in news is related to which of the following?

- a) Asteroid
- b) Invasive species
- c) Micro plastic
- d) Traditional farming method

ANS: A

Explanation: NASA has given Earth the all clear for the next century from a particularly menacing asteroid.

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- The space agency announced this week that new telescope observations have ruled out any chance of Apophis smacking Earth in 2068.
- That's the same 1,100-foot (340-meter) space rock that was supposed to come frighteningly close in 2029 and again in 2036.
- NASA ruled out any chance of a strike during those two close approaches a while ago. But a potential 2068 collision still loomed.
- First detected in 2004, Apophis is now officially off NASA's asteroid "risk list."

Source: The Hindu

Q.7) Consider the following statements regarding the benefits of Gene Editing:

1. It can be used to treat many human diseases & genetic disorders like HIV/AIDS, hemophilia.
2. It can slow down the spread of diseases by eliminating its means of transmission.
3. It can be used to bring to life extinct species.

Which of the statements given above is/are correct?

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

ANS: D

Explanation: It is a type of genetic engineering in which DNA is inserted, deleted or replaced in the genome of an organism using artificially engineered nucleases, or "molecular scissors".

- Human genome editing can be used to treat many human diseases & genetic disorders like HIV/AIDS, hemophilia etc.
- It could substantially bolster disease resistance in humans & increase life span.
- It could form the basis of highly efficient & cost effective next generation antibiotics (based on bacteriophage viruses).
- Gene editing can be used to protect endangered species or bring to life extinct species.
- It can be used to grow healthier food (via fortification) and increasing harvest.
- It has the potential to slow down the spread of diseases by eliminating its means of transmission. E.g. Gene editing can be used to introduce sterile mosquitoes into the environment.

Source: NCERT

Q.8) Consider the following statements regarding the "benzoic acid":

1. It exists as a crystalline, colorless solid under normal conditions.
2. It is used in the manufacture of dyes and in insect repellants.

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: Benzoic acid is an organic compound which is described by the chemical formula C_6H_5COOH .

- It consists of a carboxyl group attached to a benzene ring. Therefore, benzoic acid is said to be an aromatic carboxylic acid.

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- This compound exists as a crystalline, colorless solid under normal conditions.
- It is white and belongs to the family of carboxylic acid.
- The term 'benzoate' refers to the esters and salts of C_6H_5COOH .
- The commercial production of benzoic acid is done via the partial oxidation of toluene with oxygen, catalyzed by manganese or cobalt naphthenates.

Some important uses of C_6H_5COOH are listed below.

- The production of phenol involves the use of benzoic acid.
- This compound is used in ointments that prevent or treat fungal skin diseases.
- C_6H_5COOH is used as a preservative in the food industry.
- Benzoic acid is an ingredient in many cosmetic products, such as lipsticks.
- It is also a precursor to benzoyl chloride.
- One of the components of toothpaste, mouthwash, and face-wash creams is C_6H_5
- This compound is also used in the manufacture of dyes and in insect repellants.

Source: NCERT

Q.9) The term "Keratinocytes" is related to which of the following?

- a) Primary skin cell
- b) Liver cells
- c) Muscle cells
- d) Sex cells

ANS: A

Explanation: Keratinocytes are the primary type of cell found in the epidermis, the outermost layer of the skin.

- In humans they constitute 90% of epidermal skin cells.
- Basal cells in the basal layer (stratum basale) of the skin are sometimes referred to as basal keratinocytes.

Source: The Hindu

Q.10) The term "Saggitarius *A" is often seen in news is related to which of the following?

- a) Meteorite
- b) Black hole
- c) Goldilocks zone
- d) Asteroids

ANS: B

Explanation: The center of our Milky Way Galaxy is anchored by a black hole that is nearly 5 million times the mass of our Sun.

- Surrounding it is a chaotic city of stars, gas, and dust that we call Sagittarius A.
- We stacked false-color X-ray, infrared, and radio images into this single picture to show you the different structures hidden inside the core of our Galaxy.
- X-rays (purple) radiate from the super-hot gas trapped in the black hole's grasp.
- The surrounding dust is heated by friction as it chaotically orbits around the black hole and then glows in infrared light (gold).
- And the enormous pools and three-armed rivers of gas shine in radio light (oranges and reds) to trace the complexity of magnetic fields in this violent neighborhood.

Source: The Hindu

Science

Q.1) Which of the following pair (s) is/are correctly matched?

Fruits	:	Vitamin/Antioxidant
1. Red grapes	:	Vitamin B6
2. Mango	:	Fibre
3. Banana	:	Antioxidant resveratrol

Select the correct answer using the code given below:

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

ANS: B

Explanation: Mangoes are seasonal fruits, and both are high on fibre. The former has vitamin A (a precursor to beta carotene and is antioxidant-rich) and C that helps build immunity.

- Banana is one of the easiest snacks to consume: it 'pre-packaged' with B6, magnesium and potassium.
- Red wine is made from grapes that contain an antioxidant resveratrol that is good for the heart.

Source: NCERT

Q.2) "National Gene Fund" is constituted by Government of India is related to which of the following?

- a) pharmaceuticals
- b) Animal Cloning
- c) Plant varieties
- d) Zero budget farming

ANS: C

Explanation: The Government of India has notified the Protection of Plant Varieties and Farmers Rights (Recognition and Reward from the Gene Fund) Rules, 2012, whereby a farmer who is engaged in the conservation of genetic resources of land races and wild relatives of economic plants and their improvement through selection and preservation shall be entitled to "Plant Genome Saviour Farmer Reward & Farmer Recognition" along with cash prize from National Gene Fund.

There are 10 rewards each comprising of citation, memento and cash of Rs. One and half lakh each and 20 recognitions each consisting of a cash prize of Rs. One Lakh, citation and memento in a year.

Source: The Hindu

Q.3) Consider the following statements regarding the "biologics":

- 1. It is a product that is produced from living organisms or contains components of living organisms.
- 2. Most biologics are complex mixtures that are not easily identified or characterized.

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: Biological products include a wide range of products such as vaccines, blood and blood components, allergens, somatic cells, gene therapy, tissues, and recombinant therapeutic proteins.

- Biologics can be composed of sugars, proteins, or nucleic acids or complex combinations of these substances, or may be living entities such as cells and tissues.
- Biologics are isolated from a variety of natural sources - human, animal, or microorganism - and may be produced by biotechnology methods and other cutting-edge technologies.
- Gene-based and cellular biologics, for example, often are at the forefront of biomedical research, and may be used to treat a variety of medical conditions for which no other treatments are available.
- In contrast to most drugs that are chemically synthesized and their structure is known, most biologics are complex mixtures that are not easily identified or characterized.
- Biological products, including those manufactured by biotechnology, tend to be heat sensitive and susceptible to microbial contamination.
- Therefore, it is necessary to use aseptic principles from initial manufacturing steps, which is also in contrast to most conventional drugs.
- Biological products often represent the cutting-edge of biomedical research and, in time, may offer the most effective means to treat a variety of medical illnesses and conditions that presently have no other treatments available.

Source: WHO

Q.4) Consider the following statements regarding the “measuring units”:

1. Standard units of measure such as the Kilogram, second, metre, ampere, Kelvin, mole and candela defined on the basis of physics constants.
2. The CSIR-NPL is India’s official reference keeper of units of measurements.

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: With the definition of the ‘kilogram’ getting a global, technical makeover, textbooks — from those used in schools to ones recommended by engineering colleges in India — are set to undergo an update.

- The kilogram derived its provenance from the weight of a block of a platinum-iridium alloy housed at the International Bureau of Weights and Measures in France.
- All other prototypes that served as national reference standards, including the one at New Delhi’s CSIR-National Physical Laboratory (NPL), were calibrated to it. No longer.
- The kilogram joined other standard units of measure such as the second, metre, ampere, Kelvin, mole and candela that would no longer be defined by physical objects.

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- The measures are all now defined on the basis of unchanging universal, physics constants. The kilogram now hinges on the definition of the Planck Constant, a constant of nature that relates to how matter releases energy.
- The CSIR-NPL, which is India's official reference keeper of units of measurements, on Monday, released a set of recommendations requiring that school textbooks, engineering-education books, and course curriculum update the definition of the kilogram.

Source: The Hindu

Q.5) The term “Kibble Balance” is often seen in news is related to which of the following?

- a) Device to measure Planck Constant.
- b) Device to measure heat balance.
- c) Device to measure water balance.
- d) Device to measure wind balance.

ANS: A

Explanation: ‘Kibble Balance’, is a device that was used to measure the Planck Constant and thereby reboot the kilogram.

- Named after its inventor, Bryan Kibble at the U.K.’s National Physical Laboratory (NPL), who conceptualized it in 1975, the Kibble balance is an exquisitely accurate weighing machine.
- Like any balance, it is designed to equalize one force with another: In this case, the weight of a test mass is exactly offset by a force produced when an electrical current is run through a coil of wire immersed in a surrounding magnetic field.

Source: The Hindu

Q.6) Which of the following tree is also called as “Magic Tree”?

- a) Palm tree
- b) Banyan tree
- c) Drumstick tree
- d) Papaya tree

ANS: C

Explanation: Magic Moringa Tree has been crowned by WHO as a magical tree. In Europe and America was happening once called as “Miracle Tree”.

- Apparently it's called "Kelor Tree" in Indonesia.
- Researchers have finally unravelled how each part of drumstick (*Moringa oleifera*), the “magic tree”, is nutritionally rich compared with other plants such as rice, papaya, spinach and cocoa.
- All the five tissues — stem, root, leaf, flower and seed — of drumstick studied were found to be rich either in certain vitamins or essential minerals.
- A team led by Prof. from the National Centre for Biological Sciences (NCBS), Bengaluru analysed the genes on complimentary DNA (cDNA) of all the five tissues.
- The team found drumstick leaves, which are the most nutritious part of the tree, are rich in vitamins, while the roots are mineral-rich.
- The stem is rich in vitamin C and the flowers and seeds are rich in potassium. The pod and flower also have enzymes that help bring down cholesterol level.

Source: The Hindu

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Q.7) Recently, India's largest Liquid Hydrogen Storage Tank is established in which of the following state?

- a) Tamil Nadu
- b) Telangana
- c) Odisha
- d) Andhra Pradesh

ANS: D

Explanation: ISRO Chairman K Sivan flagged off the shipment of India's largest liquid hydrogen storage tank at the VRV Asia Pacific's manufacturing plant at Sri City in Chittoor district of Andhra Pradesh.

- VRV Asia Pacific manufactured the storage tank with a Liquid Nitrogen (LIN) shield, in a collaborative effort with Satish Dhawan Space Centre (SDSC) SHAR, under the Make in India initiative.
- The storage capacity of the tank is 120 kilo liters. Liquid hydrogen is used as fuel for satellite launch vehicles.

Source: The Hindu

Q.8) The words "Motion interpolation, video interpolation, and the soap opera effect" is often seen in news is related to which of the following?

- a) Frame rate of videos
- b) Long distance telescopes
- c) Micro telescopes for drug therapy
- d) Thermal image radar system

ANS: A

Explanation: Motion smoothing is also known as motion interpolation, video interpolation, and the soap opera effect, it refers to a process of reducing motion blur by artificially inflating the frame rate of the film or series.

- So, from 24 frames per second (fps) it is increased to 60fps, 120fps or even higher (higher rates are perceived as motion), digitally combining the images to simulate more.
- This effect can be useful when watching sports, as the action moves quickly, and enabling the feature allows viewers to catch more details.

Source: The Hindu

Q.9) Recently the World Health Organization said that "burnout" remains an "occupational phenomenon" and it is not considered as a medical condition. Which of the following is/are the characteristics of burnout syndrome?

1. Feelings of energy depletion or exhaustion.
2. Increased mental distance from one's job.
3. Reduced professional efficacy.

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: D

Explanation: The World Health Organization said on May 28 that “burnout” remains an “occupational phenomenon” that could lead someone to seek care but it is not considered a medical condition.

- The clarification came a day after the WHO mistakenly said it had listed burnout in its International Classification of Diseases (ICD) for the first time.
- While burnout was listed in the previous version, the ICD-10, its definition has been changed in the latest edition of the text. “The definition has been modified based on existing research”.
- WHO has now defined burnout as “a syndrome conceptualised as resulting from chronic workplace stress that has not been successfully managed”.
- It said the syndrome was characterised by: “1) feelings of energy depletion or exhaustion; 2) increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and 3) reduced professional efficacies.”
- “Burn-out refers specifically to phenomena in the occupational context and should not be applied to describe experiences in other areas of life,” according to the definition.

Source: WHO

Q.10) Consider the following statements regarding “Poly-metallic Nodules”:

1. These are commonly called manganese nodules.
2. These are most abundant on abyssal plains.

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: Of all the mineral resources considered as potential targets for deep-sea mining, poly-metallic nodules (also commonly called manganese nodules) are probably the most likely commodity to be developed into a commercial operation.

- Poly-metallic nodules are rounded accretions of manganese and iron hydroxides that cover vast areas of the seafloor, but are most abundant on abyssal plains at water depths of 4000-6500 metres.
- They form through the aggregation of layers of iron and manganese hydroxides around a central particle (such as a shell or small rock fragment), and range in size from a few millimeters to tens of centimeters.
- The composition of nodules varies with their environment of formation, but in addition to manganese and iron, they can contain nickel, copper and cobalt in commercially attractive concentrations as well as traces of other valuable metals such as molybdenum, zirconium and Rare Earth Elements.

Source: Agrahari

Science & Technology

Q.1) The Nuclear Fuel Complex is often seen in news is located at?

- a) Mahendragiri
- b) Bangalore
- c) Hyderabad
- d) Ahmedabad

ANS: C

Explanation: Nuclear Fuel Complex, Hyderabad is an industrial unit of the Department of Atomic Energy, Government of India.

- NFC is the only organization in India which caters to the fuel requirements of nuclear power reactors.
- Nuclear Fuel Complex, Hyderabad was conceived in late 60's as a pivotal industrial arm of the Department of Atomic Energy with the mandate to fuel the nuclear power program of Govt. of India.
- An ISO certified organization, NFC is the only organization in the world today to have a comprehensive manufacturing cycle from ore to core, involving processing of both Uranium & Zirconium streams under the same roof.

Source: Agraphari

Q.2) “Vitrification technology” is often seen in news is associated with which of the following?

- a) Nuclear Waste
- b) Solar Power generation
- c) Hydro power generation
- d) Plant varieties specification

ANS: A

Explanation: The immobilisation of HLW requires the formation of an insoluble, solid waste form that will remain stable for many thousands of years. In general borosilicate glass has been chosen as the medium for dealing with separated HLW.

- The stability of ancient glass for thousands of years highlights the suitability of borosilicate glass as a matrix material. This type of process, referred to as vitrification.
- Most HLW, other than spent fuel itself, arises in a liquid form from the reprocessing of spent fuel. This HLW comprises highly-radioactive fission products and some transuranic elements with long-lived radioactivity.
- To allow incorporation into the glass matrix the waste is initially calcined (dried) to a granular powder.
- The product is then incorporated into molten glass, poured into a robust stainless steel canister about 1.3 metres high, and allowed to cool, forming a solid matrix. The containers are then welded closed and are ready for storage and final disposal.
- India is one of the few countries to have mastered the technology of vitrification. Over the years BARC has developed the technology for vitrification of HLW.
- India has a unique distinction of having operating vitrification plant at Tarapur and Trombay.

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- In our existing plant at Trombay vitrification process is essentially batch operation consisting of heating and fusing of pre-concentrated waste and glass forming additives and is carried out in melters based on induction heating.

Source: The Hindu

Q.3) “CODIS” is related to which of the following?

- a) Food Preservation Index
- b) DNA index system
- c) Acid rain measurement index
- d) Ocean acidification measurement

ANS: B

Explanation: CODIS is the acronym for the Combined DNA Index System and is the generic term used to describe the FBI’s program of support for criminal justice DNA databases as well as the software used to run these databases.

The National DNA Index System or NDIS is considered one part of CODIS, the national level, containing the DNA profiles contributed by federal, state, and local participating forensic laboratories.

Source: The Hindu

Q.4) “JUICE Mission” is going to launch by which of the following Space Agency?

- a) NASA
- b) ISRO
- c) JAXA
- d) European Space Agency

ANS: D

Explanation: JUICE, also known as the JUPiter ICy moons Explorer, is a European Space Agency mission intended to explore Jupiter and three of its icy moons: Europa, Callisto and Ganymede.

- A single orbital spacecraft, with no lander, will be the first to orbit Ganymede, and one of a handful of spacecraft to visit the Jupiter system since the 1970s. JUICE is targeted to launch in June 2022 aboard an Ariane 5 spacecraft.
- It will take more than 7.5 years to get to Jupiter, using gravity assists from Venus and Earth to speed the spacecraft up and get it into the outer solar system.
- The spacecraft is expected to be inserted in Jupiter’s orbit in January 2030, starting a 2.5-year observation session of Jupiter’s moons, as well as the planet’s atmosphere and magnetosphere.

Source: The Hindu

Q.5) Consider the following statements with respect to “Prithvi Missile”:

1. It is India’s indigenously developed ballistic missile produced under project Devil.
2. It is a surface-to-surface short range ballistic missile.

Which of the following codes below given is correct?

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

ANS: B

Explanation: The Prithvi was India's first indigenously developed ballistic missile produced by the Integrated Guided Missile Development Program (IGMDP).

Prithvi is a road-mobile, surface to surface short range ballistic missile (SRBM) powered by a single-stage, two engines, and liquid-fuel. Development of the Prithvi began in 1983, and it was first tested fired on February 25, 1988.

Source: The Hindu

Q.6) The term 'sesbania rostrata' is related to which of the following?

- a) Green manure crop
- b) Wild banana
- c) High yield mango
- d) Wild tamarind

ANS: A

Explanation: Using radiation induced mutations and/or hybridization, Sesbania rostrata crops is being carried out by Baba Atomic Research Centre (BARC).

A late flowering mutant (TSR-1) in Sesbania has been developed with the potential to produce more biomass before flowering and offers an excellent material for green manuring.

Source: BARC

Q.7) The term 'MELISA' is related to which of the following?

- a) Satellite mission
- b) Blood test
- c) Malaria eradication in Eastern Africa
- d) Andro – humanoid robot

ANS: B

Explanation: MELISA is an optimized, clinically validated blood test which establishes allergy to a number of different metals from a single blood test. MELISA can also diagnose active Lyme disease.

Source: ForumIAS factly

Q.8) Which of the following statement is NOT correct about Shourya Missile?

- a) It is a subsonic missile.
- b) It is the land-variant of India's K-15 missile.
- c) Its operational range is 700 to 1900 km.
- d) It is indigenously developed by DRDO.

ANS: A

Explanation: The Shaurya is a hypersonic surface-to-surface ballistic missile, developed by Defence Research & Development Organization (DRDO) of India.

- It is one of the top 10 missiles in its class with advanced navigation systems, propulsion system and control technologies.
- The Shaurya is actually a land variant of Indian K-15 submarine launched missile. The Shaurya is 6.2 t canister launched missile, with a 10 m length, and 0.74 m diameter.
- It boasts an intermediate operational range of 700 to 1900 km and a payload weight of 180 to 1000 kg.

Source: Business Line

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Q.9) With reference to the 'Sophia- human-like robot', which of the following statements is/are correct?

1. She is the world's first robot citizen.
2. She is the first robot Innovation Ambassador for the UNDP.

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: C

Explanation: Hanson Robotics' most advanced human-like robot, Sophia, personifies our dreams for the future of AI.

- As a unique combination of science, engineering, and artistry, Sophia is simultaneously a human-crafted science fiction character depicting the future of AI and robotics, and a platform for advanced robotics and AI research.
- The character of Sophia captures the imagination of global audiences. She is the world's first robot citizen and the first robot Innovation Ambassador for the United Nations Development Programme.

Source: The Hindu

Q.10) Which of the following statements is/are correct about 'Protection of Plant Varieties and Farmers' Rights Act'?

1. The act was enacted after Earth Summit.
2. Protection of Plant Varieties and Farmers' Rights Authority was established in 2005.

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: C

Explanation: India enacted the Protection of Plant Varieties and Farmers' Rights Act in 2001 for the protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new plant varieties.

- Protection of Plant Varieties and Farmers' Rights Authority was established in New Delhi in November, 2005 as per provision under the Act.
- The Authority has made landmark achievement in last ten years. Registration of plant varieties was started by the Authority with twelve crop species in 2007 and now 114 crop species are covered under the umbrella of PPV&FRA for granting IPR.

Source: The Hindu

Science & Technology

Q.1) “The indigenously developed Cryogenic Upper Stage (CUS) forms the third stage of GSLV Mk II”. Cryogenic engine fuel is a mix of which of the following?

- a) Liquid Nitrogen and Liquid Helium
- b) Liquid Hydrogen and Liquid Oxygen
- c) Liquid Oxygen and Liquid Helium
- d) Liquid Nitrogen and mono-methyl-hydrazine

ANS: B

Explanation: Geosynchronous Satellite Launch Vehicle Mark II (GSLV Mk II) is the largest launch vehicle developed by India, which is currently in operation.

- This fourth generation launch vehicle is a three stage vehicle with four liquid strap-ons.
- The indigenously developed cryogenic Upper Stage (CUS), which is flight proven, forms the third stage of GSLV Mk II.
- Cryogenic engine makes use of Liquid Oxygen (LOX) and Liquid Hydrogen (LH2) as propellants which liquefy at -183 deg C and -253 deg C respectively.
- LOX and LH2 are stored in their respective tanks. From there they are pumped in to turbo pump by individual booster pumps to ensure a high flow rate of propellants inside the combustion/thrust chamber.
- The major components of a cryogenic rocket engine are combustion/thrust chamber, igniter, fuel injector, fuel cryo pumps, oxidizer cryo pumps, gas turbine, cryo valves, regulators, the fuel tanks and a rocket engine nozzle.

Source: ForumIAS Factly

Q.2) “Variants of Concern and Variants of interest” is often seen in news is associated with which of the following?

- a) Invasive species
- b) Space objects
- c) Micro plastics
- d) COVID – 19

ANS: D

Explanation: What began as a pneumonia outbreak in Wuhan, China, in December 2019, has assumed global proportions and claimed countless lives within a span of two years.

- At the outset, the virus spread through droplets of saliva, cough particles or nasal discharge from an infected person.
- Within the passage of a year, December 2020 saw the emergence of changing COVID-19 variants. These changes in variations allow the virus to be more contagious than before.
- The changes in the variants occur when there is a mutation of the genes of the virus. However, these mutations are only natural.
- M.D Robert Bollinger told the Johns Hopkins University’s Medical Organisation, that “All RNA viruses mutate over time. For example, flu viruses change often...”
- MD Stuart Ray told the Hopkins Medical Organisation that “Geographic separation tends to result in genetically distant variants.”

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- In light of such developments, the new mutations are bound to be several and distinct from one another. (New Variants of Coronavirus: What You Should Know | Johns Hopkins Medicine)
- The World Health Organisation has classified each emerging variant as either a Variant of Concern (VOC) or a Variant of Interest (VOI).
- The Alpha, Beta, Gamma and Delta variants fall under Variants of Concern.
- Whereas the Eta, Iota, Kappa and Lambda fall under Variants of Interest.

Source: The Hindu

Q.3) “Arackar licanantay” is recently seen in news is related to which of the following?

- a) Moon crest
- b) Volcano on mars
- c) Titanosaur
- d) Polar invasive species

ANS: C

Explanation: Scientists studying Chile's parched Atacama desert, the world's driest, have discovered the remains of a previously unknown species of dinosaur that millions of years ago lived among lush greenery in what is now a moonscape of rock and sand.

- A team led by Chilean geologist Carlos Arévalo unearthed the remains of Arackar licanantay, which means "Atacama bones" in the Kunza language, 75 kilometers south of the desert city of Copiapó.
- The so-called titanosaur had a small head and long neck and tail, as well as an unusually flat back compared with others like it.
- Recent paleontological studies suggest Arackar lived amid flowering plants, ferns and palm trees during the Cretaceous period 66-80 million years ago.
- Parts of the Atacama today, by contrast, have gone without rain for one hundred years and support little plant or animal life.
- The discovery of a titanosaur on the west side of South America's Andes Mountains is rare, though several species have been found in Argentina and Brazil, further east.
- Arackar also appears smaller in size compared with some other titanosaurs.
- The Argentinosaurus, discovered on the east side of the Andes in neighbouring Argentina, was more than four times as long, scientists say.

Source: The Hindu

Q.4) Which of the following is/are mission/missions related to Venus Planet?

1. Magellan
2. Phoenix
3. Maven

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: A

Explanation: Mars Missions by NASA:

- Mariner
- Mars Resonance Orbiter
- Phoenix

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- MAVEN
- In-Sights Lander
- Curiosity Rover

Magellan mission is related to Planet Venus.

Source: NASA

Q.5) Consider the following statements regarding “Indian Desert”:

1. The Indian Desert lies towards the western margin of Aravali Hills.
2. It is the ninth largest desert in the world.
3. It spreads over the states of Gujarat, Rajasthan, Haryana and Punjab.

Which of the statements given above is/are correct?

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

ANS: B

Explanation: The Indian Desert lies towards the western margin of Aravali Hills.

- It is also called Thar Desert. It is the ninth largest desert in the world.
- It spreads over the states of Gujarat and Rajasthan. This region has semi-arid and arid weather conditions. It receives less than 150 mm of rainfall per year.
- The vegetation cover is low with thorny bushes. Luni is the main river in this area.
- All other streams appear only at the time of rainfall otherwise they disappear into the sand.

Source: NCERT

Q.6) Consider the following statements regarding the Government Instant Messaging System (GIMS):

1. GIMS is the instant messaging platform for Government communication.
2. GIMS is being packaged for employees of Central, State and Local government departments and organizations for intra and inter organization communications.
3. Like WhatsApp, GIMS employs end-to-end encryption for one-to-one messaging.

Which of the statements given above is/are correct?

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

ANS: B

Explanation: GIMS is the instant messaging platform for Government communication.

- GIMS platform provides GIMS mobile client for instant messaging and GIMS Portal for administration and monitoring of platform.
- Designed to suit the hierarchy and communication policies of the government.
- Adaptable to both the central and state government organizations for intra and inter organization communication.
- It is being developed as a secure Indian alternative without the security concerns attached with apps hosted abroad or those owned by foreign entities.
- Like WhatsApp, GIMS employs end-to-end encryption for one-to-one messaging.

Source: ForumIAS Factly

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Q.7) Recently which state police has adopted unique bar-coding software - Trakea - to ensure that thousands of forensic reports that form the backbone of the criminal investigation system?

- a) Andhra Pradesh
- b) Kerala
- c) Tamil Nadu
- d) Haryana

ANS: D

Explanation: Haryana Police has adopted unique barcoding software — Trakea — to ensure that thousands of forensic reports that form the backbone of the criminal investigation system and subsequent trials in the courts of law, are not tampered with.

- According to the police, Trakea ensures foolproof security of the samples collected from the scene of crime, and the forensic analysis reports, and is different from traditional methods that the state police force has been following for decades.
- Haryana Police claims it is the country's first police force to have introduced this unique barcoding for forensic reports.

Source: The Hindu

Q.8) Consider the following statements regarding e-waste clinic in India:

1. India's first e-waste clinic has been inaugurated in Indore, Madhya Pradesh.
2. It would enable segregation, processing and disposal of waste from both household and commercial units.
3. The clinic is set up in accordance with the Solid Waste Management Rules adopted in 2016.

Which of the statements given above is/are correct?

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

ANS: D

Explanation: India's first e-waste clinic has been inaugurated in Bhopal and will enable segregation, processing and disposal of electronic waste from both household and commercial units.

- It was set up by the Bhopal Municipal Corporation and the Central Pollution Control Board.
- The e-waste clinic is developed on the bases of a three-month pilot project and, if successful, more clinics will be built throughout the country.
- The clinic is set up in accordance with the Solid Waste Management Rules adopted in 2016.

Source: The Hindu

Q.9) Consider the following statements regarding "Green Bonds":

1. The proceeds from green bonds are ear-marked to finance green projects.
2. India's First Green Bond was issued by SEBI in 2015.

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

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ANS: A

Explanation: Green bonds are debt instruments issued by financial, non-financial or public entities where the proceeds are 'ear-marked' for use towards financing 'green' projects.

- India's First Green Bond was issued by Yes Bank Ltd in 2015.
- In 2016, India became second country (after China) to provide national level guidelines for Green bonds, issued by SEBI.
- According to the 2019-20 Economic Survey, India has the second largest green bond market among emerging economies after China.
- India has issued \$10.2 billion of green bonds in the first half of 2019.
- India's first listed Green Bond on 'India INX' issued by Indian Railway Finance Corporation.

Source: The Hindu

Q.10) "Selective Catalytic Reduction" is often seen in news is related to which of the following?

- a) Thermal power stations
- b) Bharat Stage - VI norms
- c) Nuclear power plants
- d) Stubble burning

ANS: B

Explanation: Diesel Particulate Filter (DPF) and Selective Catalytic Reduction (SCR) are being introduced with the roll-out of BS VI norms, which were not a part of BS IV.

- Real Driving Emission (RDE) will be introduced in India for the first time with the implementation of Bharat Stage VI emission norms.
- It will measure a vehicle's emission in real-time conditions against laboratory conditions.
- Onboard Diagnostics (OD) has been made mandatory for all vehicles which will give the vehicle owner or repair technician access to the status of the various vehicle sub-systems.

Source: MOEFCC

Space & IT

Q.1) “Air Independent Propulsion (AIP) system” is often seen in news is related to which of the following?

- a) Aircraft Carrier
- b) Light Combat Aircraft
- c) Frigates
- d) Submarines

ANS: D

Explanation: Submarines are essentially of two types: conventional and nuclear. Conventional submarines use a diesel-electric engine, and must surface daily for oxygen for fuel combustion.

- If fitted with an Air Independent Propulsion (AIP) system, the submarine needs to take in oxygen only once a week.
- The state-of-the-art “air independent propulsion” (AIP) system that the Defence R&D Organisation (DRDO) is indigenously developing will be ready to drive the Indian Navy’s submarines from 2024 onwards.
- Consequently, this AIP will not power the six new submarines that the navy is tendering in a Rs 45,000crore programme called Project 75-I.
- Instead, those six boats (as the navy traditionally refers to submarines) will have AIP systems that the foreign vendor must offer.

Source: Indian Express

Q.2) The term “Vyommitra” is recently in news is related to which of the following?

- a) Half-humanoid robot
- b) Satellite radar system
- c) Space education portal
- d) AI driven car

ANS: A

Explanation: Recently, Indian Space Research Organisation (ISRO) unveiled its first ‘woman’ astronaut, named Vyom Mitra who will ride to space in the first test flight of the human space mission, Gaganyaan.

- She is half-humanoid and her body stops at the torso and has no legs. She is capable of switching panel operations, performing Environment Control and Life Support Systems (ECLSS) functions, conversations with the astronauts, recognising them and solving their queries.

Source: ForumIAS factly

Q.3) The terms “Antu, Kueyen, Melipal and Yepun” is related to which of the following?

- a) Asteroids
- b) Planets of Jupiter
- c) Telescope
- d) Radar systems

ANS: C

Explanation: The Very Large Telescope array (VLT) is the flagship facility for European ground-based astronomy at the beginning of the third Millennium.

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- It is the world's most advanced optical instrument, consisting of four Unit Telescopes with main mirrors of 8.2m diameter and four movable 1.8m diameter Auxiliary Telescopes.
- The telescopes can work together, to form a giant 'interferometer', the ESO Very Large Telescope Interferometer, allowing astronomers to see details up to 25 times finer than with the individual telescopes. The large telescopes are named Antu, Kueyen, Melipal and Yepun.

Source: NASA

Q.4) Which of the following statements is/are correct about "Aditya L1 mission"?

1. It is first scientific expedition of ISRO to study Mercury.
2. Aditya L1 satellite will be placed in the halo orbit around the Lagrangian point 1 (L1) of the sun-earth system.
3. It will be launched using the PSLV.

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: C

Explanation: Aditya - L1 First Indian mission to study the Sun. The Aditya-1 mission was conceived as a 400kg class satellite carrying one payload, the Visible Emission Line Coronagraph (VELC) and was planned to launch in a 800 km low earth orbit.

- Satellite will be placed in the halo orbit around the Lagrangian point 1 (L1) of the Sun-Earth system has the major advantage of continuously viewing the Sun without any occultation/ eclipses.
- Therefore, the Aditya-1 mission has now been revised to "Aditya-L1 mission" and will be inserted in a halo orbit around the L1, which is 1.5 million km from the Earth. The satellite carries additional six payloads with enhanced science scope and objectives.
- The project is approved and the satellite will be launched during 2019 – 2020 timeframe by PSLV-XL from Sriharikota.
- Aditya-1 was meant to observe only the solar corona. The outer layers of the Sun, extending to thousands of km above the disc (photosphere) is termed as the corona.
- It has a temperature of more than a million degree Kelvin which is much higher than the solar disc temperature of around 6000K.
- How the corona gets heated to such high temperatures is still an unanswered question in solar physics.

Source: ISRO

Q.5) The term "Qubits" is often seen in news is related to which of the following?

- a) Super computers
- b) Meteors
- c) Quantum computers
- d) Asteroids

ANS: C

Explanation: Quantum Computers work by harnessing the properties of quantum mechanics.

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- As the reality of a quantum computer comes closer, it is useful for us to understand both how one functions and how it's different from a traditional computer. The first thing to bear in mind is that they use different basic units of data: 'bits' and 'qubits'.
- Every element of a classical computer is written in binary code (1s and 0s) and is translated into electricity: high voltage is represented by 1, and low voltage by 0. In quantum computing, qubits are the basic unit and their value can be 1, 0, or 1 and 0 simultaneously, overlapping (superposition) and intertwining (entanglement) according to the laws of physics.
- This means that qubits, as opposed to bits, can take on various values at one time and can perform calculations that a conventional computer cannot.
- The classical computer, if there is interference with the system; the system can correct itself and continue running. For the time being, this is not the case with quantum computers.
- "External disturbances force the system to define itself as 1 or 0, causing it to lose its quantum coherence.
- To avoid this kind of external 'noise,' the system has to be completely isolated: the atoms have to be very quiet, ensuring nothing makes them collide or interact with the surroundings.
- Quantum computers have to be at a temperature of $-273\text{ }^{\circ}\text{C}$ ($-459\text{ }^{\circ}\text{F}$) with hardly any atmospheric pressure and isolated from Earth's magnetic field.

Source: The Hindu

Q.6) The term "Muktoshri" is related to which of the following?

- a) Life saving drug
- b) New variety of rice
- c) New variety of maize
- d) New endemic banana

ANS: B

Explanation: West Bengal government's rice research centre has come up with a new variety of rice called Muktoshri that can be grown in arsenic prone areas.

It was developed jointly by the Rice Research Station at Chinsurah, coming under West Bengal's Agriculture Department and the National Botanical Research Institute, Lucknow.

Source: The Hindu

Q.7) Which of the following statements is/are correct about "Polycrack Technology"?

1. It is world's first patented heterogeneous catalytic process which converts multiple feed stocks into hydrocarbon liquid fuels, gas, carbon and water.
2. It has low tolerance to moisture hence drying of waste is not required.
3. In polycrack, biological decomposition is not allowed as the Waste is treated as it is received.

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: Polycrack technology is world's first patented heterogeneous catalytic process which converts multiple feed stocks into hydrocarbon liquid fuels, gas, carbon and water.

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Polycrack Plant can be fed with all types of Plastic, Petroleum sludge, Un-segregated MSW (Municipal Solid Waste) with moisture up to 50%, E-Waste, Automobile fluff, Organic waste including bamboo, garden waste etc., and Jatropha fruit and palm bunch.

Polycrack has the following advantages over the conventional approach of treating solid waste:-

- Pre-segregation of waste is not required to reform the waste. Waste as collected can be directly fed into Polycrack.
- It has high tolerance to moisture hence drying of waste is not required.
- Waste is processed and reformed within 24 hours.
- It is an enclosed unit hence the working environment is dust free.
- Excellent air quality surrounding the plant.
- Biological decomposition is not allowed as the Waste is treated as it is received.
- The foot print of the plant is small hence the area required for installing the plant is less when compared with conventional method of processing.
- All constituents are converted into valuable energy thereby making it Zero Discharge Process.
- Gas generated in the process is re-used to provide energy to the system thereby making it self-reliant and also bring down the operating cost.
- There is no atmospheric emission during the process unlike other conventional methods except for combustion gases which have pollutants less than the prescribed norms the world over.
- Operates around 450 degrees, making it a low temperature process when compared with other options.
- Safe and efficient system with built-in safety features enables even an unskilled user to operate the machine with ease.
- Low capital cost and low operating cost.
- Fully automated system requires minimum man power.

Source: ForumIAS factly

Q.8) “Project Soli” is launched by which of the following?

- a) Google
- b) IBM
- c) Facebook
- d) Tesla

ANS: A

Explanation: Project Soli, driven by Google’s Advanced Technology and Projects (ATAP) team, was first showcased back in 2015.

- The idea is that a radar chip can be used to detect hand movements and gestures to interpret what they could mean.
- It’s only recently that Google figured out how to reduce the size of this radar chip and fit it on the front of the smart phone, still ensuring accuracy.

Source: The Hindu

Q.9) The “LOx methane” is recently in news is related to which of the following?

- a) Space rocket engine fuel
- b) High speed diesel variant
- c) Bio-diesel
- d) Hydrogen based fuel

ANS: A

Explanation: The Indian Space Research Organization (ISRO) is developing methane-powered rocket engines.

- The space agency is developing two 'LOx methane' engines (liquid oxygen oxidiser and methane fuel) engines.
- One of the two projects is trying to convert the existing cryogenic engine, which uses liquid hydrogen for fuel, into a LOx methane engine.
- The other is a smaller engine of 3 tonnes thrust, which will feature an electric motor.
- These are being developed at ISRO's Liquid Propulsion Systems Centre at Trivandrum.

Source: ISRO

Q.10) The "Head on Generation (HOG)" technology is sometimes in news is related to which of the following?

- a) Driverless car
- b) Drones
- c) Tractors
- d) Trains

ANS: D

Explanation: The South Central Railway (SCR) announced the introduction of a new technology – Head On Generation (HOG) system – in Telangana Express where power from the engine would be supplied to the entire train for lighting and air-conditioning.

- The trains like these have two power cars known as End On Generators (EOG) on either end to provide electricity to all the coaches.
- These power cars produce electricity by the diesel generators with each using 40 litres of fuel per hour for a non-AC coach and 65-70 litres of diesel per hour per coach in case of an AC coach.
- The new HOG technology obviates the need for using diesel as power is tapped from the overhead electric traction lines through a pantograph to the train engine and the same is distributed to the trailing coaches.
- Earlier, the power supply from the overhead electric traction was being used to only run the engine and haul the coaches.
- "The new system does not require any diesel and hence, will reduce air and noise pollution, besides providing uninterrupted illumination in all the coaches.
- On an average, it will reduce carbon emission by 700 metric tonnes per year per train".

Source: The Hindu

Awareness in Defence

Q.1) The “Advanced Technology Vessel (ATV) Project” is related to which of the following?

- a) INS Arihant
- b) Tejas aircraft
- c) Air-craft carrier
- d) Brahmos Missile project

ANS: A

Explanation: The plan for the Advanced Technology Vessel (ATV) until the late 1980s was to build an SSN - a fast-moving deep-diving nuclear-powered attack submarine, which would hunt surface ships.

- Around the time India leased a Charlie-I class nuclear-powered attack submarine from the Soviet Union, which happened in 1988, planning veered towards building a submarine carrying ballistic missiles.
- The hull design was lengthened and the SSN quietly transformed into an SSBN. The Project code named Advanced Technology Vessel (ATV) Project took 25 years for completion.
- It spawned a new era in the field of cooperation between DRDO, BARC, Navy, PSUs and private industry in which these organizations synergized their efforts to achieve a significant technological and strategic milestone.
- The Arihant class(nuclear-powered ballistic missile submarines)- INS Arihant (S73), INS Aridhaman (S74) are built for the Indian Navy by Navy Shipbuilding Centre, Visakhapatnam.
- The miniaturised naval version of the reactor was designed and built by the Bhabha Atomic Research Centre (BARC) at the Indira Gandhi Centre for Atomic Research (IGCAR) in Kalpakkam.

Source: The Hindu

Q.2) Which of the following statements is/are correct about the Airborne Warning and Control System (AWACS)?

1. It is an airborne radar system designed to detect aircraft at short range and command and control, battle space management and communications.
2. PHALCON AWACS is used by Indian Air Force was developed by Israel.

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: C

Explanation: AWACS is distinctive radar domes mounted on the fuselage of the aircraft, which provide the Alliance with air surveillance, command and control, battle space management and communications.

PHALCON AWACS is developed by Israel and it is used by Indian Air Force.

Source: Indian Express

Q.3) Consider the following statements regarding the Prithvi-II missile:

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1. It is a surface-to-air tactical missile with a strike range of 350 km.
2. It is capable of carrying 500 to 1,000 kg of warheads, both conventional as well as nuclear.

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: Prithvi-II missile is a surface-to-surface tactical missile with a strike range of 350 km.

- It is developed by DRDO under Integrated Guided Missile Development Program (IGMDP).
- It is capable of carrying 500 to 1,000 kg of warheads, both conventional as well as nuclear.
- The state-of-the-art missile is powered by liquid propulsion twin engines.
- It uses an advanced inertial guidance system with maneuvering orbit to hit its target.
- It was inducted into armour of the defence forces in 2003.

Source: ForumIAS factly

Q.4) The Spike missile is newly acquired from Israel by Indian government is related to which of the following?

- a) Inter Continental Ballistic Missile
- b) Torpedo
- c) Nuclear payload capable missile
- d) Anti-tank missile

ANS: D

Explanation: The Indian Army successfully tested two newly acquired Spike long-range (LR) anti-tank guided missiles at the Infantry School at Mhow, Madhya Pradesh.

- The Army has recently procured a small batch of 12 launchers and 250 missiles from Israel using its new financial powers to make emergency procurements sanctioned by the Defence Ministry.
- “Spike-LR is a fourth generation missile, which can engage a target with precision at ranges up to 4 km.
- In addition to the fire-and-forget capability, the missile has the ability to fire, observe and update, providing substantial flexibility to the firer to pinpoint the impact point, as also the ability to switch to a different target mid-flight,” the manufacturer, Rafael Advanced Defense Systems, of Israel.

Source: ForumIAS factly

Q.5) The term “Losharik”, sometimes seen in news is related to which of the following?

- a) Onshore oil field
- b) Nuclear powered submarine
- c) Arctic Research Vessel
- d) Hypersonic Aircraft

ANS: B

Explanation: Losharik is a highly advanced nuclear powered submarine of Russia.

- Recently a fire accident was reported on the submarine within the Russian territorial waters.
- It is a deep-diving special mission's ship, operated by the Russian Navy.
- It is capable of withstanding high pressures at great depths, enabling it to survey the ocean floor.

Source: ForumIAS factly

Q.6) The "Project 15B" often seen in news is related to which of the following?

- a) Stealth frigates
- b) Stealth guided missile destroyers
- c) Anti-tank guided missiles
- d) Drones

ANS: B

Explanation: Project 15B is a class of stealth guided missile destroyers.

- Warships built under Project 15Bravo, with a length of 163 metres and 17.4 metres at the beam and a displacement of 7.300 tonnes, are propelled by four gas turbines to achieve speeds in excess of 30 knots.
- Ships under this project can carry and operate two multiple role helicopters.
- Enhanced stealth features have been achieved through the shaping of hull and use of radar transparent deck fittings which make these ships difficult to detect.

Source: The Hindu

Q.7) Consider the following statements regarding the NIRBHAY Missile:

1. It is a sub-sonic cruise missile.
 2. It has a range more than 3000km.
- 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: NIRBHAY, the long-range, sub-sonic, cruise missile was successfully tested today with a sharper 'terrain hugging capability'.

- The NIRBHAY missile has a range of 700 km to 1,000 km.
- After its launch in typical missile style, it can be controlled in aircraft mode.
- Travelling at sub-sonic speeds of different Mach (speed of sound), the hit capacity is enhanced by control and by homing in on targets at different altitudes.

Source: The Hindu

Q.8) The "Project NETRA" is often seen in news is related to which of the following?

- a) Early warning system in space to detect debris
- b) Earth observation satellite constellation system
- c) Early warning system of Tsunamis
- d) Low Altitude Defense System

ANS: A

Explanation: The Indian Space Research Organisation (ISRO) initiated 'Project NETRA' – an early warning system in space to detect debris and other hazards to Indian satellites.

- The space agency says our SSA (space situational awareness) will first be for low-earth orbits or LEO which have remote-sensing spacecraft.
- Under NETRA, or Network for space object Tracking and Analysis, the ISRO plans to put up many observational facilities: connected radars, telescopes; data processing units and a control centre.
- They can, among others, spot, track and catalogue objects as small as 10 cm, up to a range of 3,400 km and equal to a space orbit of around 2,000 km.

Source: ForumIAS factly

Q.9) Which of the following is/are NOT an air – craft carrier?

1. INS Vikrant
2. INS Viraat
3. INS Arihant

Select the correct answer using the code given below:

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

ANS: C

Explanation: INS Vikrant - Initially laid down as HMS Hercules for the British Navy, but construction was put on hold. India purchased the incomplete carrier in 1957, and construction was completed in 1961 and inducted as first aircraft carrier of India.

- It was decommissioned in 1997, scrapped in 2014.
- INS Vikrant (2013) - First domestically built aircraft carrier expected to join service by 2020.
- INS Viraat - A Centaur-class aircraft carrier commissioned in 1959 as the British Navy's HMS Hermes and later sold to India in 1987 and it was decommissioned in 2017.
- INS Vikramaditya - Originally built as Baku for Soviet Navy and it was entered into Indian Navy in 2013.

Source: The Hindu & ForumIAS factly

Q.10) The famous “Transition to Triumph” book is related to which of the following defense force of India?

- a) Army
- b) Navy
- c) Air-force
- d) Coastguard

ANS: B

Explanation:

Transition to Triumph book is the history of the Indian navy covers the period from 1965 to 1975.

- Indian Naval history (Transition to Triumph) also records that “by themselves the ships of the Eastern Fleet were too few and too slow to enforce contraband control and help would be needed from Vikrant’s aircraft.

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- But the extraordinary extent to which Vikrant's aircraft actually succeeded in assisting ships in contraband control and apprehending merchant ships, over and above their air strikes against East Pakistan, came to be fully realised only after the war.”

Source: The Hindu

ForumIAS

Awareness in Science & Technology

Q.1) Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI) is located in which of the following state?

- a) Tamil Nadu
- b) Kerala
- c) Andhra Pradesh
- d) Karnataka

ANS: A

Explanation: Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI) is a Government Company under the administrative control of the Department of Atomic Energy (DAE) incorporated on 22nd October 2003 as Public Limited Company under the Companies Act, 1956.

With the objective of constructing and commissioning the first 500 MWe Fast Breeder Reactor (FBR) at Kalpakkam in Tamilnadu and to pursue construction, commissioning, operation and maintenance of subsequent Fast Breeder Reactors for generation of electricity in pursuance of the schemes and programmes of Government of India under the provisions of the Atomic Energy Act,1962.

Source: The Hindu

Q.2) Which of the following country launched the “PICARD Mission” to monitor the solar diameter, the differential rotation, the solar constant, and to study the long-term nature of their interrelations?

- a) United States of America
- b) France
- c) Italy
- d) United Kingdom

ANS: B

Explanation: Picard is a CNES solar-terrestrial microsatellite mission of the Myriade series with French multi-institutional and international cooperation.

- The overall objective is to monitor the solar diameter, the differential rotation, the solar constant (simultaneous measurement of the absolute total and spectral solar irradiance), and to study the long-term nature of their interrelations.

Source: ForumIAS factly

Q.3) The “C-17 Globemaster” is often seen in news is related to which of the following?

- a) Fighter aircraft
- b) Submarine
- c) Military transport aircraft
- d) Aircraft carrier

ANS: C

Explanation:

Explanation: The C-17 Globe-master military transport aircraft was originally built by Boeing and McDonnell Douglas together for the US Air Force.

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- A high-wing, 4-engine, T-tailed military-transport aircraft, the multi-service C-17 can carry large equipment, supplies and troops directly to small airfields in harsh terrain anywhere in the world day or night.
- The Indian Air Force has a fleet of 11 C-17 Globe-master IIIs.

Source: ForumIAS factly

Q.4) Consider the following statements regarding Indian Institute of Remote Sensing (IIRS):

1. It is located at Dehradun.
2. It is a premier institute with the objective of capacity building in Remote Sensing and Geo-informatics.

Which of 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: Indian Institute of Remote Sensing (IIRS) at Dehradun is a premier institute with the objective of capacity building in Remote Sensing and Geo-informatics and their applications through education and training programmes at postgraduate level.

- The Institute also hosts and provides support to the Centre for Space Science and Technology Education in Asia and the Pacific (CSSTE-AP), affiliated to the United Nations.
- The training and education programmes of the Institute are designed to meet the requirements of various target / user groups, i.e., for professionals at working, middle and supervisory levels, fresh graduates, researchers, academia, and decision makers. The duration of courses ranges from one week to two years.

Source: The Hindu

Q.5) Consider the following statements regarding Yuva Vaigyanik Karyakram (YUVIKA):

1. It was launched by NITI Aayog.
2. It was launched for XI standard students to imparting basic knowledge on Space Technology, Space Science and Space Applications.

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: Indian Space Research Organisation has launched a special programme for School Children called “Young Scientist Programme” “YUva VIGyani KARYakram” (युविका) from the year 2019.

The second session of the programme is scheduled to be held during the month of May 2020.

- The Program is primarily aimed at imparting basic knowledge on Space Technology, Space Science and Space Applications to the younger ones with the intent of arousing their interest in the emerging areas of Space activities.
- The program is thus aimed at creating awareness amongst the youngsters who are the future building blocks of our Nation. ISRO has chalked out this programme to “Catch them young”.

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- The programme will be of two weeks duration during summer holidays (May 11-22, 2020) and the schedule will include invited talks, experience sharing by the eminent scientists, facility and lab visits, exclusive sessions for discussions with experts, practical and feedback sessions.
- 3 students each from each State/ Union Territory will be selected to participate in this programme covering CBSE, ICSE and State syllabus.
- 5 additional seats are reserved for OCI candidates across the country. Those who have finished 8th standard and currently studying in 9th standard (in the academic year 2019-20) will be eligible for the programme.
- Students who are studying in India including OCI (Overseas Citizen of India) are eligible for the programme. The selection is based on the 8th Standard academic performance and extracurricular activities.

Source: ForumIAS factly

Q.6) Consider the following statements regarding Agni 5 Missile:

1. It is a two stage nuclear-capable ballistic missile developed by DRDO.
2. Range of Agni 5 Missile is 10000km.

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: India's defence scientists have successfully launched Agni 5, the nuclear-capable ballistic missile, with over 5,000 km range.

- It is a three stage missile, 17 metres tall, and two metres wide and capable of carrying upto 1.5 tonne of payload, especially nuclear warheads.
- It is developed by labs (DRDO) under the Missile Complex in Hyderabad and several industries across the country were first flight tested in 2012.

Source: ForumIAS factly

Q.7) Which of the following is NOT a member of Australia Group?

- a) France
- b) Germany
- c) India
- d) South Africa

ANS: D

Explanation: The 42 states participating in the Australia Group are Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, India, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom, and the United States. The European Union also participates.

Source: <https://www.armscontrol.org/factsheets/australiagroup>

Q.8) India is NOT a member of which of the following export control regime?

- a) Nuclear Suppliers Group
- b) Australia Group

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- c) Wassenaar Arrangement
- d) Missile Technology Control Regime

ANS: A

Explanation: NSG consists of 48 members which include the five nuclear weapon states US, UK, France, China, and Russia.

- It is not a formal organization, and its guidelines are not binding. Decisions, including on membership, are made by consensus.
- India is not a member of NSG.

Source: The Hindu

Q.9) “GLONASS” or Global Navigation Satellite System developed by which of the following country?

- a) USA
- b) China
- c) European Union
- d) Russia

ANS: D

Explanation: GLONASS is an acronym, which stands for Globalnaya Navigazionnaya Sputnikovaya Sistema, or Global Navigation Satellite System.

- GLONASS is Russia’s version of GPS (Global Positioning System).
- Soviet Union started the development of GLONASS in 1976.
- GLONASS is the most expensive program of the Russian Federal Space Agency, consuming a third of its budget in 2010.

Source: ForumIAS factly

Q.10) In which of the following city, South Asia's first “proton therapy centre” was launched?

- a) Amravati
- b) Chennai
- c) Bangalore
- d) Cochin

ANS: B

Explanation: South Asia's first proton therapy centre was launched in Chennai. Apollo Proton Cancer Centre, equipped with the path-breaking pencil beam technology, offers hope to cancer patients from India and abroad.

- It is a type of radiation therapy which uses protons rather than x-rays to treat cancer.
- It is considered as one of the most advanced forms of external beam radiation therapy for cancer treatment in the world.
- It is also known as Proton Beam Therapy and offers high levels of precision as compared to other treatment options.

Source: The Hindu

Other Technological Developments

Q.1) Consider the following statements with regarding benefits of Gene Editing:

1. It can treat many human diseases & genetic disorders.
2. It can be used to grow healthier food and increasing harvest.
3. It can be used to bring to life extinct species.

Which of statements given above is/are correct?

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

ANS: D

Explanation: It is a type of genetic engineering in which DNA is inserted, deleted or replaced in the genome of an organism using artificially engineered nucleases, or “molecular scissors”.

- Human genome editing can be used to treat many human diseases & genetic disorders like HIV/AIDS, hemophilia etc.
- It could substantially bolster disease resistance in humans & increase life span.
- It could form the basis of highly efficient & cost effective next generation antibiotics (based on bacteriophage viruses).
- Gene editing can be used to protect endangered species or bring to life extinct species.
- It can be used to grow healthier food (via fortification) and increasing harvest.
- It has the potential to slow down the spread of diseases by eliminating its means of transmission. E.g. Gene editing can be used to introduce sterile mosquitoes into the environment.

Source: The Hindu

Q.2) “National Gene Fund” is constituted by Government of India is related to which of the following Act?

- a) Plant varieties Act, 2001
- b) Biological Diversity Act, 2002
- c) Forest conservation Act, 1980
- d) The Regional Centre for Biotechnology Act, 2016

ANS: A

Explanation: The National Gene Fund constituted by Government of India under section 45 of the Plant varieties Act, 2001. Amongst other things, the fund is also utilized for supporting the conservation and sustainable use of genetic resources including in-situ and ex-situ collections.

- As per provisions of section 70 (2)(a) of the PPV&FR Rules, 2003, the Govt. of India in consultation with the Authority instituted the Plant Genome Savior Community Award (five awards of Rs.10 lakhs each).
- This is being awarded since 2009-10, to the farming community / farmers, particularly of the tribal and rural areas engaged in conservation, improvement and preservation of genetic resources of economic plants and their wild relatives in the

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areas of agro-biodiversity hotspots (22 Agro-biodiversity hotspots distributed over 7 agro-ecological zones).

- The Government of India has notified the Protection of Plant Varieties and Farmers Rights (Recognition and Reward from the Gene Fund) Rules, 2012, whereby a farmer who is engaged in the conservation of genetic resources of land races and wild relatives of economic plants and their improvement through selection and preservation shall be entitled to “Plant Genome Saviour Farmer Reward & Farmer Recognition” along with cash prize from National Gene Fund.
- There are 10 rewards each comprising of citation, memento and cash of Rs. One and half lakh each and 20 recognitions each consisting of a cash prize of Rs. One Lakh, citation and memento in a year.

Source: Ministry of Science & Technology

Q.3) “Project Kautilya” is related to which of the following?

- a) Financial Reforms
- b) Water Conservation
- c) Electronic Intelligence
- d) River Conservation

ANS: C

Explanation: According to the Ministry of Defense’s annual report of 2013-14, Kautilya for space-borne ELINT System involves the development of Electronic Intelligence payload for integration on an indigenous mini satellite.

The ELINT includes recordings and analysis of intercepted signals and helps create an RF signature of a radar which can in turn be used for locating and quickly identify the radar in subsequent encounters.

Source: Ministry of Defense

Q.4) Consider the following statements regarding New India Space Limited (NISL):

1. It is a wholly owned Government of India undertaking.
 2. It is under the administrative control of Department of Space
- 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: The Union Government has set up New Space India Limited (NSIL), a wholly owned Government of India undertaking/ Central Public Sector Enterprise (CPSE), under the administrative control of Department of Space (DOS) on 06th March 2019 to commercially exploit the research and development work of Indian Space Research Organization (ISRO) Centre’s and constituent units of DOS.

Source: Agraphari

Q.5) ICESat mission is launched by which of the following space agency?

- a) ISRO
- b) JAXA
- c) European Space Agency
- d) NASA

ANS: D

Explanation: The Ice, Cloud and land Elevation Satellite-2, or ICESat-2, will measure the height of a changing Earth – one laser pulse at a time, 10,000 laser pulses a second.

- Launched in 2018, ICESat-2 will carry a laser altimeter that detects individual photons, allowing scientists to measure the elevation of ice sheets, sea ice, forests and more in unprecedented detail.
- Our planet's frozen and icy areas, called the cryosphere, are a key focus of NASA's Earth science research.
- ICESat-2 will help scientists investigate why, and how much, our cryosphere is changing in a warming climate.
- The satellite will also measure heights across Earth's temperate and tropical regions, and take stock of the vegetation in forests worldwide.

Source: NASA

Q.6) Consider the following statements regarding National Innovation Fund (NIF):

1. It is established with assistance of Department of Biotechnology.
2. Its mission is to help India become a creative and knowledge-based society by expanding policy and institutional space for grassroots technological innovators.

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 National Innovation Foundation (NIF) - India was set up in March 2000 with the assistance of Department of Science and Technology, Government of India.

- It is India's national initiative to strengthen the grassroots technological innovations and outstanding traditional knowledge.
- Its mission is to help India become a creative and knowledge-based society by expanding policy and institutional space for grassroots technological innovators.

Source: Agraphari

Q.7) Which of the following is the implementing agency of National Initiative for Development and Harnessing Innovations (NIDHI)?

- a) NITI Aayog
- b) Department of Science & Technology
- c) CSIR
- d) DPIIT

ANS: B

Explanation: NIDHI (National Initiative for Development and Harnessing Innovations), an umbrella program is pioneered by the Department of Science & Technology (DST), Government of India, for nurturing ideas and innovations (knowledge-based and technology-driven) into successful startups.

- To take forward student innovations in IEDC / NewGen IEDC programme to commercialization stage.
- To promote student startups.
- To accelerate the journey of idea to prototype by providing initial funding assistance.

Source: Agraphari

Q.8) “RAISE 2020” is related to which of the following?

- a) CoVID-19
- b) Environmental Conservation
- c) Artificial Intelligence
- d) Organic farming

ANS: C

Explanation: Responsible AI for Social Empowerment 2020 (RAISE 2020) is a global meeting of minds to use Artificial Intelligence (AI) for social empowerment, inclusion and transformation in key areas like Healthcare, Agriculture, Education and Smart Mobility amongst other sectors.

Source: The Hindu

Q.9) Which of the following is covers under TRIPS PLUS provisions?

- a) Automobiles
- b) Marine products
- c) Pharmaceuticals
- d) Data Exclusivity

ANS: D

Explanation: TRIPs Plus are higher level of protection norms demanded by the developed countries that are not prescribed by the WTO’s TRIPs regime.

- Although they are named as ‘TRIPs-Plus,’ they are not formally related to TRIPs. Rather, the term is used to indicate that these requirements go beyond the minimum standards imposed by TRIPs.
- Many developing countries who are members of FTAs are under pressure to enact these tougher conditions in their patent laws.
- An example for advanced norms under TRIPs Plus is the protection demanded by developed countries for data exclusivity.

Source: The Hindu

Q.10) Fast Breeder Test Reactors (FBTR) is located in which of the following place?

- a) Kaiga
- b) Kundankulam
- c) Kalpakkam
- d) Tarapur

ANS: C

Explanation: Indira Gandhi Centre for Atomic Research (IGCAR) has been carrying out a comprehensive R&D on sodium cooled fast breeder reactor technology for the past 30 years.

- A test reactor, called Fast Breeder Test Reactors (FBTR), is in operation from 1985 onwards which has provided valuable feedback.
- Based on this experience and also taking into account the international experience, design of a 500MWe Prototype Fast Breeder Reactor (PFBR) has been done.
- The design has been peer reviewed by international design agencies.
- Indigenously produced Mixed Uranium & Plutonium Oxide will be used as the fuel in the Prototype Fast Breeder Reactor at Kalpakkam.

Source: Agraphari

Other Technological Developments

Q.1) Consider the following statements regarding the “Primordial Black Holes”:

1. PBHs were formed during the Hot Big Bang phase.
2. PBH can be massively large as 3000kms or be extremely tiny like nucleus of an atom.

Which of the following 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: Primordial Black Holes (PBH) were formed during the Hot Big Bang phase.

- PBH can be massively large as 3000kms or be extremely tiny like nucleus of an atom.
- It is believed that they are formed as a result of collapsing radiations as opposed to the collapse of massive stars, which is the case of any other black holes.
- A recent study on Primordial black holes has confirmed that this marginal rise in potential energy resulted in birth of several PBHs and also emitted very powerful gravitational waves.
- Inter University Centre for Astronomy and Astrophysics (IUCAA), has studied primordial black holes that were born as a result of a tiny bump in the potential energy levels of the universe, at a time when it was expanding rapidly.

Source: The Hindu

Q.2) The “Artemis (human spaceflight programme)” is recently in news is launched by which of the following space agency?

- a) European Space agency
- b) Roscosmos
- c) NASA
- d) JAXA

ANS: C

Explanation: The Artemis program is a US (NASA) government-funded crewed spaceflight program that has the goal of landing "the first woman and the next man" on the Moon, specifically at the lunar South Pole region by 2024.

Source: The Hindu

Q.3) The X-ray Polarimeter Satellite (XPoSat) is a planned space observatory to study polarization of cosmic X-rays – is going to launch by which of the following agency?

- a) ISRO
- b) NASA
- c) JAXA
- d) Both A and B

ANS: A

Explanation: The X-ray Polarimeter Satellite is a planned space observatory to study polarisation of cosmic X-rays.

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- It is planned to be launched in 2021, and to provide a service time of at least five years.
- The telescope is being developed by the Indian Space Research Organisation (ISRO) and the Raman Research Institute.

Source: Indian Express

Q.4) Which of the following country is NOT a member of Quadrilateral Security Dialogue (QSD, also known as the Quad)?

- a) Japan
- b) South Korea
- c) Australia
- d) United States of America

ANS: B

Explanation: The Quadrilateral Security Dialogue (QSD), better known as the 'Quad', started as a strategic dialogue in 2007.

- The dialogue members included India, the US, Australia and Japan.
- It was established to check the growth of Chinese power in what was still referred to as 'Asia-Pacific', and which has since become 'Indo-Pacific'.
- The Quad had its real genesis in the response to the 2004-2005 Asian Tsunami when India showed prowess in spearheading the relief and rescue effort in South East Asia.
- However, the principal aim of the Quad was strategic, with a quest to manage the consequences for the regional balance of power in the Indo-Pacific due to the scale and scope of China's rise.

Source: The Hindu

Q.5) Which of the following pair (s) is/are NOT correctly matched?

- | Operation | : | Associated with |
|---------------------------|---|---------------------------------|
| 1. Operation Samudra Setu | : | Repatriation of Indian citizens |
| 2. Operation Sanjeevani | : | Gulf of Oman |
| 3. Operation Sankalp | : | Maldives |

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: C

Explanation: Indian Navy has launched Operation Samudra Setu - meaning Sea Bridge, as a part of national effort to repatriate Indian citizens from overseas.

- Under Operation Sanjeevani an Indian Air Force (IAF) C-130J transport aircraft delivered 6.2 tons of essential medicines and hospital consumables to Maldives.
- Indian Navy launched Operation Sankalp in the Persian Gulf and the Gulf of Oman on Thursday to reassure Indian flagged vessels transiting through the area following the recent maritime incidents in the region.

Source: The Hindu

Q.6) Which of the following pair (s) is/are correctly matched?

- | Missile /Defense system | : | Origin Country |
|-------------------------|---|----------------|
| 1. Spike Missile | : | Israel |

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2. Tsirkon missile : Russia
3. Maareech torpedo defense system : India

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: D

Explanation: Russian administration announced on Russian Navy would be equipped with hypersonic nuclear strike weapons and underwater nuclear drones.

- Tsirkon hypersonic cruise missile is designed to be carried on surface ships; it is under final phase of testing.

Spike Missile: Spike is an Israeli fire-and-forget anti-tank guided missile and anti-personnel missile.

- It was developed and designed by the Israeli company Rafael Advanced Defense Systems.

Maareech torpedo defense system: It is an Advanced Torpedo Defence System (ATDS) that is capable of being fired from all frontline ships.

- It has been designed and developed indigenously by DRDO.
- It is capable of detecting, locating and neutralizing incoming torpedoes.

Source: Indian Express & ForumIAS

Q.7) Consider the following statements regarding the “project AHANA”:

1. It is a flagship national programme, is working for a world where no child is born with HIV/Acquired Immunodeficiency Syndrome (AIDS).
2. It is implemented by National AIDS Control Organization (NACO) with the support of World Health Organization.

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: AHANA, a flagship national programme, is working for a world where no child is born with HIV/Acquired Immunodeficiency Syndrome (AIDS).

- It focuses on the elimination of mother-to-child transmission of HIV and is implemented by Plan India with support from The Global Fund.
- AHANA is being implemented in close coordination with the National AIDS Control Organisation (NACO) and National Health Mission (NHM) to influence policies and strategies in both the design and implementation phases of the National Health Mission Programme.
- AHANA aims to cover 55% of India’s annual pregnancy load and reach 16.5 million annual pregnancies across 357 districts in 14 states each year with HIV testing.
- AHANA also provides care and support to HIV exposed babies until they are 18 months old, along with facilitating postpartum care for the lactating mother.

Source: The Hindu & ForumIAS

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Q.8) Consider the following statements regarding the “National Biopharma Mission”:

1. It is an Industry-Academia Collaborative Mission of Department of Biotechnology (DBT).
2. It is co-funded by the Asian Development Bank and is being implemented at Biotechnology Research Assistance Council (BIRAC).

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: National Biopharma Mission is an Industry-Academia Collaborative Mission of Department of Biotechnology (DBT).

- It aims for accelerating discovery research to early development for Biopharmaceuticals approved by the Cabinet for a total cost US\$ 250 million.
- It is 50% co-funded by the World Bank is being implemented at Biotechnology Research Assistance Council (BIRAC).
- This program is dedicated to deliver affordable products to the nation with an aim to improve the health standards of India’s population.

Q.9) Consider the following statements regarding “INS Arihant”:

1. It is India’s first indigenously built nuclear submarine.
2. It is a ship submersible ballistic, nuclear (SSBN) submarine.
3. French designers assisted in building the Arihant.

Which of the statements given above is/are correct?

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

ANS: B

Explanation: INS Arihant is India’s first nuclear-powered submarine.

- The ship submersible ballistic, nuclear (SSBN) submarine was launched at the Indian Navy’s dockyard in Visakhapatnam, which is the headquarters of India’s Eastern Naval Command.
- Indian Prime Minister Manmohan Singh, who has inaugurated the vessel into the Indian Navy, asserted that the indigenously built submarine would be used for self defence.
- The name Arihant derives from two words – Ari meaning enemy and Hanth meaning destroy.
- Arihant, India’s first indigenously built nuclear submarine, cost \$2.9bn.
- It was jointly developed by the Indian Navy, Bhabha Atomic Research Centre (BARC) and Defence Research and Development Organisation (DRDO) at the naval dockyard in Visakhapatnam.
- Russian designers assisted in building the vessel.

Source: The Hindu

Q.10) Consider the following statements regarding “Lithium”:

1. It has the lowest density of all metals.
2. It is used in rechargeable batteries for mobile phones, laptops, digital cameras and electric vehicles.

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3. Lithium is abundantly available in India.

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

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

ANS: C

Explanation: Lithium is an alkali metal. It has the lowest density of all metals.

- The most important use of lithium is in rechargeable batteries for mobile phones, laptops, digital cameras and electric vehicles.
- But as well as the lithium-ion batteries for which it has grown in popularity, the highly reactive and flammable alkali mineral – sometimes referred to as “white gold” – is also used in ceramics and glass, lubricating greases, polymer production, and air treatment.
- According to the latest figures from the US Geological Survey (USGS), global lithium production in 2018 reached around 85,000 tonnes – up from 69,000 in the previous year.
- Continued exploration efforts have seen global lithium resource estimates reach 62 million tonnes – a significant proportion of which are located in South America’s “lithium triangle” – an area encompassing Chile, Argentina and Bolivia.
- India currently imports all its lithium needs.
- It imported lithium batteries worth \$1.2 billion in fiscal 2019, up from \$384 million in FY17.
- Recently researchers at the Atomic Minerals Directorate, a unit of India’s Atomic Energy Commission, have estimated lithium reserves of 14,100 tonnes in a patch of land surveyed in Mandya, 100 km from Bengaluru.

Source: The Hindu

Indian Society & Welfare

Q.1) Which of the following is/are NOT correctly matched?

Organization	:	Founder/President
1. South India Liberal Federation	:	C N Annadurai
2. Bahishkrit Hitkarni Sabha	:	Jyotirao Phule
3. Sree Narayana Dharma Paripalana Yogam	:	Narayana Guru

Select the correct answer using the code given below:

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

ANS: B

Explanation: The Justice Party, earlier South Indian Liberal Federation, was a political party in the Madras Presidency of British India. It was established in 1916 by Natesa Mudaliar and co-founded by T. M. Nair and P. Theagaraya Chetty as a result of a series of non-Brahmin conferences and meetings in the presidency.

- Bahishkrit Hitakarini Sabha is a central institution formed by Dr. Babasaheb Ambedkar for removing difficulties of the untouchables and placing their grievances before government.
- S.N.D.P. means Sri Narayana Guru Dharma Paripalana Yogam or sangam. Narayana Guru through his socio religious teachings and writings has become so famous in the socio-religions and political scenario of Kerala during 19th century that all the young people turned towards the reformative movements of Sri Narayana Guru and voluntarily they have redesignated their former youth association (it's called Vivatu sangha) as S.N.D.P. It was registered as a joint stock company in January 1903 with Sri Narayana Guru as life time president.

Source: NCERT

Q.2) The Prerana MyTree, an eco-initiative by students is started in which of the following state?

- a) Kerala
- b) Karnataka
- c) Andhra Pradesh
- d) Tamil Nadu

ANS: B

Explanation: In the wake of 16-year-old Greta Thunberg's call for standing up for climate action, students all over the world are heeding her clarion call.

- On Children's Day, students in Bengaluru and Karnataka are doing their bit for the environment by planting trees.
- Prerana MyTree, an eco-initiative by students from 48,000 government schools across Karnataka will plant about 2.5 lakh trees across the state.
- Prerana MyTree is supported by the state government, the NGO Sikshana Foundation, Dell and Bengaluru-based startup, Eyeris Media.

Source: The Hindu

Q.3) The term Principle of Non-Refoulement often seen in news is related to which of the following?

- a) Economic offender
- b) Refugees
- c) Right to property
- d) Polluter pay principle

ANS: B

Explanation: Non-refoulement is a fundamental principle of international law.

- It prohibits states from forcibly returning refugees to conditions that caused them to flee their homes in the first place, where they would be likely in danger of persecution based on race, religion, nationality, membership of a particular social group or political opinion.
- It is also in charge of the exchequer control and internal audits.

Source: The Hindu

Q.4) Which of the following pair (s) is/are correctly matched?

Organization	:	Founder
1. Dharma Sabha	:	Raja Radhakant Deb
2. Tattvabodhini Sabha	:	Rabindranath Tagore
3. Brahmo Samaj of India	:	Rammohan Roy

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: A

Explanation: Dharma Sabha: The orthodox Hindu led by Raja Radhakant Deb organised the 'Dharma Sabha' with the object of countering the propaganda of BrahmoSamaj.

- Tatvabodhini Sabha: Debendranath Tagore, father of Rabindranath Tagore founded the Tatvabodhini Sabha in 1839 to propagate Rammohun Roy's ideas. The Tatvabodhini Sabha and its organ the Tatvabodhini Patrika promoted a systematic study of India's past in Bengali language and helped spread rational outlook.
- Brahmo Samaj of India: Keshubsen and his followers broke away from Brahmo samaj in 1866 and established what was called the 'Brahmo Samaj of India'.

Source: e-gyankosh

Q.5) The "Global Social Mobility Index" is released by which of the following International Institution?

- a) UNESCO
- b) United Nations Development Programme (UNDP)
- c) World Economic Forum (WEF)
- d) UNICEF

ANS: C

Explanation: India has been ranked very low at 76th place out of 82 countries on a new Social Mobility Index compiled by the World Economic Forum, while Denmark has topped the charts.

The report, released ahead of the 50th Annual Meeting of the WEF, also lists India among the five countries that stand to gain the most from a better social mobility score that seeks

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to measure parameters necessary for creating societies where every person has the same opportunity to fulfill his potential in life irrespective of socioeconomic background.

Source: The Hindu

Q.6) Consider the following statements regarding the World Population Prospects 2019 report:

1. It is published and released by World Economic Forum.
2. According to the report, India is projected to overtake China as the world's most populous country by 2027.

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 key message from the UN's World Population Prospects 2019 report is that national leaders must redouble their efforts to raise education, health and living standards for people everywhere.

- India is projected to become the most populous country by 2027 surpassing China, and host 1.64 billion people by 2050;
- The world as a whole could be home to 8.5 billion people in just over a decade from now, and the number could go up to 9.7 billion by mid-century.
- The largest increases in population between 2019 and 2050 will take place in: India, Nigeria, Pakistan, the Democratic Republic of the Congo, Ethiopia, the United Republic of Tanzania, Indonesia, Egypt and the United States of America (In descending order of the expected increase).
- The UN report shows migration to countries with a falling ratio of working-age people to those above 65 will be steady, as those economies open up to workers to sustain economic production.
- Japan has the lowest such ratio, followed by Europe and the Caribbean; in over three decades, North America, Eastern and Southeastern Asia will join this group.
- India meanwhile will have a vast number of young people and insufficient natural resources left for exploitation. Preparing for the changes and opportunities migration offers will depend on a skills revolution.

Source: The Hindu

Q.7) According to the International Labour Organization (ILO) report, working on a warmer planet: The impact of heat stress on labour productivity and decent work, which of the following sector is the most affected?

- a) Agriculture sector
- b) Manufacturing sector
- c) Construction business
- d) Service sector

ANS: A

Explanation: According to the International Labour Organization (ILO) report, Working on a warmer planet: The impact of heat stress on labour productivity and decent work, Globally two sectors projected to be hit worst are agriculture and construction, with agriculture worse affected.

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- The ILO says 940 million people around the world work in the agricultural sector, which is projected to account for 60% of working hours lost due to heat stress by 2030.
- In construction, an estimated 19% of global working hours are likely to be lost.

Source: The Hindu

Q.8) Which of the following indicators used by Global Hunger Index for ranking countries?

1. Undernourishment
2. Child wasting
3. Child stunting
4. Child mortality

Select the correct answer using the code given below:

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

ANS: D

Explanation: The 14th Global Hunger Index (GHI) 2019 was released recently and it had ranked India a lowly 102 among the 117 countries it had mapped.

- The GHI has been brought out almost every year by Welthungerhilfe (lately in partnerships with Concern Worldwide) since 2000.
- A low score gets a country a higher ranking which implies a better performance.
- The reason for mapping hunger is to ensure that the world achieves –Zero Hunger by 2030 - one of the Sustainable Development Goals of the United Nations.

Four indicators of GHI –

- Undernourishment (which reflects inadequate food availability)
- Child Wasting (which reflects acute under nutrition)
- Child Stunting (which reflects chronic under nutrition)
- Child Mortality (which reflects both inadequate nutrition and unhealthy environment)

Source: The Hindu

Q.9) The “Nagpur Resolution” is often seen in news is related to which of the following?

- a) Green corridors
- b) Public participation
- c) Organic farming
- d) Electoral reforms

ANS: B

Explanation: Nagpur Resolution is a holistic approach for empowering citizens adopted during regional conference organized by DARPG in Nagpur.

- The conference was organized by the Department of Administrative Reforms and Public Grievances (DARPG), in collaboration with the Government of Maharashtra.
- The resolution aims to empower the citizens by policy interventions for better service delivery through timely updating of citizens charters, implementation of enactments and benchmarking standards for continuous improvement.
- It also aims to ensure timely publication of Good Governance Index to identify the quality of governance in 10 sectors especially those pertaining to welfare and infrastructure at the Union, State and District levels.

Source: ForumIAS factly

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Q.10) The “Spandana initiative” is often seen in news is related to which of the following state?

- a) Tamil Nadu
- b) Kerala
- c) West Bengal
- d) Andhra Pradesh

ANS: D

Explanation: It is an initiative of Andhra Pradesh Government to make police stations more approachable for the public, especially women.

- Spandana (means response) centers have been established within the premises of all District Collector offices and police stations.
- These centers mostly have a female receptionist and other staff members who are trained, briefed and sensitized in handling women victims and complainants.
- Spandana centres spread across the district, and each have video conferencing facility, it is easier and cheaper for people to lodge complaints.

Source: The Hindu

Revision

Q.1) With respect to World Economic Forum's Global Gender Gap Report 2020, India has improved its ranking in which of the following indicators?

- a) Political Empowerment
- b) Health and survival
- c) Educational attainment
- d) Economic participation

ANS: A

Explanation: Global Gender Gap Report, 2020 by World Economic Forum benchmarks 153 countries on their progress towards gender parity across four thematic dimensions:

- Economic Participation and Opportunity
- Educational Attainment
- Health and Survival, and
- Political Empowerment.

India slipped four places to 112th rank and has closed two-thirds of its overall gender gap (score of 66.8%).

While India has improved in political empowerment, it has fallen in other three indicators.

India is the only country among the 153 countries studied where the economic gender gap is larger than the political one.

Source: ForumIAS factly

Q.2) Consider the following statements regarding the Commission on the Status of Women (CSW):

1. It is the principal global intergovernmental body exclusively dedicated to the promotion of gender equality and the empowerment of women.
2. It is a functional commission of ECOSOC.
3. It monitors and reviews the progress and problems in the implementation of the Beijing Declaration and Platform for Action.

Which of the statements given above is/are correct?

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

ANS: D

Explanation: Commission on the Status of Women (CSW).

- The Commission on the Status of Women (CSW) is the principal global intergovernmental body exclusively dedicated to the promotion of gender equality and the empowerment of women.
- A functional commission of the Economic and Social Council (ECOSOC), it was established by ECOSOC resolution 11(II) of 21 June 1946.
- The CSW is instrumental in promoting women's rights, documenting the reality of women's lives throughout the world, and shaping global standards on gender equality and the empowerment of women.
- In 1996, ECOSOC in resolution 1996/6 expanded the Commission's mandate and decided that it should take a leading role in monitoring and reviewing progress and

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problems in the implementation of the Beijing Declaration and Platform for Action, and in mainstreaming a gender perspective in UN activities.

Source: Laxmikanth

Q.3) Consider the following statements regarding the provisions of the Protection of Children from Sexual Offences (POCSO) Act:

1. The Act defines a child as any person below sixteen years of age.
2. It is a gender neutral law.
3. It recognizes consensual sexual acts among children or between a child and an adult.

Which of the statements given above is/are correct?

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

ANS: B

Explanation: To deal with child sexual abuse cases, the Government has brought in a special law, namely, The Protection of Children from Sexual Offences (POCSO) Act, 2012. The Act has come into force with effect from 14th November, 2012 along with the Rules framed there under.

Provisions of the Protection of Children from Sexual Offences (POCSO) Act:

- The Act defines a child as any person below eighteen years of age and regards the best interests and well-being of the child as being of paramount importance at every stage, to ensure the healthy physical, emotional, intellectual and social development of the child.
- It defines different forms of sexual abuse, including penetrative and non-penetrative assault, as well as sexual harassment and pornography, and deems a sexual assault to be “aggravated” under certain circumstances, such as when the abused child is mentally ill or when the abuse is committed by a person in a position of trust or authority vis-à-vis the child, like a family member, police officer, teacher, or doctor
- It also seeks to establish Special Courts for speedy trial of such offences. The Act stipulates that a case of Child Sexual Abuse must be disposed of within one year from the date the offence is reported.
- It also provides for relief and rehabilitation of the child, as soon as the complaint is made. The Special Juvenile Police Unit or the local police are also required to report the matter to the Child Welfare Committee within 24 hours of recording the complaint, for long term rehabilitation of the child.
- It is gender neutral law, wherein the law takes cognizance of sexual crimes committed against both girls and boys under the age of 18 years.
- It does not recognize consensual sexual acts among children or between a child and an adult. Prosecutes any person (including a child) for engaging in a sexual act with a child irrespective of whether the latter consented to it.

Source: ForumIAS factly

Q.4) The “Hague Convention” is related to which of the following?

- a) Child adoption
- b) Women empowerment
- c) International Justice
- d) None

ANS: A

Explanation: The Hague Convention protects children and their families against the risks of illegal, irregular, premature or ill-prepared adoptions abroad. To do this, the Hague Convention puts:

- safeguards in place to make sure that all inter-country adoptions are in the best interests of the child and respects their human rights,
- a system in place of cooperation among countries to guarantee that these safeguards are respected, and to prevent the abduction of, sale of, or traffic in children.

For Hague adoptions, the authorities in both countries must agree to go ahead with the adoption. For non-Hague adoptions, requirements may vary from one country to another. The Hague Convention does not allow private adoptions in the child's home country.

Source: The Hindu

Q.5) NATIONAL LEGAL SERVICES AUTHORITY (NALSA) VS UNION OF INDIA case is related to which of the following?

- a) Sexual harassment at work place
- b) Domestic violence
- c) Transgender
- d) Child rights

ANS: C

Explanation: NATIONAL LEGAL SERVICES AUTHORITY (NALSA) VS UNION OF INDIA case was filed by the NALSA to legally recognize persons who fall outside the male/female gender binary, including persons who identify as “third gender”.

- This was a landmark decision where the apex court legally recognised “third gender”/transgender persons for the first time and discussed “gender identity” at length.
- The Court recognised that third gender persons were entitled to fundamental rights under the Constitution and under International law.
- Further, it directed state governments to develop mechanisms to realise the rights of “third gender”/transgender persons.

Source: Laxmikanth

Q.6) The term “Bandicoot” is related to which of the following?

- a) Child labour Alert system
- b) Man-hole cleaning robot
- c) Risk alert app for women
- d) None

ANS: B

Explanation: Bandicoot is a robotic system for manhole and sewer line cleaning aimed at the complete elimination of manual scavenging from the face of earth.

The Greater Hyderabad Municipal Corporation (GHMC) in 2019 procured a 'Bandicoot', which would help end the practice of manual scavenging.

Source: The Hindu

Q.7) The term “Total Polar Compounds” is often seen in news is related to which of the following?

- a) Edible oils
- b) Crude oil

- c) Ocean deposits
- d) Cosmetics and Shampoos

ANS: A

Explanation: During frying, oil undergoes degradation due to their exposure to elevated temperatures which result in changes in the physico-chemical, nutritional and sensory properties of the oil.

- Polar compounds are formed during frying.
- The toxicity of these compounds is associated with several diseases such as hypertension, atherosclerosis, Alzheimer's disease liver diseases etc.
- Therefore, it is essential to monitor the quality of vegetable oils during frying.
- In order to safeguard consumer health, FSSAI has fixed a limit for Total Polar Compounds at 25% beyond which the vegetable oil shall not be used. Therefore, Vegetable Oils should not be repeatedly used for frying.
- The estimation of Total Polar Compounds (TPC) is a widely accepted parameter to decide whether the oil is safe for further use or not.
- The TPC Value is considered a better indicator since it refers to all degraded products from the initial triglycerides present in the oil.

Source: The Hindu

Q.8) Consider the following statements regarding the “five-day annual International Pulsar Timing Array (IPTA) meet”:

1. It is hosted by Pune based National Centre for Radio Astrophysics (NCRA).
2. The IPTA is a collaboration of radio astronomers from a dozen countries across the globe.
3. It uses more than 12 radio telescopes all over the world with an aim to detect ultra-low frequency gravitational waves.

Which of the statements given above is/are correct?

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

ANS: D

Explanation: The Pune-based National Centre for Radio Astrophysics (NCRA) is all set to host the five-day annual International Pulsar Timing Array (IPTA) meet from June 17 to 21.

- The IPTA is a collaboration of radio astronomers from a dozen countries across the globe.
- It uses more than 12 radio telescopes all over the world with an aim to detect ultra-low frequency gravitational waves.
- More than 40 expert international astronomers and 30 international students are expected to participate in the event, besides several Indian participants.
- “The upgrade of the Giant Metrewave Radio Telescope (GMRT) in Pune and the Ooty Radio Telescope (ORT) has helped us meet the parameters for being a full member of the IPTA.
- The current status of the quest for ultra-low frequency Gravitational Waves and the roadmap for future technical and scientific challenges is to be the main focus of the meeting.
- These waves are wrinkles in space-time produced by two massive black holes, each revolving around the other.
- Such black holes, which weigh billion times more than our Sun, are found in the centres of colliding galaxies.

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- These waves affect radio pulses from 10km size stars called radio pulsars by changing ever so slightly the period of radio pulsation of these stars.

Source: Indian Express

Q.9) Consider the following statements regarding “Cell for IPR Promotion and Management (CIPAM)”:

1. It is a professional body which ensures focused action on issues related to IPRs.
2. It works under Department of Science & Technology.

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 professional body under the aegis of Department for Promotion of Industry and Internal Trade (DPIIT) which ensures focused action on issues related to IPRs and addresses the 7 identified objectives of the policy.

- CIPAM assists in simplifying and streamlining of IP processes, apart from undertaking steps for furthering IPR awareness, commercialization and enforcement.
- Simplifying and streamlining of IP processes by formulating and implementing a focused strategy for each policy objective
- Coordination with State level agencies and Ministries/ Departments of the Government of India, industry bodies as well as international agencies; IP cells to be set up
- IPR awareness campaign across the country in schools,colleges/universities and the industry
- Training and sensitization programmes for enforcement agencies and Judiciary; coordination for effective enforcement of IPR rights.
- Study and facilitate implementation of best practices for promotion and commercialization of IP within the country

Source: ForumIAS factly

Q.10) “Lunar X Prize” is recently in news is sponsored by which of the following social media giant?

- a) Face Book
- b) Google
- c) YouTube
- d) Twitter

ANS: B

Explanation: The Google Lunar XPRIZE (GLXP), sometimes referred to as Moon 2.0, was a 2007–2018 inducement prize space competition organized by the X Prize Foundation, and sponsored by Google.

The challenge called for privately funded teams to be the first to land a robotic spacecraft on the Moon, travel 500 meters, and transmit back to Earth high-definition video and images.

Source: The Hindu

Society & Welfare

Q.1) The “Ananthsayanam Ayyangar Committee, Justice Venkatchaliah Commission, Balkrishna Sidke Renke and Idate Commission” related to which of the following?

- a) De-notified tribes
- b) Education
- c) Primary health
- d) Rural women empowerment

ANS: A

Explanation: The committees/commissions related to De-notified/criminal tribes.

- The Ananthsayanam Ayyangar Committee (gave a comprehensive report on how CTA worked throughout India), the CTA was repealed in August 1949 and former “criminal tribes” were de-notified in 1952, when the Act was replaced with the Habitual Offenders Act, 1952 of Government of India.
- In 2002, Justice Venkatchaliah Commission recommended for strengthening the programmes for economic and educational development of De-Notified Tribes (DNTs).
- National Commission for De-notified Nomadic and Semi-Nomadic Tribes was constituted in 2005 under the chairmanship of Balkrishna Sidke Renke, to study the socio-economic conditions of these groups.
- Another National Commission for De-notified Nomadic and Semi-Nomadic Tribes chaired by Bhiku Ramji Idate was constituted in 2015 for a three-year period. It submitted its report viz “Voices of the Denotified, Nomadic & SemiNomadic Tribes” in 2018.

Source: The Hindu

Q.2) Consider the following statements regarding the Higher Education Financing Agency (HEFA):

1. It is a not-profit banking agency established in 2017.
2. It is established to mobilise extra-budgetary resources for building crucial infrastructure in the higher educational institutions under Central Government.

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: HEFA has been set up on 31st May 2017 by the Central Government as a non-profit, Non Banking Financing Company (NBFC).

HEFA was established to mobilize extra-budgetary resources for building crucial infrastructure in the higher educational institutions under Central Government.

NOTE: The Government has approved the authorised equity capital expansion of Higher Education Financing Agency (HEFA) to Rs. 10,000 crore, with Government equity of Rs. 6000 crore.

- An amount corresponding to 10% of the Government equity would be contributed by the partner institution, Canara Bank.

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- All Centrally Funded Educational Institutions in Higher Education, School Education and Medical Education sectors are eligible to avail of loans through HEFA.

Source: ForumIAS factly

Q.3) 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: Indian Express

Q.4) Consider the following statements regarding the report “Healthy States, Progressive India”:

1. It was prepared by NITI Aayog with the help of United Nations Development Programme (UNDP).
2. It ranks states and Union territories innovatively on their year-on-year incremental change in health outcomes.

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 report has been developed by NITI Aayog, with technical assistance from the World Bank, and in consultation with the Ministry of Health and Family Welfare.

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It ranks states and Union territories innovatively on their year-on-year incremental change in health outcomes, as well as, their overall performance with respect to each other.

Source: NITI Aayog

Q.5) Consider the following statements regarding the World Population Prospects 2019 report:

1. It is published and released by United Nations (UN).
2. According to the report, India is projected to overtake China as the world's most populous country by 2050.

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: The key message from the UN's World Population Prospects 2019 report is that national leaders must redouble their efforts to raise education, health and living standards for people everywhere.

- India is projected to become the most populous country by 2027 surpassing China, and host 1.64 billion people by 2050;
- The world as a whole could be home to 8.5 billion people in just over a decade from now, and the number could go up to 9.7 billion by mid-century.
- The largest increases in population between 2019 and 2050 will take place in: India, Nigeria, Pakistan, the Democratic Republic of the Congo, Ethiopia, the United Republic of Tanzania, Indonesia, Egypt and the United States of America (In descending order of the expected increase).
- The UN report shows migration to countries with a falling ratio of working-age people to those above 65 will be steady, as those economies open up to workers to sustain economic production.
- Japan has the lowest such ratio, followed by Europe and the Caribbean; in over three decades, North America, Eastern and Southeastern Asia will join this group.
- India meanwhile will have a vast number of young people and insufficient natural resources left for exploitation. Preparing for the changes and opportunities migration offers will depend on a skills revolution.

Source: ForumIAS factly

Q.6) Consider the following statements regarding the National Safai Karamcharis Finance & Development Corporation (NSKFDC):

1. It is a government undertaking owned by both Central and state governments.
2. It is an apex corporation for the all round socio-economic upliftment of the Safai Karamcharis, Scavengers and their dependants throughout India.
3. It is the nodal agency for implementation of the Central Sector Self Employment Scheme for Rehabilitation of Manual Scavengers (SRMS).

Which of the statements given above is/are correct?

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

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ANS: C

Explanation: National Safai Karamcharis Finance & Development Corporation(NSKFDC), A wholly owned Govt. of India Undertaking under the Ministry of Social Justice & Empowerment (M/o SJ&E) was set up on 24th January 1997 as a Company “Not for Profit” under Section 25 of the Companies Act, 1956.

- NSKFDC is in operation since October, 1997, as an Apex Corporation for the all round socio-economic upliftment of the Safai Karamcharis, Scavengers and their dependants throughout India, through various loan and non-loan based schemes.
- Apart from operating various loan and non-loan based schemes for the upliftment of the target group, NSKFDC is playing a vital role in elimination of manual scavenging - the worst surviving symbol of untouchability.
- NSKFDC has been designated as the Nodal Agency for implementation of the Central Sector Self Employment Scheme for Rehabilitation of Manual Scavengers (SRMS) under the aegis of the Ministry of Social Justice & Empowerment.

Source: ForumIAS factly

Q.7) Consider the following statements regarding the Dr. Ambedkar scheme for Social integration through Inter Caste Marriages:

1. It is applicable to 1000 couples annually.
2. Each couple gets 5 lakh rupees.
3. To avail the scheme, one of the couple should belong to either schedule caste or schedule tribes.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) None

ANS: D

Explanation: Under the Dr. Ambedkar scheme for Social integration through Inter Caste Marriages scheme, 500 couples can apply annually. Each couple gets Rs 2.5 lakh, of which Rs 1.5 lakh is paid up-front. The balance amount is kept as a fixed deposit and released to the couple after three years

- The number of couples who can avail the scheme in a state depends on its Scheduled Caste population as per the 2011 census.
- Among the beneficiary couple, one of the spouses should belong to Scheduled Caste and the other to a Non-Scheduled Caste.
- It shall be the discretion of the Minister of Social Justice & Empowerment & Chairman of Dr. Ambedkar Foundation to sanction the incentive to the Couple.

Source: The Hindu

Q.8) The Sanitation is related to which of the following List of Schedule 7 of Indian Constitution?

- a) Union list
- b) State List
- c) Concurrent list
- d) None

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ANS: B

Explanation: The State List lists subjects under which the legislature of a state may make laws. Public order, police, public health and sanitation; hospitals and dispensaries, betting and gambling are some of the subjects that come under the state.

Source: Laxmikanth

Q.9) The *Time to Care* report, sometimes in news is related to which of the following?

- a) Wealth Inequality
- b) Climate change
- c) Financial exclusion
- d) Refugees

ANS: A

Explanation: India's richest 1% hold more than four-times the wealth held by 953 million people who make up for the bottom 70% of the country's population, while the total wealth of all Indian billionaires is more than the full-year budget.

- Releasing the study *Time to Care*, ahead of the 50th Annual Meeting of the World Economic Forum (WEF), rights group Oxfam also said the world's 2,153 billionaires have more wealth than the 4.6 billion people who make up 60 per cent of the planet's population.
- The report flagged that global inequality is shockingly entrenched and vast and the number of billionaires has doubled in the last decade, despite their combined wealth having declined in the last year.

Source: The Hindu

Q.10) The "Bru/Reang community", sometimes seen in news is related to which of the following state?

- a) Manipur
- b) Jharkhand
- c) Chhattisgarh
- d) Mizoram

ANS: D

Explanation: Twenty-three years after ethnic clashes in Mizoram forced 37,000 people of the Bru (or Reang) community to flee their homes to neighbouring Tripura, an agreement has been signed to allow them to remain permanently in the latter state.

- The agreement among the Bru leaders and the governments of India, Tripura, and Mizoram, signed in New Delhi on January 16, gives the Bru the choice of living in either state.
- In several ways, the agreement has redefined the way in which internal displacement is treated in India.

Source: Indian Express

Society & Development

Q.1) The Government of India launched “Shilpgram and Octave” is related to which of the following?

- a) Environmental Conservation
- b) Defense Radars
- c) Artificial Intelligence
- d) Cultural Promotion

ANS: D

Explanation: To preserve & promote various forms of folk art and culture of the tribals throughout the country including West Bengal, the Government of India has set up seven Zonal Cultural Centres (ZCCs) with headquarters at Patiala, Nagpur, Udaipur, Prayagraj, Kolkata, Dimapur and Thanjavur.

- These ZCCs organize various cultural activities and programmes all over the country on regular basis. These ZCCs under Ministry of Culture are also implementing a number of schemes for promoting the folk/tribal art and culture, details of which are as below:
- Theatre Rejuvenation: To promote theatre activities including stage shows and Production oriented workshops, etc. Honorarium Up to Rs. 30,000/- per show excluding TA & DA is paid. The groups finalized on the basis their credentials as well as the merit of project submitted by them.
- Research & Documentation: To preserve promote and propagate vanishing visual and performing art forms including folk, tribal and classical in the field of music, dance, theatre, literature, fine arts etc. in print/ audio – visual media. The art form is finalized in consultation with state Cultural Department.
- Shilpgram: To promote folk and tribal art and crafts of the zone by organizing seminar, workshops, exhibitions, craft fairs, design development and marketing support to the artisans living in the rural areas.
- Octave: To promote and propagate the rich cultural heritage of North East region comprising of eight States namely Arunachal Pradesh, Assam, Meghalaya, Mizoram, Sikkim, Nagaland, Manipur and Tripura to the rest of India.

Source: ForumIAS factly

Q.2) Consider the following statements with respect to Deen Dayal Upadhyaya Grameen Kaushalaya Yojana (DDU-GKY):

1. It is launched by Ministry of Skill Development in 2014
2. Its aim is to transform rural poor youth into an economically independent and globally relevant workforce

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 Government has informed that around 4.39 lakh candidates have been trained during 2018-19 and 2019-20 under Deen Dayal Upadhyaya Grameen Kaushalaya Yojana (DDU-GKY).

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It was launched in 2014 by the Ministry of Rural Development (MoRD) as a part of the National Rural Livelihood Mission (NRLM). Scheme aim is to transform rural poor youth into an economically independent and globally relevant workforce.

Source: ForumIAS factly

Q.3) Consider the following statements with respect to Pradhan Mantri Laghu Vyapari Maan-dhan Yojana:

1. It is a compulsory and contributory pension scheme
2. Ministry of finance is the nodal ministry to implement the scheme

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: National Pension Scheme for Traders, Shopkeepers and Self-Employed Persons (originally proposed name was, Pradhan Mantri Laghu Vyapari Maan-dhan Scheme) has been launched on 12.09.2019. It is a voluntary and contributory pension scheme.

- The traders in the age group of 18-40 years with an annual turnover, not exceeding Rs.1.5 crore and who is not a member of EPFO/ESIC/NPS/PM-SYM or an income tax payer, can join the scheme.
- Under the scheme, 50% monthly contribution is payable by the beneficiary and equal matching contribution is paid by the Central Government. Subscribers, after attaining the age of 60 years, are eligible for a monthly minimum assured pension of Rs.3,000/-.
- As the Scheme has been launched on 12th September, 2019. It envisages a coverage of about 50 lakh enrolments under the Scheme for 2019-20.
- In order to achieve this, various measures including celebration of Pension Week/ Pension Saptah have been taken.
- All State/UT Governments were requested for popularizing and bringing more awareness about the Scheme.
- The progress of the Scheme is being reviewed regularly in the Ministry at senior level with State/UT Governments, for taking initiatives under Mission Mode. Ministry of Labour & Employment is the nodal ministry to implement the scheme.

Source: ForumIAS factly

Q.4) Consider the following statements with respect to Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP):

1. PMBJP campaign launched by Ministry of Health to provide quality medicines at affordable prices to the masses
2. Bureau of Pharma PSUs of India (BPPI) is the implementation agency for PMBJP

Which of the following above statements is/are correct?

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

ANS: B

Explanation: Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) is a campaign launched by the Department of Pharmaceuticals to provide quality medicines at affordable prices to the masses.

- PMBJP stores have been set up to provide generic drugs, which are available at lesser prices but are equivalent in quality and efficacy as expensive branded drugs.
- It was launched by the Department of Pharmaceuticals in November 2008 under the name Jan Aushadi Campaign.
- Bureau of Pharma PSUs of India (BPPI) is the implementation agency for PMBJP

Source: ForumIAS factly

Q.5) Consider the following statements with respect to National Career service (NCS) Scheme:

1. National Career Service (NCS) is a one-stop solution that provides a wide array of employment and career related services to the citizens of India
2. The scheme is being implemented by the Directorate General of Employment, Ministry of Labour & Employment

Which of the following above statements is/are correct?

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

ANS: C

Explanation: National Career Service is a Five Year Mission Mode Project launched by the Hon'ble Prime Minister on 20th July, 2015. The project is being implemented by the Directorate General of Employment, Ministry of Labour & Employment.

- National Career Service (NCS) is a one-stop solution that provides a wide array of employment and career related services to the citizens of India.
- It works towards bridging the gap between jobseekers and employers, candidates seeking training and career guidance, agencies providing training and career counselling.
- The NCS project reaches out to the people of this country through its three essential pillars i.e. a well designed ICT based portal which is NCS portal, Country wide set up of Model Career Centers and Inter-linkage with all the states through employment exchanges.
- The digital centralized portal provides a wide range of career related services including job search, job matching, rich career content, career counselling, information on Job Fairs, services of local service providers like drivers, plumbers, etc. for households and various other services. This portal facilitates registration of Job Seekers, Employers, Skill Providers, Career Counsellors, Local Service Providers (LSP's), Career Centers, Placement Organisations, Households (for availing the services of the LSP's) and Government Departments.

Source: The Hindu

Q.6) Consider the following statements with respect to the Prime Minister's National Relief Fund (PMNRF):

1. It was established by Indira Gandhi in 1971
2. The fund is recognized as a Trust under the Societies Registration Act of 1860

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: C

Explanation: In pursuance of an appeal by the then Prime Minister, Pt. Jawaharlal Nehru in January, 1948, the Prime Minister's National Relief Fund (PMNRF) was established with public contributions to assist displaced persons from Pakistan.

- The resources of the PMNRF are now utilized primarily to render immediate relief to families of those killed in natural calamities like floods, cyclones and earthquakes, etc. and to the victims of the major accidents and riots.
- Assistance from PMNRF is also rendered, to partially defray the expenses for medical treatment like heart surgeries, kidney transplantation, cancer treatment and acid attack etc.
- The fund consists entirely of public contributions and does not get any budgetary support. The corpus of the fund is invested in various forms with scheduled commercial banks and other agencies.
- Disbursements are made with the approval of the Prime Minister. PMNRF has not been constituted by the Parliament.
- The fund is recognized as a Trust under the Income Tax Act and the same is managed by Prime Minister or multiple delegates for national causes.

Source: ForumIAS factly

Q.7) Article 350B of Indian Constitution has provision relating to which of the following?

- a) Language to be used in representations for redress of grievances.
- b) Special officer for linguistic minorities.
- c) Directive for development of the hindi language.
- d) Facilities for instruction in mother-tongue at primary stage.

Correct Answer: B

Explanation: Originally, the Constitution of India did not make any provision with respect to the Special Officer for Linguistic Minorities.

- Later, the States Reorganisation Commission (1953-55) made a recommendation in this regard.
- Accordingly, the Seventh Constitutional Amendment Act of 1956 inserted a new Article 350-B in Part XVII of the Constitution.

Source: Laxmikanth

Q.8) Which of the following acts relevant provisions are subsumed by Code on Wages Bill, 2019?

1. The Minimum Wages Act, 1948.
2. The Payment of Wages Act, 1936.
3. The Payment of Bonus Act, 1965.
4. The Equal Remuneration Act, 1976.

Select the correct answer using the code given below:

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

ANS: A

Explanation: Lok Sabha passed the Code on Wages Bill, 2019, which amends and consolidates laws relating to wages/bonus and universalizes the provisions of minimum wages and timely payment of wages to all employees irrespective of the sector and wage ceiling.

- At present, the provisions of both Minimum Wages Act and Payment of Wages Act apply to workers below a particular wage ceiling working in Scheduled Employments only.
- “This Bill would ensure Right to Sustenance for every worker and intends to increase the legislative protection of minimum wage from existing about 40% to 100% workforce.”
- A release issued by the Ministry noted that the Code on Wages Bill, 2019, subsumes relevant provisions of the Minimum Wages Act, 1948, the Payment of Wages Act, 1936, the Payment of Bonus Act, 1965 and the Equal Remuneration Act, 1976.
- After the enactment of the Bill, all these four Acts will get repealed.

Source: The Hindu

Q.9) Consider the following statements regarding the “Motor Vehicles (Amendment) Bill, 2019”:

1. It defines golden hour as the time period of up to two hours.
2. It requires the central government to constitute a Motor Vehicle Accident Fund, to provide compulsory insurance cover to all road users in 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: B

Explanation: The Motor Vehicles (Amendment) Bill, 2019 was introduced in Lok Sabha on July 15, 2019. The Bill seeks to amend the Motor Vehicles Act, 1988 to provide for road safety.

- The Act provides for grant of licenses and permits related to motor vehicles, standards for motor vehicles, and penalties for violation of these provisions.
- Compensation for road victims: The central government will develop a scheme for cashless treatment of road accident victims during golden hour.
- The Bill defines golden hour as the time period of up to one hour following a traumatic injury, during which the likelihood of preventing death through prompt medical care is the highest.
- The central government may also make a scheme for providing interim relief to claimants seeking compensation under third party insurance.
- The Bill increases the minimum compensation for hit and run cases as follows: (i) in case of death, from Rs 25,000 to two lakh rupees, and (ii) in case of grievous injury, from Rs 12,500 to Rs 50,000.
- Compulsory Insurance: The Bill requires the central government to constitute a Motor Vehicle Accident Fund, to provide compulsory insurance cover to all road users in India.
- Good Samaritans: The Bill defines a good samaritan as a person who renders emergency medical or non-medical assistance to a victim at the scene of an accident.

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- The assistance must have been (i) in good faith, (ii) voluntary, and (iii) without the expectation of any reward.
- Such a person will not be liable for any civil or criminal action for any injury to or death of an accident victim, caused due to their negligence in providing assistance to the victim.
- Recall of Vehicles: The Bill allows the central government to order for recall of motor vehicles if a defect in the vehicle may cause damage to the environment, or the driver, or other road users.
- Taxi aggregators: The Bill defines aggregators as digital intermediaries or market places which can be used by passengers to connect with a driver for transportation purposes (taxi services). These aggregators will be issued licenses by state further they must comply with the Information Technology Act, 2000.

Source: PRSINDIA

Q.10) Which of the following provisions of the constitution is/are related to “secular state of India”?

1. The term secular was added to the Preamble of the Indian Constitution by the 44th Constitutional Amendment Act of 1978.
2. The Preamble secures to all citizens of India liberty of belief, faith and worship
3. The State shall not deny to any person equality before the law or equal protection of the laws

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: C

Explanation: The Constitution of India stands for a secular state. Hence, it does not uphold any particular religion as the official religion of the Indian State. The following provisions of the Constitution reveal the secular character of the Indian State:

- The term ‘secular’ was added to the Preamble of the Indian Constitution by the 42nd Constitutional Amendment Act of 1976.
- The Preamble secures to all citizens of India liberty of belief, faith and worship.
- The State shall not deny to any person equality before the law or equal protection of the laws (Article 14).
- The State shall not discriminate against any citizen on the ground of religion (Article 15).
- Equality of opportunity for all citizens in matters of public employment (Article 16).
- All persons are equally entitled to freedom of conscience and the right to freely profess, practice and propagate any religion (Article 25).
- Every religious denomination or any of its section shall have the right to manage its religious affairs (Article 26).
- No person shall be compelled to pay any taxes for the promotion of a particular religion (Article 27).

Source: Laxmikanth

Society & Welfare - II

Q.1) “Lorenz curve” is associated with which of the following?

- a) Unemployment
- b) Inflation
- c) Inequality
- d) Climate Change

ANS: C

Explanation: A graph showing the degree of inequality in income and wealth in a given population or an economy.

- It is a rigorous way to measure income inequality. In this method (for example), personal incomes in an economy are arranged in increasing order; the cumulative share of total income is then plotted against the cumulative share of the population.
- The curve’s slope is thus proportional to per capita income at each point of the population distribution.
- In the case of complete equality of income, the lorenz curve will be a straight line and with greater curvature the inequality rises proportionally—the Gini Coefficient measures this inequality.

Source: TMH Ramesh Singh

Q.2) “Grihini Suidha Yojana” is launched by which of the following state?

- a) Andhra Pradesh
- b) Tamil Nadu
- c) Sikkim
- d) Himachal Pradesh

ANS: D

Explanation: Himachal Grihini Suidha Yojana launched in 2018, it aimed to cover households left out under Pradhan Mantri Ujjwala Yojana.

Except families having a pensioner, income taxpayer or any member employed with the government, board, corporation etc, all households of the state without an LPG connection were eligible.

Source: The Hindu

Q.3) “e – Sampada” is recently in news is launched by which of the following?

- a) Ministry of Food Processing Industries
- b) Ministry of Animal Husbandry and Fisheries
- c) NITI Aayog
- d) Ministry of Housing and Urban Affairs

ANS: D

Explanation: The Ministry of Urban Affairs launched a new Web Portal and Mobile App, e-Sampada which provides a single window for all these services including allotment for over one lakh government residential accommodations, office space allotment to government organisations in 28 cities and venues like 5, Ashoka Road for social functions.

In its endeavour to provide ‘One Nation, One System’, the erstwhile four websites (gpra.nic.in, eawas.nic.in, estates.gov.in, holidayhomes.nic.in), and two Mobile Apps (m-

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Awasthi & Ashoka) of the Directorate of Estates have been integrated into one, which paves the way for all services on the same platform throughout the country.

Source: The New Indian Express.

Q.4) 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: Press Information Bureau

Q.5) With reference to the “Municipal bonds”, which of the following statements is/are correct?

1. It is a kind of debt instrument where investors offer loans to local governments.
2. Surat was the first city in south Asia to launch a municipal bond.

Select the correct answer using the code given below:

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

ANS: A

Explanation: A municipal bond is a kind of debt instrument where investors offer loans to local governments.

They are issued by civic bodies for specific projects and usually have a 10-year tenure. The ULB pays the annual interest on the bonds to the investor at the decided rate.

- Ahmedabad was the first city in south Asia to launch a municipal bond of Rs 100 crore in 1998, which was completely subscribed.
- Surat Municipal Corporation was the second city in Gujarat to announce bonds in 2018, to fund a sewage treatment project worth Rs 450 crore.
- The Vadodara Municipal Corporation (VMC) is expected to launch municipal bonds in January, and will become the third Urban Local Body (ULB) in Gujarat to use this method to raise money to fund development work sanctioned under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT).

Source: Indian Express

Q.6) With reference to the “Adopt a Heritage: Apni Dharohar, Apni Pehchaan project”, which of the following is/are eligible to adopt a heritage?

1. Individuals

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2. Non Governmental Organizations

3. Public sector companies

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: D

Explanation: The Ministry of Tourism, Government of India runs the “Adopt a Heritage: Apni Dhरोhar, Apni Pehchaan” project which is a collaborative effort by the Ministry of Tourism, Ministry of Culture, Archaeological Survey of India and State/ UTs Government for developing tourism amenities at heritage/ natural/ tourist sites spread across India for making them tourist friendly, in a planned and phased manner which I started in September 2017.

The project aims to encourage companies from public sector, private sector, trusts, NGOs, individuals and other stakeholders to become ‘Monument Mitras’ and take up the responsibility of developing and upgrading the basic and advanced tourist amenities at these sites as per their interest and viability in terms of a sustainable investment model under CSR. They would also look after the Operation & Maintenance of the same.

Source: Indian Express

Q.7) With reference to the “Sentinelese”, which of the following statements is/are correct?

- 1. The population of Sentinelese is shown increasing trend in last decade.
- 2. Sentineles are Negrito tribes who inhabited the North Sentinel Island of Andaman.

Select the correct answer using the code given below:

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

ANS: B

Explanation: The Population growth of Sentinelese does not show any improvement in the last Decade.

- The Sentinelese, with a population of about 50 to 100 on the North Sentinel Island, are not only among the most isolated of nearly 70 PVTGs across the country.
- The Andaman Islands are home to four ‘Negrito’ tribes namely the Great Andamanese, Onge, Jarawa and Sentinelese.
- Nicobar Islands are home to two ‘Mongoloid’ tribes – the Shompen and Nicobarese.

Source: The Hindu

Q.8) “Global Pravasi Rishta Portal” is recently seen in news is launched by?

- a) NITI Aayog
- b) Ministry of External Affairs
- c) Ministry of Home Affairs
- d) Ministry of Culture

ANS: B

Explanation: Ministry of External Affairs has launched the Global Pravasi Rishta Portal and app in order to connect with nearly 3.12 crore Indians across the world.

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It acts as a dynamic communication platform by facilitating a three-way communication between the Indian Missions (meaning the embassies), external affairs ministry and Indian diaspora.

Source: Indian Express

Q.9) “Human Freedom Index 2020” is released by which of the following?

- a) World Economic Forum
- b) Transparency International
- c) United Nations
- d) Fraser Institute

ANS: D

Explanation: The Human Freedom Index 2020 has been jointly released by Fraser Institute in Canada and the Cato Institute in the United States.

- The index presents a broad measure of human freedom, understood as the absence of coercive constraints.
- It uses a 0 to 10 scale to measure personal freedom based on parameters such as rule of law, safety and security, identity and relationships, freedom of movement, economic freedom, and ability of individuals to make their own economic decisions without government or crony interference.
- New Zealand has topped the index followed by Switzerland and Hong Kong. India has been placed at the 111th spot out of 162 countries.

Source: The Hindu

Q.10) Recently, India and which of the following country jointly launched “Virtual Vaccines Hub”?

- a) France
- b) Germany
- c) United Kingdom
- d) United States of America

ANS: C

Explanation: India and the UK Government have launched a Virtual Vaccines Hub. It aims to distribute vaccines for Covid-19 and other deadly viruses by sharing knowledge on clinical trials and regulatory approvals and get vaccines to people who need them most in a safe, secure and energy-efficient way.

Source: Times of India

Disaster Management

Q.1) Disaster Management act was enacted in which of the following year?

- a) 2000
- b) 2005
- c) 2007
- d) 2014

ANS: B

Explanation: The Disaster Management Act, 2005 has been enacted by the Parliament of India for the effective management of disasters.

Source: Shankar IAS

Q.2) Consider the following statements regarding National Disaster Management Authority (NDMA):

- 1. It is the apex constitutional body for disaster management in India.
- 2. Home minister is the chair person of NDMA.

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: The National Disaster Management Authority (NDMA) is the apex statutory body for disaster management in India.

The NDMA was formally constituted on 27th September 2006, in accordance with the Disaster Management Act, 2005 with Prime Minister as its Chairperson and nine other members, and one such member to be designated as Vice-Chairperson.

Source: ForumIAS factly

Q.3) Consider the following statements regarding National Disaster Responsive Force (NDRF):

- 1. It functions under ministry of Home Affairs.
- 2. It consists of both military and Para-military battalion forces.

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: Today NDRF is a distinguished, unique Force across the country functioning under the Ministry of Home Affairs, Government of India, within the overall command, control and leadership of the Director General, NDRF.

- At present, National Disaster Response Force consists of 12 battalions, three each from the BSF and CRPF and two each from CISF, ITBP and SSB.

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- Each battalion have 18 self-contained specialist search and rescue teams of 45 personnel each including engineers, technicians, electricians, dog squads and medical/paramedics.
- The total strength of each battalion is 1,149. All the 12 battalions have been equipped and trained to respond natural as well as man-made disasters.
- Battalions are also trained and equipped for response during chemical, biological, radiological and nuclear (CBRN) emergencies.

Source: <http://www.ndrf.gov.in/about-us>

Q.4) Consider the following statements regarding District Disaster Management Authority (DDMA):

1. Disaster management act provides for constitution of DDMA for every district of a state.
 2. It is headed by local elected representative.
 3. It is responsible for planning, coordination and implementation of disaster management.
- Which of the statements given above is/are correct?

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

ANS: D

Explanation: Section 25 of the DM Act provides for constitution of DDMA for every district of a state.

- The District Magistrate/ District Collector/Deputy Commissioner heads the Authority as Chairperson besides an elected representative of the local authority as Co-Chairperson except in the tribal areas where the Chief Executive Member of the District Council of Autonomous District is designated as Co-Chairperson.
- Further in district, where Zila Parishad exists, its Chairperson shall be the Co-Chairperson of DDMA.
- The District Authority is responsible for planning, coordination and implementation of disaster management and to take such measures for disaster management as provided in the guidelines.
- The District Authority also has the power to examine the construction in any area in the district to enforce the safety standards and to arrange for relief measures and respond to the disaster at the district level.

Source: Ministry of Home Affairs

Q.5) The “Ring of Fire” is often seen in news is located around which of the following Ocean?

- a) Pacific Ocean
- b) Arctic Ocean
- c) Antarctic Ocean
- d) Atlantic Ocean

ANS: A

Explanation: Since 1970, more than two million people have been killed by natural disasters in the ‘Ring of Fire’ region around the Pacific Ocean, an average of 43,000 a year, as per the United Nations (UN).

Source: The Hindu

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Q.6) Consider the following statements regarding National Hydrology Project:

1. It was started in 2016 as a Central Sector Scheme.
2. It is an initiative of the Ministry of Jal Shakti and is supported by the World Bank.

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: National Hydrology Project was started in 2016 as a Central Sector Scheme with 100% grant to implementing agencies on pan India basis.

- It is an initiative of the Ministry of Jal Shakti and is supported by the World Bank.
- It has a budget outlay of Rs. 3680 crore to be spent over a period of 8 years.

Aim:

- To improve the extent, reliability and accessibility of water resources information.
- To strengthen the capacity of targeted water resource management institutions in India.
- To facilitate acquisition of reliable information efficiently this would pave the way for an effective water resource development and management.

Project Beneficiaries:

- Central and state implementing agencies responsible for surface and/or groundwater planning and management, including river basin organizations.
- Users of the Water Resources Information System (WRIS) across various sectors and around the World.

Source: <http://nhp.mowr.gov.in/HomeNew/NHPIIndexnew.aspx>

Q.7) Consider the following statements regarding Sendai Framework Agreement:

1. It was endorsed by the UN General Assembly following the 2015 Third UN World Conference on Disaster Risk Reduction (WCDRR).
2. The timeline for agreement is 2015 to 2030.

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: The Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai Framework) was the first major agreement of the post-2015 development agenda and provides Member States with concrete actions to protect development gains from the risk of disaster.

- The Sendai Framework works hand in hand with the other 2030 Agenda agreements, including The Paris Agreement on Climate Change, The Addis Ababa Action Agenda on Financing for Development, the New Urban Agenda, and ultimately the Sustainable Development Goals.
- It was endorsed by the UN General Assembly following the 2015 Third UN World Conference on Disaster Risk Reduction (WCDRR).

Source: <https://www.undrr.org/implementing-sendai-framework/what-sendai-framework>

Q.8) Consider the following statements regarding Disaster Management in India:

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1. Constitution of India does not explicitly mention the word Disaster.
 2. Central government used the concurrent subject to pass disaster management act.
- 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: Constitution of India does not have any explicit provision on the subject of disaster management. ... As a result, the subject of disaster management failed to secure a place in the elaborate scheme of division of vital subjects between the centre and states.

- As far as the DM Act is concerned, the Seventh Schedule to the Constitution does not have an explicit entry on disaster management.
- Hence, Parliament had to trace its legislative competence for passing the DM Act to the Concurrent List entry on “Social security and social insurance; employment and unemployment”.

Source: <https://vidhilegalpolicy.in/blog/covid-19-and-the-need-for-clear-centre-state-roles/>

Q.9) Which of the following factors are affecting the ocean salinity?

1. Evaporation
2. Freezing of Ice
3. Rivers
4. Wind flow

Select the correct answer using the code given below:

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

ANS: D

Explanation: All waters in nature, whether rain water or ocean water, contain dissolved mineral salts. Salinity is the term used to define the total content of dissolved salts in sea water. Factors affecting ocean salinity are mentioned below:

- The salinity of water in the surface layer of oceans depends mainly on evaporation and precipitation.
- Surface salinity is greatly influenced in coastal regions by the fresh water flow from rivers, and in Polar Regions by the processes of freezing and thawing of ice.
- Wind, also influences salinity of an area by transferring water to other areas.
- The ocean currents contribute to the salinity variations. Salinity, temperature and density of water are interrelated. Hence, any change in the temperature or density influences the salinity of water in an area.

Source: NCERT

Q.10) Consider the following statements regarding the Storm Surge:

1. Storm surge is the abnormal rise in seawater level during a storm, measured as the height of the water above the normal predicted astronomical tide.
2. The amplitude of the storm surge at any given location depends on the orientation of the coast line with the storm track, the intensity, size, speed of the storm, and the local bathymetry.

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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: Storm Surge.

- Storm surge is the abnormal rise in seawater level during a storm, measured as the height of the water above the normal predicted astronomical tide.
- The surge is caused primarily by a storm's winds pushing water onshore.
- The amplitude of the storm surge at any given location depends on the orientation of the coast line with the storm track;
- The intensity, size, and speed of the storm; and the local bathymetry.

Source: NOAA

Various Security Forces & Their Mandate & Miscellaneous

Q.1) Which of the following is the oldest Para-military organization in India?

- a) Assam Rifles
- b) Central Reserve Police Force
- c) Central Industrial Security Force
- d) Sashastra Seema Bal

ANS: A

Explanation: The Assam Rifles is India's oldest paramilitary force which has been at the forefront of keeping India safe for nearly 19 decades.

Source: <https://www.aninews.in/news/national/general-news/rajnath-singh-greets-personnel-on-186th-rising-day-of-assam-rifles20210324104702/>

Q.2) Which of the following Para-military force guards the Indo-Nepal border?

- a) Central Reserve Police Force
- b) Central Industrial Security Force
- c) Indo-Tibetan Border Police
- d) Sashastra Seema Bal

ANS: D

Explanation: The border patrol teams have also been asked to remain extra alert in Uttarakhand near the Kalapani area.

While the ITBP guards the India-China border, the SSB guards the Indo-Nepal and Bhutan border — to heighten vigilance.

Source: <https://www.newindianexpress.com/nation/2020/sep/03/amid-lac-standoff-forces-at-nepal-border-told-to-be-extra-alert-mha-sources>.

Q.3) Which of the following Para-military force was called as the Crown Representative Police?

- a) CISF
- b) SSB
- c) CRPF
- d) ITBP

ANS: C

Explanation: The Central Reserve Police Force (CRPF) is the premier central police force of the Union of India for internal security.

Originally constituted as the Crown Representative Police in 1939, it is one of the oldest Central Para military forces (now termed as Central Armed Police Force).

Source: <https://crpf.gov.in/history-crpf.htm>

Q.4) Which agency is a federal contingency world classes zero force to deal with anti-terrorists activities in all its manifestations?

- a) National Security Guard
- b) Anti-terrorists Squad
- c) Central Reserve Police Force

d) Research & Wing Analysis

ANS: A

Explanation:

NSG is Federal Contingency World Class Zero Error Force to deal with anti-terrorist activities in all its manifestation. The NSG is a Force specially equipped and trained to deal with specific situations and is therefore, to be used only in exceptional circumstances to thwart serious acts of terrorism.

Ethos : The Ethos of the NSG is premised on the following:-

- Pursuit for excellence
- Lead from the front.
- Zero Error.
- Speed, surprise, stealth, precision and accuracy are its hall marks.

Source: <https://www.nsg.gov.in/about-us/about-nsg>

Q.5) Consider the following statements regarding Central Industrial Security Force:

1. It was established by executive resolution.
2. It provides security to the premises staff along with the security of property and establishments.

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: CISF is an armed force of the Union established under an Act of Parliament, "Central Industrial Security Force Act, 1968 (50 of 1968)".

- In the year 1969, the strength of the force established with the help of 3129 personnel, was increased to 1,41,421 as of 01.03.2020.
- CISF has 12 reserve battalions, 08 training institutes and 63 other formations.
- According to the mandate, CISF provides security to the premises staff along with the security of property and establishments.
- CISF is providing security to the strategic establishment, including the Department of Space, the Department of Atomic Energy, the Airports, the Delhi Metro, the ports, the historical monuments and the basic areas of Indian economy such as petroleum and natural gas, electricity, coal, steel and mining.
- CISF is providing protection to some private sector units and important government buildings in Delhi.
- Presently, CISF is also providing security to the protected persons classified as Z Plus, Z, X, Y.
- CISF is the only force with a customized and dedicated fire wing.

Source: <https://www.cisf.gov.in/cisfeng/about-us/>

Q.6) Which of the following force is a compensatory cost force?

- a) CISF
- b) SSB
- c) CRPF
- d) NSG

ANS: A

Explanation: CISF is a compensatory cost force.

Source: <https://www.cisf.gov.in/cisfeng/about-us/>

Q.7) Which force is deployed on border guarding duties from Karakoram Pass in Ladakh to Jachep La in Arunachal Pradesh covering 3488 km of Indo-China Border?

- a) CRPF
- b) CISF
- c) SSB
- d) ITBP

ANS: D

Explanation: ITBPF was raised on 24 Oct, 1962. Presently, ITBP is deployed on border guarding duties from Karakoram Pass in Ladakh to Jachep La in Arunachal Pradesh covering 3488 km of Indo-China Border and manning Border Outposts on altitudes ranging from 9000' to 18700' in the Western, Middle and Eastern sectors of the Indo-China Border.

- ITBPF is a specialized mountain force and most of the officers and men are professionally trained mountaineers and skiers.
- Being the first responder for natural disaster, ITBPF has been carrying out numerous rescue and relief operations across the country.

Source: <https://www.itbpolice.nic.in/indexenglish.html>

Q.8) “Lawalong Wildlife Sanctuary” is located in which of the following state?

- a) Kerala
- b) Arunachal Pradesh
- c) Jharkhand
- d) Chhattisgarh

ANS: C

Explanation: Lawalong Wildlife Sanctuary was set up in 1978 to the southwest of Hazaribagh in the Chhotanagpur plateau area.

- It covers an area of about 211 sq. kms. The terrain is undulating and dissected by rivers and streams.
- Located in the south-west part of Chatra district, Lawalong sanctuary has a rich wildlife, including tiger and bison.
- Different species of birds and serpents are also found here.
- A variety of wildlife including Tiger, Panther, Hyena, Spotted Deer, Wild Boar, Nilgai are available in this sanctuary.

Source: The Hindu

Q.9) Which of the following is/are consists of “River valleys” of Arunachal Pradesh?

1. The Siang Valley
2. The Kameng Valley
3. The Tirap Valley

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: D

Explanation: All three valleys are located in Arunachal Pradesh.

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- Rivers constitute an important part of the topography of the state. Arunachal Pradesh is divided into five major river valleys: 1. The Siang Valley 2. The Kameng Valley 3. The Subansiri Valley 4. The Lohit Valley 5. The Tirap Valley.
- These valleys are named after the important rivers of the state.
- The major rivers and their tributaries traversing the state are Siang, Kameng, Subansiri, Subansiri, Lohit, Tirap etc.
- All these and other countless rivers and rivulets are fed by snow from the Himalayas. Therefore, mostly these small rivulets are perennial in nature.

Source: Shodhganga

Q.10) 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: The World Commission on Environmental Law (WCEL) 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

Miscellaneous

Q.1) Which of the following is/are type (s) of Government Securities (G-Sec)?

1. Treasury Bills (T-bills)
2. Cash Management Bills (CMBs)
3. Dated Government Securities

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: D

Explanation: A Government Security (G-Sec) is a tradeable instrument issued by the Central Government or the State Governments. It acknowledges the Government's debt obligation.

Such securities are short term (usually called treasury bills, with original maturities of less than one year) or long term (usually called Government bonds or dated securities with original maturity of one year or more).

In India, the Central Government issues both, treasury bills and bonds or dated securities while the State Governments issue only bonds or dated securities, which are called the State Development Loans (SDLs).

G-Secs carry practically no risk of default and, hence, are called risk-free gilt-edged instruments.

- Treasury Bills (T-bills): Treasury bills or T-bills, which are money market instruments, are short term debt instruments issued by the Government of India and are presently issued in three tenors, namely, 91 day, 182 day and 364 day.
- Cash Management Bills (CMBs): In 2010, Government of India, in consultation with RBI introduced a new short-term instrument, known as Cash Management Bills (CMBs), to meet the temporary mismatches in the cash flow of the Government of India. The CMBs have the generic character of T-bills but are issued for maturities less than 91 days.
- Dated G-Secs: Dated G-Secs are securities which carry a fixed or floating coupon (interest rate) which is paid on the face value, on half-yearly basis. Generally, the tenor of dated securities ranges from 5 years to 40 years.

Source: RBI

Q.2) "Mission Purvodaya" is often seen in news is related to which of the following?

- a) Steel sector
- b) Coal sector
- c) Refinery sector
- d) Cement sector

ANS: A

Explanation: Mission Purvodaya in steel sector envisions creating an integrated steel hub in Eastern India.

- With abundance of raw materials, strategic geographical location and strong and developing connectivity, Odisha is well poised to be the heart of this eastern steel hub.

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- The Mission is rolled out by Union Petroleum and Natural Gas & Steel Ministry.
- More than 75% of India's envisioned incremental steel capacity will come from eastern India, with Odisha alone crossing 100 MTPA.
- In Odisha, Kalinganagar will be developed as the epicenter of Mission Purvodaya.

Source: The Hindu

Q.3) Consider the following statements regarding the Vizag-Chennai Industrial Corridor (VCIC):

1. It is part of Kolkata-Kanyakumari East Coast Economic Corridor.
2. It is funded by Asian Infrastructure Investment Bank (AIIB).

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: Asian Development Bank (ADB) had prepared Conceptual Development Plan (CDP) for Vizag-Chennai Industrial Corridor (VCIC).

- The Andhra Pradesh government has mooted development of nodes in Visakhapatnam, Machilipatnam, Donakonda and on the Yerpedu-Srikalahasti stretch.
- The VCIC has been identified for development in the first phase of Kolkata-Kanyakumari East Coast Economic Corridor.
- The ADB, which prepared the concept paper, has agreed to give \$500 million towards multi-tranche financing facility and policy-based loan worth \$125 million.

Source: The Hindu

Q.4) Consider the following statements regarding the Farmer Producer Organization (FPO):

1. Farmers, Local representatives and other interested parties are the shareholders of FPO.
2. NABARD has dedicated funds to promote FPOs.

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: An FPO, formed by a group of farm producers, is a registered body with producers as shareholders in the organization.

- It deals with business activities related to the farm produce and it works for the benefit of the member producers.
- Small Farmers' Agribusiness Consortium (SFAC) is providing support for promotion of FPOs.
- NABARD has dedicated Funds like Producer Organisation Development Fund (PODF) and PRODUCE for promotion of FPOs.
- Financing FPOs through NABARD's subsidiary NABKISAN Finance Ltd., digitisation of FPO data, development of performance measurement tool, etc. have also contributed to the ongoing efforts.

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- Besides, NABARD is running an awareness campaign on the role of FPOs in building resilience against climate change, increase in productivity and optimal efficiency in the agri value chain.

Source: NABARD

Q.5) The Global Education Monitoring Report is released by which of the following?

- a) United Nations Children's Fund (UNICEF)
- b) United Nations Educational, Scientific and Cultural Organization (UNESCO)
- c) World Bank
- d) World Economic Forum

ANS: B

Explanation: The Global Education Monitoring Report is released by the United Nations Educational, Scientific and Cultural Organization (UNESCO).

Source: The Hindu

Q.6) The Bhilwara model is recently seen in news is related to which of the following?

- a) CoVID-19 tackling
- b) Controlling locust attack
- c) Migrants mobilization
- d) Global Warming

ANS: A

Explanation: The Bhilwara COVID-19 containment “model” refers to the steps taken by the administration in Rajasthan’s Bhilwara district to contain the disease, after it emerged as a hotspot for coronavirus positive cases.

- The measures taken by the Rajasthan government include imposing a curfew in the district which also barred essential services, extensive screening and house-to-house surveys to check for possible cases, and detailed contact tracing of each positive case so as to create a dossier on everybody they met ever since they got infected.
- The Bhilwara model (in Rajasthan) has become a successful example for the world to emulate in tackling the Covid-19 crisis because of the efforts of local bureaucracy.
- This earmarks the importance of the role of civil services in containing the spread of disease at community level.

Source: The Hindu

Q.7) Consider the following statements regarding the recently discovered mineral Goldschmidtite:

1. It was discovered in deep sea mines of Arctic Ocean.
2. It has high concentrations of elements like magnesium, iron, niobium and potassium.

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: A new, curious mineral has been discovered inside a diamond unearthed from a mine in South Africa.

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- The mineral has been named goldschmidtite, after Victor Moritz Goldschmidt, the Norwegian scientist acknowledged as the founder of modern geochemistry.
- Goldschmidtite has an unusual chemical signature for a mineral from Earth's mantle, according to the University of Alberta, a student of which discovered it.
- While the mantle is dominated by elements such as magnesium and iron, goldschmidtite has high concentrations of niobium, potassium and the rare earth elements lanthanum and cerium.
- PhD student Nicole Meyer found a single grain of the mineral in the diamond, unearthed in Koffiefontein, South Africa.
- The university described it as dark green and opaque.

Source: NCERT

Q.8) Consider the following statements regarding the Rare Earth Elements (REE):

1. The rare earth elements are all metals.
2. Rare earth element Cerium Oxide is used for polishing Granite and Marble stones.

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: Rare earth elements are a group of seventeen chemical elements that occur together in the periodic table.

- The group consists of yttrium and the 15 lanthanide elements (lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium).
- Scandium is found in most rare earth element deposits and is sometimes classified as a rare earth element.
- The rare earth elements are all metals and the group is often referred to as the "rare earth metals."
- These metals have many similar properties, and that often causes them to be found together in geologic deposits.
- They are also referred to as "rare earth oxides" because many of them are typically sold as oxide compounds.
- A large number of alloys are made more durable by the addition of rare earth metals.
- Glass, granite, marble, and gemstones are often polished with cerium oxide powder. Many motors and generators contain magnets made with rare earth elements.
- Phosphors used in digital displays, monitors, and televisions are created with rare earth oxides. Most computer, cell phone, and electric vehicle batteries are made with rare earth metals.

Source: The Hindu

Q.9) The Placer deposits of India mostly/highly located at which of the following?

- a) Coastal areas
- b) Deccan Plateau
- c) Himalayas
- d) Northern Plains

ANS: A

Explanation: The costal land forms of east and west coasts of the Nation contain significantly important placer mineral deposits.

- The minerals like ilmenite, rutile, garnet, zircon, monazite and sillimanite are occurring in these deposits.
- The controls like source rock geology, coastal geomorphology effective drainage network and favorable climatic conditions favored the formation of rich placer deposits in coastal environments.
- Important deposits occur in the coastal environments of Kerala (Chavara), Tamil Nadu (Manavalakurichi, Midalam, Vayakallur), Andhra Pradesh (Kakinada, Pentakota, Bhimunipatnam, Konada – Kandivalasa – Mukumpeta – Bendi creek – Donkar), (Sanaekasangi – Gopalpur, Chatrapur, Bajarkot, Satpara and Puri) and Maharastra (Kalbadevi, Newre and Malgund).

Source: The Hindu

Q.10) Which of the following state (s)/place (s) of India is/are come (s) under Seismic Zone IV?

1. Entire North eastern India
2. Delhi-NCR region
3. Andaman & Nicobar Islands

Select the correct answer using the codes given below:

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

ANS: C

Explanation: The Bureau of Indian Standards has classified regions in India into four seismic zones on the basis of historical seismic activity.

- These are zones II, III, IV and V. Among these, Zone V is the most seismically active region and zone II is the least active.
- According to Modified Mercalli scale, the seismic zone intensity is/are classified as zone II (low intensity zone), zone III (moderate intensity zone), zone IV (severe intensity zone) and zone V (very severe intensity zone).

According to the Ministry of Earth Sciences:

- Zone V includes entire northeastern India, parts of Jammu and Kashmir and Himachal Pradesh, Uttaranchal, Rann of Kutch in Gujarat, parts of North Bihar and Andaman & Nicobar Islands.
- Zone-IV includes the remaining parts of Jammu and Kashmir and Himachal Pradesh. Delhi-NCR region, Sikkim, northern parts of Uttar Pradesh, Bihar and West Bengal, parts of Gujarat and small portions of Maharashtra near the west coast and Rajasthan also fall in this zone.
- Regions under zone III are Goa, Kerala, Lakshadweep, and remaining parts of Uttar Pradesh, Gujarat and West Bengal, parts of Punjab, Rajasthan, Madhya Pradesh, Bihar, Jharkhand, Chhattisgarh, Maharashtra, Orissa, Andhra Pradesh, Tamilnadu and Karnataka.
- The remaining portion of the country falls under zone II.

Source: Indian Express

Revision

Q.1) Consider the following statements regarding the Global Hunger Index (GHI) 2019:

1. It is released by Food and Agriculture Organization (FAO).
2. India has improved its GHI score continuously from 2000 to 2019.

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: The GHI has been brought out almost every year by Welthungerhilfe (lately in partnerships with Concern Worldwide) since 2000.

- In 2018, India was ranked 103 out of 119 countries. In 2000, the country was ranked 83 out of 113 countries. Now, with 117 countries in the fray, it has dropped to 102.
- India is ranked 102 of 117 countries in the Global Hunger Index 2019, behind its neighbours Nepal, Pakistan and Bangladesh.
- It's GHI score has also decelerated — from 38.9 in 2005 to 32 in 2010 and then from 32 to 30.3 between 2010 and 2019.
- The GHI score is calculated on four indicators — undernourishment; child wasting, the share of children under the age of five who are wasted (that is, who have low weight for their height, reflecting acute under-nutrition); child stunting, children under the age of five who have low height for their age, reflecting chronic under-nutrition; and child mortality, the mortality rate of children under the age of five.

Source: The Hindu

Q.2) Which of the following report/reports is/are released by World Bank?

1. Global Economic Prospect Report.
2. Global Financial Development Report.
3. Global Financial Stability Report.

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: Both Global Economic Prospect Report and Global Financial Development Report are released by World Bank.

NOTE: Global Financial Stability Report is released by International Monetary Fund (IMF).

Source: World Bank

Q.3) “Sargent plan” during British period in India is related to which of the following?

- a) Education
- b) Finance
- c) Partition
- d) Railways

ANS: A

Explanation: The goal of the Sargent plan was the reorganization of the entire education system of India. The commission under the chairmanship of the John Sargent submitted its report to the Central Advisory Board of Education CABE in (1944). This scheme of post war educational development was mainly focused on the quality enhancement of higher education (ie. university system).

Recommendations-

- Pre-primary basic school for 3-6 years age group.
- Compulsory and free education for 6-14 year age group.
- High school education of two types – Academic & Technical and Vocational.
- Refresher courses for teachers and better salary for them.
- Abolition of intermediate courses.
- Standard of the universities must be raised.
- Admission should be restricted so only the capable students can go for the higher education.

Source: Spectrum

Q.4) Consider the following statements regarding the financial stability report (FSR):

1. It is released biannually by Reserve Bank of India.
2. It is approved by sub-committee of Financial Stability and Development Council (FSDC) before it is published.

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: The Financial Stability Reports (FSR), published by Reserve Bank of India, after approved by FSDC Sub-Committee since its inception, taking inputs from financial sector regulators i.e. RBI, SEBI, PFRDA, IRDAI including Ministry of Finance, are periodic exercise for reviewing the nature, magnitude and implications of risks that may have a bearing on the macroeconomic environment, financial institutions, markets and infrastructure.

- These reports will also assess the resilience of the financial sector through stress tests.
- FSR is a biannual publication.

Source: ForumIAS factly

Q.5) Consider the following statements regarding the Cabinet Committee on Investment and Growth (CCIG):

1. It was created in 2014 to promote capital investment and growth of the economy.
2. It is headed by finance minister.

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: In June 2019, the Union government formed two cabinet committees — one on Investment, the other on Employment and Skill Development.

The Prime Minister constitutes Standing Committees of the Cabinet and sets out the specific functions assigned to them. He can add or reduce the number of committees.

Investment: The Cabinet Committee on Investment will “identify key projects required to be implemented on a time-bound basis”, involving investments of Rs 1,000 crore or more, or any other critical projects, as may be specified by it, with regard to infrastructure and manufacturing.

- It will prescribe time limits for giving requisite approvals and clearances by the ministries concerned in identified sectors.
- It will also monitor the progress of such projects.

Employment: The Cabinet Committee on Employment and Skill Development is supposed to provide “direction to all policies, programmes, schemes and initiatives for skill development aimed at increasing the employability of the workforce for effectively meeting the emerging requirements of the rapidly growing economy and mapping the benefits of demographic dividend”.

- It is required to enhance workforce participation, foster employment growth and identification, and work towards removal of gaps between requirement and availability of skills in various sectors.
- The panel will set targets for expeditious implementation of all skill development initiatives by the ministries and to periodically review the progress in this regard.

The addition of the two committees is indicative of the new focus areas for the government. The goal of both is new jobs.

Source: The Hindu

Q.6) Which of the following committee is related to anti-defection law?

- a) Halim Committee
- b) Santhanam Committee
- c) Bhagwan Sahay Committee
- d) None

ANS: A

Explanation: The Dinesh Goswami Committee on Electoral Reforms, the Law Commission of India and the National Commission to Review the Working of the Constitution has recommended a review of the anti-defection law.

- The issues arising out of the decisions given by different Presiding Officers and the interpretation of the law by various courts were discussed at the Conferences of Presiding Officers of Legislative Bodies in India as well.
- In view of the near unanimity among the Presiding Officers for a review of the law, the then Speaker of Lok Sabha and Chairman of the Conference, Shri G.M.C. Balayogi constituted in October 1998 a Committee of Presiding Officers headed by the Speaker of the West Bengal Legislative Assembly, Shri Hashim Abdul Halim, to go into different aspects of the matter.
- The Committee presented its Report in February 2003 recommending inter alia that the provisions relating to splits and mergers be deleted from the Tenth Schedule; the terms 'voluntarily giving up membership' and 'political party' are defined; and that a time frame is laid down for decisions on the anti-defection cases.

Source: Laxmikanth

Q.7) “Public Interest Foundation & Others vs Union of India 2018” case is related to which of the following?

- a) Criminalisation of Politics
- b) Gender Inequality
- c) Right to Privacy
- d) Right to Education

ANS: A

Explanation: The Supreme Court’s constitution bench, in its judgment in Public Interest Foundation & Others v Union of India, 2018 explains its limitations in preventing those charged with heinous offences from becoming legislators and finds that Parliament alone is competent to do so.

It satisfies itself by appealing to Parliament to make a law for this purpose on priority and issues a few directions to the Election Commission and the political parties to make the disclosure of the criminal antecedents of candidates contesting elections sufficient and clear to the voters, so that the latter could be warned not to vote the candidates, charged with serious offences.

Source: Laxmikanth

Q.8) Which of the following committee (s) is/are related to Defence in British India?

1. Skeen Committee
2. Chatfield Committee
3. Babington Smith Committee

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: The crucial link between the founding of a military academy and the attainment of independence was acutely realized by a section of Indian leadership in the days of struggle for independence, whose concerted efforts resulted in the recommendations of the Montague Chelmsford Reforms Committee that enabled ten Indians for receiving training at Sandhurst for induction as commissioned officers;

- Setting up of the Skeen Committee in 1925 and later holding of Round Table Conference in London in 1930, which recommended the establishment of the Indian Sandhurst.
- As a follow up action, a committee was set up under the chairmanship of Field Marshal Sir Philip Chetwode, the then Commander-in-Chief of India, to work out modalities for establishment of an Indian Sandhurst.
- In Jul 1931, the committee recommended establishment of a military academy for induction of 40 Gentlemen Cadets (GC) in each term comprising 15 as Direct Entries, 15 from the ranks through Kitchner College, Nowgaon and 10 from princely states.
- The training span was initially envisaged for three years but later reduced to two and a half years.

Source: Spectrum

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Q.9) Which of the following Act (s) is/are passed during the period of Indira Gandhi?

1. The Benami Transactions (Prohibition) Act.
2. Maintenance of Internal Security Act (MISA).
3. Monopolies and Restrictive Trade Practices Act (MRTP).

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: C

Explanation: Important acts were passed during the period of Indira Gandhi.

- Maintenance of Internal Security Act, 1971 (MISA): A controversial law which gave the then Prime Minister Indira Gandhi and law enforcement gave absolute power to search and seize properties without a warrant, put individuals under preventive detention and use wiretapping.
- Monopolies and Restrictive Trade Practices Act, 1969 (MRTP): The objective of the Act was to restrict monopolistic trade activities and to maintain the economy of the country in balance. In short, the law was to make sure that the wealth of the country does not remain concentrated in the hands of the rich.
- Foreign Exchange Regulation Act, 1973 (FERA): What is now popularly known as FEMA, the Foreign Exchange Management Act, 1999 was called FERA back in 1973. The Act aimed to regulate foreign payments and investments and the conversion of foreign exchange.
- The Coal Mines (Nationalization) Act, 1973: Acquisition, transfer of right, title and interest of the owners of coal mines was covered under the law.

Source: NCERT

Q.10) Which of the following pair (s) is/are correctly matched?

Committee	:	Organization
1. Sivaraman Committee	:	NABARD
2. B.D. Kumar Committee	:	EXIM Bank
3. Sukomoy Chakravarty committee	:	SIDBI Bank

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: The B.D. Kumar Committee, which submitted its report in 1975, recommended for setting up of an export-import Bank type institution to finance and promote exports of engineering goods and turnkey projects.

The Reserve Bank of India (RBI) at the insistence of the Government of India, constituted a Committee to Review the Arrangements For Institutional Credit for Agriculture and Rural Development (CRAFICARD) to look into these very critical aspects.

- The Committee was formed on 30 March 1979, under the Chairmanship of Shri B. Sivaraman, former member of Planning Commission, Government of India.
- Its recommendation was formation of a unique development financial institution which would address these aspirations and formation of National Bank for

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Agriculture and Rural Development (NABARD) was approved by the Parliament through Act 61 of 1981.

Source: ForumIAS

ForumIAS

International Relations

Q.1) Recently, which of the following country led a UN resolution to set up a separate convention on cybercrime?

- a) Israel
- b) Iran
- c) China
- d) Russia

ANS: D

Explanation: The Russian proposal entitled “Countering the use of information and communications technologies for criminal purposes” was recently put forth in the United Nations General Assembly (UNGA).

- India voted in favour of a cybercrime resolution led by Russia in a committee of the United Nations General Assembly.
- The resolution seeks to set up new cyber norms considered as counter alternative to the US backed Budapest Accord.

Source: The Hindu

Q.2) The term “2010 Strategic Concept” is related to which of the following?

- a) NATO
- b) Warsaw Pact
- c) Nuclear Non-Proliferation Treaty (NPT)
- d) START treaty

ANS: A

Explanation: Strategic Concepts lay down the Alliance’s core tasks and principles, its values, the evolving security environment and the Alliance’s strategic objectives for the next decade.

The 2010 Strategic Concept defines NATO’s cores tasks as: collective defense, crisis-management and cooperative security.

Source: Indian Express

Q.3) Which of the following agreement/agreements is/are signed by India and United States of America (USA)?

1. General Security of Military Information Agreement (GSOMIA).
2. Logistics Exchange Memorandum of Agreement (LEMOA).

Select the correct answer using the code given below:

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

ANS: C

Explanation: Agreements signed by India and USA.

- India had signed the General Security of Military Information Agreement (GSOMIA) in 2002 and the Logistics Exchange Memorandum of Agreement (LEMOA) in 2016.
- The last one remaining is the Basic Exchange and Cooperation Agreement for Geo-spatial Cooperation (BECA) is not yet signed by India.

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FOUNDATIONAL AGREEMENTS		
<p>Logistics Exchange Memorandum of Agreement (LEMOA)</p> <ul style="list-style-type: none"> ➤ Provide logistic support, refuelling & berthing facilities for each other's warships & aircraft on barter/equal-value exchange basis ➤ Will not involve stationing of US troops on Indian soil. Nor will India extend support if US goes to war with "a friendly country" ➤ Good for US forces re-balancing to Asia Pacific. Indian forces rarely operate far away from their shores but access to Djibouti & Diego Garcia could be useful 	<p>Communication Interoperability & Security Memorandum Agreement (CISMOA)</p> <ul style="list-style-type: none"> ➤ Technology enabler to help transfer high-tech avionics, encrypted communication & electronic systems to India ➤ US says CISMOA will boost 'interoperability' as well as ensure secrecy of its C4ISR (command, control, communications, computer, intelligence, surveillance and reconnaissance) systems ➤ But fears that US will be able to track & snoop on Indian warships/aircraft equipped with such systems 	
	<p>Basic Exchange & Cooperation Agreement for Geo-Spatial Cooperation (BECA)</p> <ul style="list-style-type: none"> ➤ US says BECA will help India with advanced satellite & topographical data for long-range navigation & missile-targeting ➤ But India, which has its own satellite imaging capabilities, unwilling for American digital sensors to be positioned on its soil 	

Source: The Hindu

Q.4) Which of the following treaty/treaties is/are related to European Union?

1. Treaty of Lisbon
2. Treaty of Nice
3. Treaty of Amsterdam

Select the correct answer using the code given below:

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

ANS: D

Explanation: The European Union is based on the rule of law. This means that every action taken by the EU is founded on treaties that have been approved voluntarily and democratically by all EU member countries. A treaty is a binding agreement between EU member countries. It sets out EU objectives, rules for EU institutions, how decisions are made and the relationship between the EU and its member countries. The main treaties are:

- Treaty of Lisbon: Signed on 13 December 2007, to make the EU more democratic, more efficient and better able to address global problems, such as climate change, with one voice.
- Treaty of Nice: Signed on 26 February 2001, to reform the institutions so that the EU could function efficiently after reaching 25 member countries.
- Treaty of Amsterdam: Signed on 2 October 1997, to reform the EU institutions in preparation for the arrival of future member countries.

Source: ForumIAS

Q.5) Consider the following statements regarding BASIC group:

1. The member countries of the group consist of India, Brazil, South Korea and China.
2. The main objective of the group is to promote industrialization.

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: The BASIC group was formed as the result of an agreement signed by the four countries on November 28, 2009.

- They are a bloc of four large newly industrialized countries – Brazil, South Africa, India and China.
- The main objective of the BASIC group is to have a broadly common position on reducing greenhouse gas emissions and raising the massive funds that are needed to fight climate change.

Source: ForumIAS

Q.6) Consider the following statements regarding the Eurasian Economic Union (EAEU):

1. The Eurasian Economic Union is an international organization for regional economic integration.
2. All Central Asian countries except Turkmenistan and Russia are member countries of Eurasian Economic Union.

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: The Eurasian Economic Union is an international organization for regional economic integration. It has international legal personality and is established by the Treaty on the Eurasian Economic Union.

- The EAEU provides for free movement of goods, services, capital and labor, pursues coordinated, harmonized and single policy in the sectors determined by the Treaty and international agreements within the Union.
- The Member-States of the Eurasian Economic Union are the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic and the Russian Federation.
- The Union is being created to comprehensively upgrade, raise the competitiveness of and cooperation between the national economies, and to promote stable development in order to raise the living standards of the nations of the Member-States.

Source: ForumIAS

Q.7) Consider the following statements regarding the Organization of the Petroleum Exporting Countries (OPEC):

1. OPEC is a permanent, Informal organization.
2. OPEC membership is open to any country that is a substantial exporter of oil and which shares the ideals of the organization.

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 Organization of the Petroleum Exporting Countries (OPEC) was founded in Baghdad, Iraq, with the signing of an agreement in September 1960 by five countries namely Islamic Republic of Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. They were to become the Founder Members of the Organization.

- OPEC is a permanent, intergovernmental organization.
- The current OPEC members are the following: Algeria, Angola, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, and the Republic of the Congo, Saudi Arabia (the de facto leader), the United Arab Emirates and Venezuela. Ecuador, Indonesia and Qatar are former members.
- OPEC's objective is to co-ordinate and unify petroleum policies among Member Countries, in order to secure fair and stable prices for petroleum producers; an efficient, economic and regular supply of petroleum to consuming nations; and a fair return on capital to those investing in the industry.
- OPEC membership is open to any country that is a substantial exporter of oil and which shares the ideals of the organization.

Source: OPEC

Q.8) 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.9) The term "Protecting Power" is recently in news is related to which of the following?

- a) Diplomatic relations
- b) Foreign exchange reserves
- c) Defense treaties
- d) Bilateral defense exercises

ANS: A

Explanation: Following the killing of Iranian military and intelligence commander Major General Qassem Soleimani in Baghdad in a drone attack carried out by the United States, the Iranian government registered its protest with the Swiss Embassy in Tehran.

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- Switzerland represents the interests of the US in Iran. This is because the US itself does not have an embassy there. Iran's interests in the United States, on the other hand, are represented by the Pakistan Embassy in Washington.
- In an arrangement such as this, Switzerland is the "Protecting Power" of the United States' interests in Iran. The instrument of Protecting Powers is provided for under the 1961 and 1963 Vienna Conventions on Diplomatic Relations.
- "If diplomatic relations are broken off between two States, or if a mission is permanently or temporarily recalled... the sending State may entrust the protection of its interests and those of its nationals to a third State acceptable to the receiving State," the 1961 Vienna Convention states.
- And the 1963 Convention reiterates: "A sending State may with the prior consent of a receiving State, and at the request of a third State not represented in the receiving State, undertake the temporary protection of the interests of the third State and of its nationals."

Source: Indian Express

Q.10) Which of the following are the priority areas of regional cooperation within the framework of the East Asia Summit (EAS)?

1. Environment and energy
2. Pandemic diseases
3. Finance
4. Natural Disaster Management
5. Security

Select the correct answer using the code given below:

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

ANS: B

Explanation: The East Asia Summit is a unique Leaders-led forum of 18 countries of the Asia-Pacific region formed to further the objectives of regional peace, security and prosperity.

- It has evolved as a forum for strategic dialogue and cooperation on political, security and economic issues of common regional concern and plays an important role in the regional architecture.
- Established in 2005, EAS allows the principal players in the Asia-Pacific region to discuss issues of common interest and concern, in an open and transparent manner, at the highest level.
- The membership of EAS consists of ten ASEAN Member States (i.e. Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Singapore, Thailand, the Philippines and Vietnam), Australia, China, India, Japan, New Zealand, Republic of Korea, Russian Federation and the USA.
- EAS is an initiative of ASEAN and is based on the premise of the centrality of ASEAN.
- There are six priority areas of regional cooperation within the framework of the EAS. These are – Environment and Energy, Education, Finance, Global Health Issues and Pandemic Diseases, Natural Disaster Management, and ASEAN Connectivity.
- India endorses regional collaboration in all six priority areas.

Source: ForumIAS

International Relations

Q.1) Which of the following are the members of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)?

1. Bangladesh
2. India
3. Sri Lanka
4. Myanmar
5. Bhutan
6. Nepal
7. Thailand

Select the correct answer using the code given below:

- a) 1, 2, 3, 4, 5, 6 and 7
- b) 1, 2, 5, 6 and 7 only
- c) 1, 2, 3 and 7 only
- d) 1, 2 and 3 only

ANS: A

Explanation: The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a regional organization comprising seven Member States lying in the littoral and adjacent areas of the Bay of Bengal constituting a contiguous regional unity.

- This sub-regional organization came into being on 6 June 1997 through the Bangkok Declaration.
- It constitutes seven Member States: five deriving from South Asia, including Bangladesh, Bhutan, India, Nepal, Sri Lanka, and two from Southeast Asia, including Myanmar and Thailand.
- Initially, the economic bloc was formed with four Member States with the acronym 'BIST-EC' (Bangladesh, India, Sri Lanka and Thailand Economic Cooperation).
- Following the inclusion of Myanmar on 22 December 1997 during a special Ministerial Meeting in Bangkok, the Group was renamed 'BIMST-EC' (Bangladesh, India, Myanmar, Sri Lanka and Thailand Economic Cooperation).
- With the admission of Nepal and Bhutan at the 6th Ministerial Meeting (February 2004, Thailand), the name of the grouping was changed to 'Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation' (BIMSTEC).

Source: ForumIAS factly

Q.2) Which of the following country is recently re-joined the Commonwealth group?

- a) Nepal
- b) Ethiopia
- c) Yemen
- d) Maldives

ANS: D

Explanation: The Maldives re-joined the Commonwealth, more than three years after the Indian Ocean island nation quit the association amid mounting criticism of its human rights record then.

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- In 2016, the Maldives pulled out of the Commonwealth terming “unjust” the grouping’s decision to penalise the country over former President Mohamed Nasheed’s controversial ouster in 2012.
- It followed the Commonwealth Ministerial Action Group (CMAG)’s warning to Maldives of suspension from the bloc, voicing “deep disappointment” over the country’s lack of progress in resolving the political crisis during former President Abdulla Yameen’s presidency, whose authoritarian slant sparked concern domestically and internationally.

Source: The Hindu

Q.3) Consider the following statements regarding the G-20:

1. It is an inter-governmental treaty between 19 member countries and European Union.
2. It was created after the gulf war to promote economic growth among developing and developed countries.

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: The Group of Twenty, or the G20, is the premier forum for international economic cooperation. The G20 comprises 19 countries and the European Union.

- The 19 countries are Argentina, Australia, Brazil, Canada, China, Germany, France, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom and the United States.
- The G20 brings together the leaders of both developed and developing countries from every continent.
- Collectively, G20 members represent around 80% of the world’s economic output, two-thirds of global population and three-quarters of international trade.
- Throughout the year, representatives from G20 countries gather to discuss financial and socioeconomic issues.
- Originated in 1999 at the level of Finance Ministers and Central Bank Governors, the G20 gathered for high-level discussions on macro-financial issues.
- In the wake of the 2008 global financial crisis, the G20 was elevated to include the leaders of member countries.
- The first G20 Leaders’ Summit took place in Washington D.C. in November 2008.
- Consequently, the G20 agenda expanded beyond macro-financial issues, to include socio-economic and development issues.

Source: Indian Express

Q.4) Which of the following country is NOT part of QUAD?

- a) Australia
- b) New Zealand
- c) Japan
- d) India

ANS: B

Explanation: In a significant development for the region, the Quadrilateral Strategic Dialogue (“the Quad”) between India, Australia, Japan and the U.S. held its first Minister-level meeting since it was revived in 2017.

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- The group is seen as a regional counter-weight to China and has only met at the Joint or Assistant Secretary level since 2017.
- Members of the Quad, barring Australia, are currently engaged in the annual Malabar exercises – military exercises that started between India and the U.S. in 1994 and became trilateral (with Japan) in 2015.
- India has not permitted Australia to participate in these exercises, concerned about what message it would send to China, which is wary of the exercise.

Source: The Hindu

Q.5) Consider the following statements regarding G – 77:

1. It is the largest intergovernmental organization of developing countries in the United Nations.
 2. It consists of Seventy seven member countries.
- 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: The Group of 77 (G-77) was established on 15 June 1964 by seventy-seven developing countries signatories of the “Joint Declaration of the Seventy-Seven Developing Countries” issued at the end of the first session of the United Nations Conference on Trade and Development (UNCTAD) in Geneva.

- Beginning with the first “Ministerial Meeting of the Group of 77 in Algiers (Algeria) on 10 – 25 October 1967, which adopted the Charter of Algiers”, a permanent institutional structure gradually developed which led to the creation of Chapters of the Group of 77 with Liaison offices in Geneva (UNCTAD), Nairobi (UNEP), Paris (UNESCO), Rome (FAO/IFAD), Vienna (UNIDO), and the Group of 24 (G-24) in Washington, D.C. (IMF and World Bank).
- Although the members of the G-77 have increased to 134 countries, the original name was retained due to its historic significance.
- The Group of 77 is the largest intergovernmental organization of developing countries in the United Nations, which provides the means for the countries of the South to articulate and promote their collective economic interests and enhance their joint negotiating capacity on all major international economic issues within the United Nations system, and promote South-South cooperation for development.

Source: <https://www.g77.org/doc/>

Q.6) Which of the following Multilateral Export-Control Regime is also called as London Club?

- a) Nuclear Suppliers Group
- b) MTCR
- c) Wassenaar arrangement
- d) Australia Group

ANS: A

Explanation: The Nuclear Suppliers Group (NSG) first met in November 1975 in London, and is thus popularly referred to as the “London Club”.

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It is a Group of nuclear supplier countries that seek to prevent nuclear proliferation by controlling the export of materials, equipment and technology that can be used to manufacture nuclear weapons.

Source: The Hindu

Q.7) Which of the following countries are Baltic nations?

1. Estonia
2. Latvia
3. Lithuania

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: D

Explanation: Baltic States, the northeastern region of Europe, includes the countries of Estonia, Latvia, and Lithuania, on the eastern shores of the Baltic Sea.

- Vice President M Venkaiah Naidu concluded his 5-day tour to the three Baltic nations Lithuania, Latvia and Estonia in August 2019.
- The visit was aimed at strengthening the bilateral engagements with the three nations, besides giving the relationships a fresh impetus in the context of a changing global order.
- Besides considering the strategic interests, the focus of the visit was also on improving cooperation in the fields of security, especially countering terrorism.

Source: Oriental Black swan

Q.8) The term “Debt Trap Diplomacy” is often seen in news is associated with which of the following country?

- a) China
- b) United States of America
- c) Japan
- d) Russia

ANS: A

Explanation: There has recently been a spate of articles and studies across the United States and Europe that seek to debunk the ‘debt trap diplomacy’ of China under its multi-billion dollar connectivity project, the Belt and Road Initiative (BRI).

- This type of diplomacy refers to offering projects/loans on terms that end up being too difficult for countries to repay, eventually compelling them to accept political or economic concessions.
- China’s BRI has resulted in several such unsustainable debt-for-infrastructure deals, which nevertheless, further Beijing’s geostrategic interests by increasing its global presence and influence.

Source: <https://thewire.in/world/china-debt-trap-diplomacy-south-asia-europe>

Q.9) Consider the following statements regarding the Eastern Economic Forum (EEF):

1. EEF was established in 2010 and forum conducts its meetings biannually.
2. India pledged to extend \$ 10 billion line of credit to Russia’s far eastern region at 5th EEF.

Which of the statements given above is/are correct?

- a) 1 only

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

ANS: D

Explanation: The Eastern Economic Forum was established by decree of the President of the Russian Federation Vladimir Putin in 2015 to support the economic development of Russia's Far East and to expand international cooperation in the Asia-Pacific region.

Unveiling the Russian edition of India's 'Look East, Act East' policy, Prime Minister Narendra Modi pledged on September 2019 to extend a \$1 billion Line of Credit to Russia's Far East region (RFE).

Source: The Hindu

Q.10) The Global Forum on Remittances, Investment and Development (GFRID) is related to which of the following?

- a) The United Nations Conference on Trade and Development
- b) The United Nations Industrial Development Organization
- c) World Economic Forum
- d) International Fund For Agricultural Development (IFAD)

ANS: D

Explanation: The Global Forum on Remittances, Investment and Development (GFRID) brings together key decision makers, stakeholders and practitioners who are engaged in the field of remittances and migration for development.

- Since its first forum in 2007, IFAD has gathered over 1,000 participants from the public and private sector, and the civil society, to facilitate the creation of partnerships and the exchange of best practices in maximizing the impact of remittances to the benefit of migrants' communities of origin.
- In doing so, IFAD partners with key international financial institutions and other prominent organizations, such as the European Commission (2015) and the United Nations Department of Economic and Social Affairs (2017).
- The forum is held biannually, in conjunction with the observance of the International Day of Family Remittances (IDFR) on 16 June.

Source: UN IFAD

International Relations & Organizations

Q.1) “Partnerships for Affordable Healthcare Access and Longevity (PAHAL) – project” is often seen in news is launched with the help of which of the following nation?

- a) France
- b) Japan
- c) Israel
- d) United States of America

ANS: D

Explanation: Partnerships for Affordable Healthcare Access and Longevity (PAHAL) is USAID flagship innovative financing platform to promote health financing models and provide catalytic support to social enterprises (IBMs) for improving access to affordable and quality healthcare solutions for the urban poor communities, with a focus on Tuberculosis, Maternal and Child Health and WASH.

- PAHAL has built a platform that provides unparalleled access to social enterprises for reducing cost and improving access to quality healthcare services.
- US announced that it will provide an additional \$3 million to India, through its aid agency USAID, for mitigating the spread of Covid-19.
- In coordination with the Indian government, USAID is providing these funds to the Partnerships for Affordable Healthcare Access and Longevity (PAHAL) project.

Source: ForumIAS

Q.2) “The freedoms of the air are a set of commercial aviation rights granting a country's airlines the privilege to enter and land in another country's airspace”. With reference to the freedom of air, which of the following statements is/are correct?

1. Total six freedoms of air rights formed by International Civil Aviation Organization (ICAO).
2. The sixth freedom of air includes the right to fly from a foreign country to another while stopping in one's own country for non-technical reasons.

Select the correct answer using the code given below:

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

ANS: B

Explanation: The freedoms of the air (9 rights) are a set of commercial aviation rights granting a country's airlines the privilege to enter and land in another country's airspace.

- The Freedom of air was formulated in the Convention on International Civil Aviation of 1944, known as the Chicago Convention.
- The fifth freedom of air includes the right to fly between two foreign countries on a flight originating or ending in one's own country.
- The sixth freedom of air includes the right to fly from a foreign country to another while stopping in one's own country for non-technical reasons.

Source: The Hindu

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Q.3) “Loya Jirga or Grand Council” is often seen in news is related to which of the following country?

- a) Nepal
- b) Bhutan
- c) Bangladesh
- d) Afghanistan

ANS: D

Explanation: A Loya Jirga, or "grand council", is a mass national gathering that brings together representatives from the various ethnic, religious, and tribal communities in Afghanistan.

- The gathering involves participation of Afghan tribal elders, religious figures, and political leaders.
- The Loya Jirga is a centuries-old institution that has been convened at times of national crisis or to settle national issues.
- Historically, it has been used to approve a new constitution, declare war, choose a new king, or to make sweeping social or political reforms.
- It is considered the "highest expression" of the Afghan people, but it is not an official decision-making body.

Source: The Hindu

Q.4) “Most Favoured Nation (MFN)” is often seen in news is related to which of the following International Organization?

- a) International Monetary Fund
- b) United Nations
- c) World Economic Forum
- d) World Trade Organization

ANS: D

Explanation: According to the MFN principle of the WTO’s General Agreement on Tariffs and Trade (GATT), each of the WTO member countries should “treat all the other members equally as ‘most-favoured’ trading partners.”

- If a special favour such as a lower customs duty rate is grant to someone by a nation, then it has to do the same for all other WTO members.
- Thus, in effect it means non-discrimination.
- Recently, India withdrew the Most Favored Nation (MFN) status from Pakistan.

Source: WTO

Q.5) “Asia Reassurance Initiative Act (ARIA)” is recently in news is an initiative of which of the following country?

- a) Russia
- b) China
- c) Japan
- d) United States of America

ANS: D

Explanation: US President has signed ARIA act to counter the threat from China and to reinvigorate US leadership in the Indo-Pacific region.

- It aims to establish a multifaceted U.S. strategy to increase U.S. security, economic interests, and values in the Indo-Pacific region.

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- The new law mandates actions countering China's illegal construction and militarization of artificial features in the South China Sea and coercive economic practices.
- ARIA recognizes the vital role of the strategic partnership between the U.S. and India in promoting peace and security in the Indo-Pacific region and it calls for strengthening diplomatic, economic, and security ties between both the countries.
- It allocates a budget of \$1.5 billion over a five year period to enhance cooperation with America's strategic regional allies in the region.

Source: The Hindu

Q.6) The term "Industrial Security Annex (ISA)" is often seen in news is a bilateral arrangement between which of the following countries?

- a) India and Russia
- b) India and Japan
- c) India and USA
- d) India and France

ANS: C

Explanation: The Industrial Security Annex (ISA), signed between India and the U.S. at the second 2+2 dialogue in Washington, will open the door for U.S. defence companies to partner with the Indian private sector for several multi-billion dollar deals in the pipeline, especially the deal for 114 fighter jets.

- The ISA is a part of the General Security Of Military Information Agreement (GSOMIA), which India signed with the U.S. long back.
- It became critical as India opened up the defense sector to the private sector and the Strategic Partnership policy, which has few big military platforms and is reserved for the Indian private sector. U.S. companies are in the race for multi-billion dollar deal for 114 fighter jets, among other deals.

Source: ForumIAS factly

Q.7) The "Information Fusion Centre for Indian Ocean Region (IFC-IOR)" is often seen in news is located in which of the country?

- a) India
- b) Thailand
- c) Sri Lanka
- d) Maldives

ANS: A

Explanation: The Information Fusion Centre for the Indian Ocean Region (IFC-IOR), an initiative of the Indian Navy and supported by the Government of India launched in December 2018, has started functioning.

The IFC-IOR has been established at Gurugram along with the Information Management and Analysis Centre, jointly administered by the Indian Navy and Indian Coast Guard.

Source: ForumIAS factly

Q.8) "Bishkek Declaration" is related to which of the following Organization?

- a) World Trade Organization
- b) UNCTAD
- c) Shangai Cooperation Oranization
- d) Asia Pacific Economic Cooperation (APEC)

ANS: C

Explanation: India and other members of the SCO condemned terrorism in all its forms and manifestations, and called on the international community to promote cooperation in combating the menace.

According to the Bishkek Declaration of the Shanghai Cooperation Organization's Heads of State Council, the member states stressed that acts of terrorism and extremism cannot be justified.

Source: ForumIAS factly

Q.9) The "Inter-Governmental Negotiations (IGN)" is often seen in news is related to which of the following?

- UN Security Council reforms.
- UN resolution on International Terrorists.
- World Bank Group
- International Solar Alliance

ANS: A

Explanation: The G4 nations of Brazil, Germany, Japan and India have asserted that the mandate of the United Nations' Inter-Governmental Negotiations is to achieve the long-pending reforms of the UNSC and not endlessly debate it.

- The Inter-Governmental Negotiations (IGN) format has long outlived its sell-by date and must be made transparent to ensure progress on the reform discussions, they said.
- India has been calling for the reform of the UN Security Council (UNSC) along with Brazil, Germany and Japan for long, emphasising that it rightly deserves a place at the UN high table as a permanent member.
- The G4 nations support each other's bids for permanent seats on the UNSC.

NOTE: In 2008 the General Assembly adopted Decision 62/557 "to commence intergovernmental negotiations (IGN) in informal plenary of the General Assembly".

- Up until the 22008 Decision was adopted, discussions on Security Council reform were nothing more than an oral exchange of views.
- With the creation of the IGN, the aim was have a text on which discussions could be based.
- The first round of the IGN was held on 19 February 2009.
- The General Assembly has renewed its mandate annually, and it remains the principal vehicle for Council reform discussions today.
- To date, the IGN has not been able to agree on a text to be negotiated

Source: The Hindu

Q.10) 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?

- 1 only
- 2 only
- Both 1 and 2
- 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

Schemes

Q.1) Consider the following statements regarding formation and promotion of Farmer Producers Organization (FPOs):

1. It is a central sector scheme aims to establish 1 lakh FPOs in five years.
2. It is implemented by District Rural Development Agency.

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: formation and promotion of Farmer Producers Organization (FPOs) is a Central Sector Scheme under Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW).

- Its objective is to establish 10,000 FPOs in five years period from 2019-20 to 2023-24 to ensure economies of scale for farmers.
- It is implemented by- Small Farmers Agri-business Consortium (SFAC), National Cooperative Development Corporation (NCDC) and National Bank for Agriculture and Rural Development (NABARD).
- Also, States can nominate their Implementing Agency in consultation with DAC&FW.

Source: PIB

Q.2) Consider the following statements regarding Pradhan Mantri Kisan Maan-dhan Yojana (PM-KMY):

1. It is an old age pension scheme to provide social security net to around 3 crore Small and Marginal old age farmers.
2. There is no ceiling of land owned by those who are opted for this scheme.

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: It is an old age pension scheme to provide social security net to around 3 crore Small and Marginal old age farmers as they have minimal or no savings to provide for old age and to support them in the event of consequent loss of livelihood.

- Small and Marginal Farmer (SMF) of age of 18- 40 years - a farmer who owns cultivable land up to 2 hectares as per land records of the concerned State/UT.
- Exclusions: SMFs covered under any other statutory social security schemes such as National Pension Scheme (NPS), Employees' State Insurance Corporation scheme, Pradhan Mantri Shram Yogi Maan Dhan Yojana (PM-SYM) etc.

Source: PIB

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Q.3) Which of the following schemes/missions are subsumed under Krishonnati Yojana?

1. National Mission for Sustainable Agriculture (NMSA).
2. Sub-Mission on Agriculture Extension (SMAE).
3. Mission for Integrated Development of Horticulture (MIDH).

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: It is a Centrally Sponsored Umbrella Scheme that has been implemented since 2016-17. It comprises of 11 schemes / missions:

- Mission for Integrated Development of Horticulture (MIDH)- to promote holistic growth of horticulture sector.
- National Food Security Mission (NFSM) including National Mission on Oil Seeds and Oil Palm (NMOOP)- to increase production of rice, wheat, pulses, coarse cereals, oilseeds and commercial crops through area expansion, restoring soil fertility and improving productivity.
- National Mission for Sustainable Agriculture (NMSA)- to promote sustainable agriculture practices focusing on integrated farming, appropriate soil health management and synergizing resource conservation technology.
- Sub-Mission on Agriculture Extension (SMAE)- to strengthen ongoing programmes of states/local bodies to achieve food security, empowering farmers, strengthen programme planning, ICT usage etc.
- Sub-Mission on Seeds and Planting Material (SMSP)- to increase production of certified / quality seed, increase seed replacement rate (SRR) and upgrade the quality of farm saved seeds.
- Sub-Mission on Agricultural Mechanization (SMAM)- to increase the reach of farm mechanization, promote 'Custom Hiring Centres' to offset the adverse economies of scale arising due to small landholding and high cost.
- Sub-Mission on Plant Protection and Plant Quarantine- to minimize loss to quality and yield of agricultural crops, shield agricultural bio-security, facilitate exports and promote good agricultural practices.
- Integrated Scheme on Agriculture Census, Economics and Statistics- to undertake the agriculture census, study of the cost of cultivation of principal crops, to undertake research studies on agro-economic problems etc.
- Integrated Scheme on Agricultural Cooperation (ISAC)- to provide financial assistance for improving the economic conditions of cooperatives, remove regional imbalances.
- Integrated Scheme on Agricultural Marketing (ISAM)- to develop and provide agricultural marketing infrastructure, promote innovative and latest technologies and integrate markets through a common online market platform.
- National e-Governance Plan (NeGP-A) - to improve access of farmers to information & services, making available timely and relevant information to the farmers for increasing their agriculture productivity.

Source: The Hindu

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Q.4) Consider the following statements regarding Mission for Integrated Development of Horticulture (MIDH):

1. It aims to promote holistic development of Horticulture sector (excluding bamboo & coconut).
2. It is a Central Sector Scheme.

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: It is a Centrally Sponsored Scheme which was started from 2014-15 comprising of following sub-schemes and areas of operation –

- National Horticulture Mission: to promote holistic growth of horticulture sector through an area based regionally differentiated strategies
- Horticulture Mission for North East & Himalayan States: It is a technology mission which focuses on production of quality planting material, organic farming, efficient water management etc.
- Promote, develop and disseminate technologies and generate employment opportunities.
- National Horticulture Board is implementing various schemes under Mission for Integrated Development of Horticulture (MIDH) in all States and UTs.
- Coconut Development Board is implementing various schemes under Mission for Integrated Development of Horticulture (MIDH) in all Coconut growing states in the country.
- Central Institute for Horticulture, Nagaland for providing technical back stopping through capacity building and training of farmers and Field functionaries in the North Eastern Region.

It aims to promote holistic development of Horticulture sector (including bamboo & coconut).

Source: PIB

Q.5) Which of the following crops/programme is/are part of National Food Security Mission?

1. Rice
2. Wheat
3. Seed village programme

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: It is a Centrally Sponsored Scheme which was launched in 2007.

- From the years 2018-19 and 2019-20, NMOOP and Seed Village Programme are now a part of NFSM.
- NFSM will have eight components viz. (i) NFSM- Rice; (ii) NFSM-Wheat; (iii) NFSM-Pulses; (iv) NFSM-Coarse Cereals (Maize, Barley), (v) NFSM-Sub Mission on Nutri

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Cereals; (vi) NFSM-Commercial Crops; (vii) NFSM-Oilseeds and Oilpalm; and (viii) NFSM-Seed Village Programme

Source: PIB

Q.6) Participatory Guarantee System for India is often seen in news is related to which of the following?

- a) MSMEs
- b) Solar energy
- c) Organic farming
- d) Energy efficiency

ANS: C

Explanation: Its aim is to promote domestic organic market growth and also to enable S&M farmers to have easy access to organic certification, a decentralized organic farming certification system called PGS-India is being implemented by Department of Agriculture and Cooperation.

- It is outside the framework of third-party system of certification (which is a pre-requisite to enter export market of organic produce) and it is a group-certification system including farmers, traders and consumers (hence the name) and it is supported by PKVY scheme.
- PGS ensures that their production takes place in accordance with laid-down quality standards. It is not applicable for off-farm activities like transport, storage etc.
- The certification is in the form of a documented logo or a statement

Source: PIB

Q.7) Consider the following statements regarding the “Atal Bhujal Yojana”:

1. It is a Central Sector Scheme aims to improve ground water management through community participation in identified priority areas in seven States.
2. It is funded by Japan International Cooperation Agency.
3. It pays special attention to those areas where groundwater was very low.

Which of the statements given above is/are correct?

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

ANS: A

Explanation: Prime Minister Narendra Modi launched the Atal Bhujal scheme to strengthen the institutional framework for participatory groundwater management and bringing about behavioral changes at the community level for sustainable groundwater resource management in seven States.

- The scheme will be implemented in about 8,350 gram panchayats in 78 districts of Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh.
- Of the total outlay of ₹6,000 crore to be provided from 2020-21 to 2024-25, 50% will be in the form of World Bank loan to be repaid by the Central government.
- The remaining part will be made available via Central assistance from regular budgetary support.
- The entire World Bank’s loan component and the Central assistance will be passed on to the States as grants.

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- The Prime Minister said the scheme, or the guidelines related to the Jal Jeevan Mission, were big steps in proving the resolve to deliver water to every household in the country by 2024.
- He said the Jal Jeevan Mission would work towards delivering piped water supply to every house and Atal Bhujal scheme would pay special attention to those areas where groundwater was very low.

Source: The Hindu

Q.8) The term “Jeevan Pramaan” is often seen in news is related to which of the following?

- A. It is an AADHAR Biometric Authentication based digital life certificates for Pensioners and facilitates online submission.
- B. It is a marriage incentive scheme for inter-caste marriage.
- C. It is a pension scheme for landless labour in rural areas.
- D. It is a newly launched pension scheme for women employees.

ANS: A

Explanation: One of the major requisite for the pensioners post their retirement from service, is to provide life certificates to the authorized pension disbursing agencies like Banks, Post offices etc., following which their pension is credited to their account.

- In order to get this life certificate the individual drawing the pension is required to either personally present oneself before the Pension Disbursing Agency or have the Life Certificate issued by authority where they have served earlier and have it delivered to the disbursing agency.
- Digital Life Certificate for Pensioners Scheme of the Government of India known as Jeevan Pramaan seeks to address this very problem by digitizing the whole process of securing the life certificate.
- It aims to streamline the process of getting this certificate and making it hassle free and much easier for the pensioners.
- With this initiative the pensioner's requirement to physically present him/her in front of the disbursing agency or the certification authority will become a thing of the past benefiting the pensioners in a huge way and cutting down on unnecessary logistical hurdles.

Source: ForumIAS factly

Q.9) Which of the following states are covered under the provisions of the Sixth Schedule of Indian Constitution?

1. Assam
2. Manipur
3. Tripura
4. Arunachal Pradesh
5. Mizoram

Select the correct answer using the code given below:

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

ANS: C

Explanation: The Sixth Schedule consists of provisions for the administration of tribal areas in Assam, Meghalaya, Tripura and Mizoram, according to Article 244a of the Indian Constitution.

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- Passed by the Constituent Assembly in 1949, it seeks to safeguard the rights of tribal population through the formation of Autonomous District Councils (ADC).
- ADCs are bodies representing a district to which the Constitution has given varying degrees of autonomy within the state legislature.
- The governors of these states are empowered to reorganize boundaries of the tribal areas. In simpler terms, she or he can choose to include or exclude any area, increase or decrease the boundaries and unite two or more autonomous districts into one.
- They can also alter or change the names of autonomous regions without a separate legislation.

Source: Laxmikanth

Q.10) Consider the following statements regarding the “Pradhan Mantri Vaya Vandana Yojana (PMVVY)”:

1. Minimum age for joining the scheme is 55 years.
2. Policy term for the scheme is 20 years.
3. It is exempted from GST.

Which of the statements given above is/are correct?

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

ANS: D

Explanation: Pradhan Mantri Vaya Vandana Yojana (PMVVY) is a Pension Scheme announced by the Government of India exclusively for the senior citizens aged 60 years and above which was available from 4th May, 2017 to 31st March, 2020.

- The scheme is now extended up to 31st March, 2023 for a further period of three years beyond 31st March, 2020.
- Pension is payable at the end of each period, during the policy term of 10 years, as per the frequency of monthly/ quarterly/ half-yearly/ yearly as chosen by the pensioner at the time of purchase.
- The scheme is exempted from GST.
- Loan up to 75% of Purchase Price shall be allowed after 3 policy years (to meet the liquidity needs).
- Loan interest shall be recovered from the pension installments and loan to be recovered from claim proceeds.
- On death of the pensioner during the policy term of 10 years, the Purchase Price shall be paid to the beneficiary.

Source: The Hindu

Schemes & Miscellaneous

Q.1) Which of the following is/are beneficiaries of Kisan Credit Card?

1. Individual Farmers
2. Oral lessees
3. Share croppers

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: KCC aims to provide adequate and timely credit support from the banking system under single window. The beneficiaries are:

- All farmers' individuals/Joint borrowers who are owner cultivators.
- Tenant farmers, Oral lessees and Share Croppers etc.
- SHGs or Joint Liability Groups of farmers including tenant farmers, share croppers etc.

Source: The Hindu

Q.2) Project ARYA is often seen in news is related to which of the following?

- A. Agriculture
- B. Space Technology
- C. Nuclear reactors
- D. Artificial Intelligence

ANS: A

Explanation: The GOI launched ARYA – “Attracting and Retaining Youth in Agriculture” in 2015.

- It is implemented through Krishi Vigyan Kendra in one district from each State.
- KVKs will involve the Agricultural Universities and ICAR Institutes as Technology Partners.
- In one district, 200-300 rural youths will be identified for their skill development in entrepreneurial activities and establishment of related micro-enterprise units.
- At KVKs also one or two enterprise units will be established so that they serve as entrepreneurial training units for farmers.

Source: PIB

Q.3) Consider the following statements regarding National Agricultural Higher Education Project (NAHEP):

1. It accentuates the relevance and quality of higher agricultural education in selected Agricultural Universities.
2. It is funded by NABARD and Government of India in equal share.

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: The objectives of NAHEP are:

- Accentuate the relevance and quality of higher agricultural education in selected AUs
- Student and faculty development
- Improve learning outcomes, employability and entrepreneurship; and
- Enhancing institutional and system management effectiveness

It will be funded by the World Bank and the Indian Government on a 50 : 50 basis.

Source: PIB

Q.4) Which of the following pulses are grown under Accelerated Pulses Production Program?

1. Green Gram
2. Bengal Gram
3. Lentil
4. Red gram

Select the correct answer using the codes given below:

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

ANS: D

Explanation: Accelerated Pulses Production Program aims to demonstrate plant nutrients and plant protection centric improved technologies and management practices in compact units of 1000 hectares each for five major pulse crops viz. Bengal gram, Black gram (Urdbean), Red gram (Arhar), Green gram (Moongbean), and Lentil (Masur)

- It is 100 % funding by Union Ministry of Agriculture and implemented under the NFSM-Pulses.
- It has been conceptualised to take up the active propagation of key technologies such as Integrated Nutrient Management (INM) and Integrated Pest Management (IPM).
- Department of Agriculture Cooperation and farmer welfare is implementing this programme through i) Commissioners/Directors of Agriculture of pulse producing states, and ii) Central Government Institutes: NCIPM of ICAR.

Source: PIB

Q.5) Consider the following statements regarding the “output gap”:

1. It refers to the difference between the actual output of the economy and its maximum potential.
2. It is used by policy makers to gauge inflation.

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: The output gap is an economic measure of the difference between the actual output of an economy and its potential output.

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- Potential output is the maximum amount of goods and services an economy can turn out when it is most efficient—that is, at full capacity.
- Often, potential output is referred to as the production capacity of the economy.
- Policymakers often use potential output to gauge inflation and typically define it as the level of output consistent with no pressure for prices to rise or fall.
- In this context, the output gap is a summary indicator of the relative demand and supply components of economic activity.
- As such, the output gap measures the degree of inflation pressure in the economy and is an important link between the real sides of the economy—which produces goods and services—and inflation.
- All else equal, if the output gap is positive over time, so that actual output is greater than potential output, prices will begin to rise in response to demand pressure in key markets.
- Similarly, if actual output falls below potential output over time, prices will begin to fall to reflect weak demand.

Source: Economic Survey

Q.6) Which of the following is/are beneficiaries of STREE SWABHIMAN?

1. Women entrepreneurs from metropolitan areas
2. Women entrepreneurs from rural areas
3. Women entrepreneurs from semi urban areas

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: C

Explanation: To facilitate the society at large by empowering its women entrepreneurs to not only provide sanitary pads at their common service centers (CSCs) but also to educate women to overcome this social taboo & encourage usage of sanitary pads.

Rural and semi-urban women entrepreneurs are the beneficiaries.

Source: The Hindu

Q.7) “Gyan Circle Ventures” is often seen in news is related to which of the following?

- a) ISRO
- b) MeitY
- c) ICAR
- d) CSIR

ANS: B

Explanation: It is a MeitY funded Technology Business Incubator of Indian Institute of Information Technology, Sri City (Chittoor), Andhra Pradesh.

It would function as a Technology Incubation and Development of Entrepreneurs (TIDE 2.0) incubation center to promote deep-tech entrepreneurship through financial and technical support to incubators engaged in using emerging technologies such as IoT, AI, Block-chain, Robotics etc.

Source: The Hindu

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Q.8) Consider the following statements regarding tigers:

1. There are 70 tiger reserves in India which are governed by Project Tiger.
2. India is home to 70% of tigers in the world.

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: There are 50 tiger reserves in India which are governed by Project Tiger which is administrated by the National Tiger Conservation Authority (NTCA).

India is home to 70% of tigers in the world. In 2006, there were 1,411 tigers which increased to 1,706 in 2010 and 2,226 in 2014, according to the NTCA.

Source: The Hindu

Q.9) Which of the following pair (s) is/are correctly matched?

- | Archaeological Site | : | State |
|---------------------|---|---------------|
| 1. Daojali Hading | : | Meghalaya |
| 2. Chirand | : | Bihar |
| 3. Koldihwa | : | Uttar Pradesh |

Select the correct answer using the code given below:

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

ANS: B

Explanation: Chirand: Chirand is a place in Saran district of Bihar and has significant importance archaeological and historical study of Bihar as well as India.

- In Chapra-Sonpur road, Chirand Village is situated near Doriiganj has its unprecedented archaeological, historical and cultural heritage.
- This region was dominated by Charo Dynasty hence it was named Chirand.
- In 1871, Sir W. W Hunter brought light to the archaeological significance of this area.

Daojali Hading: The excavation site at Daojali Hading (Assam) occupies an important place in the archaeological history of India as the first evidence of an Eastern Asiatic Neolithic complex of double-shouldered Celts and cord-marked pottery in India was reported from there.

- The discovery had put Northeast India on the Neolithic map of the world for the first time.
- However, the precise age of the artifacts were not known.

Koldihwa: Belan Valley in Uttar Pradesh near Prayag in Uttar Pradesh is one site where evidences of Paleolithic, Mesolithic and Neolithic sites have been found in sequence.

- The prehistoric sites of Belan valley include Mahgara, Chopani Mando, and Koldihwa.
- Koldihwa in Belan valley has provided earliest evidence of rice cultivation.

Source: The Hindu

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Q.10) Consider the following statements regarding “writs”:

1. The Supreme Court and the high courts can issue the writs.
2. President can empower any other court to issue writs.

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: The Supreme Court (under Article 32) and the high courts (under Article 226) can issue the writs of habeas corpus, mandamus, prohibition, certiorari and quo-warranto.

- Further, the Parliament (under Article 32) can empower any other court to issue these writs.
- Since no such provision has been made so far, only the Supreme Court and the high courts can issue the writs and not any other court.

Source: Laxmikanth

Schemes & Miscellaneous

Q.1) Consider the following statements regarding Fund of Funds for Startups:

1. It was set up by government with a corpus of 10,000 cr.
2. It is managed by Ministry of Finance.

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: A

Explanation: Fund of Funds for Startups (FFS) has been setup with a corpus of Rs. 10,000 crores managed by SIDBI.

Government participates in the capital of SEBI registered Alternate Investment Funds (AIFs), known as daughter funds, who in turn invest in Indian startups through equity/equity linked instruments.

Source: PIB

Q.2) Consider the following statements regarding Champion Services Sector Scheme (CSSS):

1. It is a Central Sector scheme to boost services exports across broad range of services.
2. 12 Champion services sectors have been identified for the scheme.

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: It is a Central Sector, umbrella scheme of Department of Commerce for the period 2019-20 to 2023-24.

- 12 Champion services sectors have been identified to give focused attention on their promotion. Example: IT & ITeS, tourism, legal services, financial services etc.
- Ministries/Departments concerned with these sectors have been directed to finalize and implement the Action Plans for the identified Champion Services Sectors which in effect would be their sectoral schemes operating under the umbrella scheme CSSS. Example: nodal ministry for CSSS: IT & ITeS is Ministry of electronics and technology.
- The respective line Ministries/Departments will also finalize a monitoring mechanism to monitor implementation under the overall guidance of the Committee of Secretaries (CoS) under Cabinet Secretary.
- A dedicated fund of Rs. 5000 crores has been proposed to be established to support initiatives for sectoral Action Plans of the Champion Sectors.

Source: PIB

Q.3) Niryat Bandhu Scheme is often seen in news is related to which of the following?

- a) Entrepreneurship
- b) Agriculture

- c) Space technology
- d) Public Sector Banks

ANS: A

Explanation: Announced as part of Foreign Trade Policy 2009-14 in 2011 to focus on mentoring the first generation entrepreneurs in the field of international trade.

Source: The Hindu

Q.4) Consider the following statements regarding Bharat Net Project:

1. It aims to provide a minimum bandwidth of 2gbps to each of the 2.5lakh Gram Panchayats.
 2. It is being implemented by a special purpose vehicle named Bharat Broadband Network Ltd. set up under Companies Act.
 3. It is being funded by the Universal Service Obligation Fund (USOF).
- Which of the statements given above is/are correct?

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

ANS: C

Explanation: It aims to provide a minimum bandwidth of 100 Mbps to each of the 2.5 lakhs GPs.

- It will facilitate delivery of e-governance, e-health, e-education, e-banking, public internet access, G2C, B2B, P2P, B2C etc., weather, agricultural and other services to rural India.
- It is the new brand name of NOFN (National Optic Fibre Network) which is being implemented in three phases.
- First phase – Envisaged to provide one lakh gram panchayats with broadband connectivity by laying underground optic fibre cable lines with deadline of 31st December 2017, which was achieved.
- Second Phase – It will provide connectivity to all 2,50,000 Panchayats using an optimal mix of underground fibre, fibre over powerlines, radio and satellite media to be completed by March 2019.
- Third Phase – It will be implemented from 2019 to 2023 during which state-of-the-art, future proof network, including fiber between districts and blocks, with ring topology would be created.
- It is being implemented by a special purpose vehicle named Bharat Broadband Network Ltd. set up under Companies Act.
- It is being funded by the Universal Service Obligation Fund (USOF).

Source: PIB

Q.5) Sampoorna Bima Gram Yojana is implemented by which of the following?

- a) Department of Agriculture
- b) Department of Cooperation
- c) Department of Finance
- d) Department of Posts

ANS: D

Explanation: Sampoorna Bima Gram Yojana aims to provide affordable life insurance services to people living in rural areas of the country through the postal network.

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- It will identify at least one village (having a minimum of 100 households) in each of the revenue districts of the country and cover all households with a minimum of one RPLI (Rural Postal Life Insurance) policy.
- All villages under Sansad Adarsh Gram Yojana would also be covered under the scheme to turn them into Sampurna Beema Gram.

Source: The Hindu

Q.6) Which of the following statements is/are correct about “Red soils” in India?

1. It is formed as a result of weathering of metamorphic and igneous rocks.
2. It is rich in nitrogen content but lacks potash, humus and phosphate content.

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: A

Explanation: Red soil is formed as a result of weathering of metamorphic and igneous rocks.

- The red color of the soil comes from the high percentage of iron content.
- The soil's texture varies from being sandy to clayey, but it is mainly loamy.
- Red soil is rich in potash content but lacks phosphate, humus and nitrogen content.
- The red soil is found in regions such as Tamil Nadu, Madhya Pradesh, Jharkhand, Odisha, some parts of Karnataka and southeast Maharashtra.

Source: NCERT

Q.7) “Havana Syndrome” is often seen in news is related to which of the following?

- a) Microwave radiation
- b) Space debris
- c) Plastic waste
- d) Nuclear waste

ANS: A

Explanation: Recently, a report by the National Academies of Sciences (NAS), USA has found directed microwave radiation to be the plausible cause of the Havana syndrome.

- In late 2016, USA diplomats and other employees stationed in Havana (capital of Cuba) reported feeling ill after hearing strange sounds and experiencing odd physical sensations.
- The symptoms included nausea, severe headaches, fatigue, dizziness, sleep problems, and hearing loss, which have since come to be known as the Havana Syndrome.
- The more chronic problems suffered by Havana personnel included mainly vestibular processing and cognitive problems as well as insomnia and headache.
- While the symptoms have resolved for some of the affected employees, for others, the effects have lingered and posed a significant obstacle to their work and affected the normal functioning of lives.

Source: The Hindu

Q.8) With reference to the Non-Aligned Movement (NAM), which of the following statements is/are correct?

1. The basic concept of NAM originated during Bandung conference.

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2. The First NAM Summit Conference took place in Belgrade, Yugoslavia, in 1961.

Select the correct answer using the code given below:

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

ANS: C

Explanation: The Non-Aligned Movement was formed during the Cold War, largely on the initiative of then-Yugoslav President Josip Broz Tito, as an organization of States that did not seek to formally align themselves with either the United States or the Soviet Union, but sought to remain independent or neutral.

- The basic concept for the group originated in 1955 during discussions that took place at the Asia-Africa Bandung Conference held in Indonesia.
- The First NAM Summit Conference took place in Belgrade, Yugoslavia, in September 1961.

Source: Laxmikanth

Q.9) With reference to the Panchayati Raj Institutions, arrange the following committee in chronological order of their formation:

1. Ashok Mehta Committee
2. Balwant Rai Mehta Committee
3. L.M. Singhvi Committee

Select the correct answer using the codes given below:

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

ANS: C

Explanation: Committees related to Panchayati Raj Institutions:

- Balvantrai Mehta Committee, appointed in January 1957, submits its report on 24 November 1957.
- Ashok Mehta Committee on working of panchayats, appointed on 12 December 1977, submits its report on 21 August 1978.
- L.M. Singhvi Committee submits its report on 27 November 1986. It recommends constitutional status for panchayats.

Source: Laxmikanth

Q.10) 'Polavaram irrigation project' is recently in news, it is being constructed on which of the following river?

- a) Godavari
- b) Krishna
- c) Pennar
- d) Cauvery

ANS: A

Explanation: The Polavaram Irrigation Project on River Godavari is a Multipurpose one conferring Irrigation benefits in the upland areas of Visakhapatnam, East Godavari, West Godavari and Krishna Districts.

Source: The Hindu

Revision

Q.1) Consider the following statements regarding “SAFE PLUS” scheme:

1. It is launched by SIDBI to provide interest free loans.
2. It has been especially introduced to provide emergency working capital against confirmed government orders.

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: To help support the efforts to address the COVID-19 emergency, SIDBI is supporting MSMEs manufacturing products or providing services related to fighting the Coronavirus with the launch of two schemes- the SIDBI Assistance to Facilitate Emergency response against coronavirus (SAFE scheme) and SAFE Plus.

- Under the schemes, loans are being extended at a low rate of interest of 5% within 48 hours.
- SAFE Plus has been especially introduced to provide emergency working capital against confirmed government orders, with the same rate of interest of 5%.

Source: ForumIAS factly

Q.2) Consider the following statements regarding “Index of Industrial Production (IIP)”:

1. IIP is a composite indicator that measures changes in the volume of production of a basket of industrial products.
2. The Base year of IIP is 2011 - 12.

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: The Index of Industrial Production (IIP) is a composite indicator that measures changes in the volume of production of a basket of industrial products.

- The index is compiled and published monthly by the Central Statistical Organisation (CSO), Ministry of Statistics and Programme. It is implemented six weeks after the reference month ends, i.e a lag of six weeks.
- The Base Year of the Index of Eight Core Industries has been revised from the year 2004-05 to 2011-12 from April, 2017.

Source: The Hindu

Q.3) “Arabithittu Wildlife Sanctuary” is located in which of the following state?

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

ANS: B

Explanation: Arabithittu Wildlife Sanctuary comprises of Arabithittu State Forest located in Hunsur Taluk of Mysore district of Karnataka State.

- It lies between latitudinal range 12° 17' 16" to 12° 20' 41" North and longitudinal range 76° 22' 43" to 76° 28' 51" East. Formerly this area was in Hunsur Territorial range.
- All the sides of the sanctuary are surrounded by private agricultural land except in the North east portion which belongs to the Defence Research Development Organisation of Ministry of Defence.
- Since the area is very small zonation is not done. Zone of influence outside the boundary is agricultural fields.
- The boundary of the sanctuary is consolidated by erecting chain link mesh by Defence Research Development Organisation of Ministry of Defence.
 - Even then, the pressure for grazing land by the adjacent farmers is high. Nearby quarries in the private land have been banned from operation.

Source: The Hindu

Q.4) Which of the following is/are recommendations of "Sarkaria Commission"?

1. Permanent Inter-state council should be established under article 263.
2. Residuary powers of taxation should be continue with parliament.

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: C

Explanation: In 1983, the Central government appointed a three-member Commission on Centre–state relations under the chairmanship of R S Sarkaria, a retired judge of the Supreme Court. The Commission made 247 recommendations to improve Centre–state relations. The important recommendations are mentioned below:

- A permanent Inter-State Council called the Inter-Governmental Council should be set up under Article 263.
- Article 356 (President's Rule) should be used very sparingly, in extreme cases as a last resort when all the available alternatives fail.
- The institution of All-India Services should be further strengthened and some more such services should be created.
- The residuary powers of taxation should continue to remain with the Parliament, while the other residuary powers should be placed in the Concurrent List.
- When the president withholds his assent to the state bills, the reasons should be communicated to the state government.

Source: Laxmikanth

Q.5) Consider the following statements regarding "Zonal Councils":

1. They are established under States Reorganization Act, 1956.
2. Act divided the country into five zonal councils.
3. The Prime Minister is the chairman of the zonal councils.

Which of the statements given above is/are correct?

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

d) 1, 2 and 3

ANS: B

Explanation: The Zonal Councils are the statutory (and not the constitutional) bodies. They are established by an Act of the Parliament, that is, States Reorganisation Act of 1956.

- The act divided the country into five zones (Northern, Central, Eastern, Western and Southern) and provided a zonal council for each zone.
- Each zonal council consists of the following members: (a) home minister of Central government. (b) Chief Ministers of all the States in the zone. (c) Two other ministers from each state in the zone. (d) Administrator of each union territory in the zone.
- The home minister of Central government is the common chairman of the five zonal councils.
- Each chief minister acts as a vice-chairman of the council by rotation, holding office for a period of one year at a time.

Source: Laxmikanth

Q.6) The famous “trial of Raja Nand Kumar” is related to which of the following Governor General?

- a) Robert Clive
- b) Lord Hastings
- c) Warren Hastings
- d) Lord Cornwallis

ANS: C

Explanation: The trial of Raja Nand Kumar is an example of how arbitrary and capricious the justice of administration was in British India.

- This trial is popularly known as the judicial murder of Raja Nand Kumar.
- This is a historically significant trial because later on this trial became a major ground for the impeachment of Governor General Warren Hastings and Chief Justice Impey of the Supreme Court of Calcutta, by the House of Commons, after they returned to England.

Source: Grover & Grover

Q.7) Consider the following statements regarding “Cornwallis Code”:

1. Permanent settlement is the main subject of the Cornwallis Code.
2. New code is based on the principle of separation of powers.
3. A gradation of civil courts setup.

Which of the statements given above is/are correct?

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

ANS: D

Explanation: Lord Cornwallis, the British Governor General of India, introduced 48 regulations in 1793 which are generally known as the Cornwallis Code.

- This Code originated from a number of earlier regulations, viz, the orders and regulations introduced between 1772 and 1790, Hindu and Muslim laws, traditional institutions, the regulations of permanent settlement, and the British laws.
- The aim of the Cornwallis Code was to introduce an institutional code of law and an administrative system suitable for British colonial state.

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- On 1 May 1793, Cornwallis announced his Code. Permanent settlement is the main subject of the Cornwallis Code.
- Earlier, the District Collector was at the same time the tax administrator, judge and magistrate.
- Now, a judge is appointed for every district and by separating the judiciary from the administration, judicial and magisterial power is vested with the judge.
- A gradation of civil courts was set up.

Source: Grover & Grover

Q.8) Consider the following statements regarding “5G”:

1. It is a wireless communication technology uses radio waves or radio frequency (RF) energy to transmit and receive data.
2. It will provide the capacity and bandwidth to accommodate technologies such as Internet of Things.

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: 5G is a wireless communication technology using radio waves or radio frequency (RF) energy to transmit and receive data.

- It is the next generation mobile networks technology after 4G LTE networks.
- 5G technologies will enter services gradually, beginning in 2019 and advance to a full range of services by 2024.
- 5G will provide the capacity and bandwidth as per the need of the user to accommodate technologies such as Internet of Things.
- It will provide Faster Data Speed, Ultra-low latency etc.

Source: ForumIAS factly

Q.9) “It is the point at which a country’s economy is most efficiently producing its various goods and services and, therefore, allocating its resources in the best way possible”- defines which of the following?

- a) Production Possibility Frontier
- b) Indifference Curve
- c) Supply Curve
- d) Demand Curve

ANS: A

Explanation: An allocation of the scarce resource of the economy gives rise to a particular combination of different goods and services.

- Given the total amount of resources, it is possible to allocate the resources in many different ways and, thereby achieving different mixes of all possible goods and services.
- The collection of all possible combinations of the goods and services that can be produced from a given amount of resources and a given stock of technological knowledge is called the production possibility set/frontier of the economy.

Source: Ramesh Singh

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Q.10) Which of the following subsidies is/are covered under “Green Box of WTO”?

1. Public storage for food security.
2. Pest and disease control.
3. Government policies of Minimum Support Prices.

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: The agricultural subsidies which cause minimal or no distortions to trade are put under the green box. They must not involve price support.

- This box basically includes all forms of government expenses, which are not targeted at a particular product, and all direct income support programmes to farmers, which are not related to current levels of production or prices.
- This is a very wide box and includes all government subsidies like—public storage for food security, pest and disease control, research and extension, and some direct payments to farmers that do not stimulate production like restructuring of agriculture, environmental protection, regional development, crop and income insurance, etc.

Source: Ramesh Singh