



INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

INSTA CURRENT AFFAIRS QUIZ

OCTOBER 2020

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1. Economy

1) Consider the following statements regarding Monetisation of deficit.

1. Monetisation of deficit means printing large sums of money and distributing it to the public.
2. Monetisation of deficit is not practiced in India after 1991 Economic Reforms.

Which of the above statements is/are incorrect?

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

Solution: c)

In layman's language, monetisation of deficit means printing more money. In other words, **monetisation of deficit happens when RBI buys government securities directly from the primary market to fund government's expenses.**

Monetisation of deficit was in practice in India till 1997, whereby the central bank automatically monetised government deficit through the issuance of ad-hoc treasury bills.

What is helicopter money?

This is an unconventional monetary policy tool aimed at bringing a flagging economy back on track. It involves **printing large sums of money and distributing it to the public.** Under such a policy, a central bank "directly increase the money supply and, via the government, **distribute the new cash to the population with the aim of boosting demand and inflation.**"

[Source](#)

2) Which of the following are recognised as "Three Sisters" by the World Trade Organization's (WTO) Sanitary and Phytosanitary Measures (SPS) Agreement?

1. International Plant Protection Convention (IPPC)
2. Codex Alimentarius Commission
3. Pacific Plant Protection Organization
4. World Organization for Animal Health (OIE)

Select the correct answer code:

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

Solution: b)

The **International Plant Protection Convention (IPPC)** is one of the "Three Sisters" recognized by the World Trade Organization's (WTO) Sanitary and Phytosanitary Measures (SPS) Agreement, along with the **Codex Alimentarius Commission** for food safety standards and the **World Organization for Animal Health (OIE)** for animal health standards.

[Source](#)

3) Consider the following statements regarding Bank for International Settlements (BIS).

1. Bank for International Settlements (BIS) is an international financial institution jointly owned by the World Bank and International Monetary Fund.
2. It provides banking services, but only to central banks and other international organizations.

Which of the above statements is/are incorrect?

- a) 1 only

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

Solution: a)

The Bank for International Settlements (BIS) is an international financial institution **owned by central banks** that "fosters international monetary and financial cooperation and serves as a bank for central banks". The BIS carries out its work through its meetings, programmes and through the Basel Process – hosting international groups pursuing global financial stability and facilitating their interaction.

It also provides banking services, but only to central banks and other international organizations. It is based in Basel, Switzerland.

4) Consider the following statements regarding Open Credit Enablement Network (OCEN).

1. Open credit enablement network is the new credit protocol infrastructure which will connect lenders and marketplaces.
2. It will help small businesses and entrepreneurs get loans.
3. It is built by National Payments Corporation of India.

Which of the above statements is/are correct?

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

Solution: b)

Open Credit Enablement Network (OCEN) which is a credit protocol infrastructure built by the Indian Software Product Industry Roundtable (iSpirt), a think-tank of the software industry will democratise the lending ecosystem.

OCEN as a credit rail will have a common language and **connecting lenders and marketplaces** allowing them to create innovative credit products and services on top of it.

It will democratise credit in the country, **helping small businesses and entrepreneurs get loans**.

[Source](#)

[Source](#)

5) Consider the following statements regarding AT-1 bonds.

1. AT-1 bonds are unsecured, high-risk bonds that banks issue to shore up their core capital base to meet the Basel III norms.
2. As per latest norms, banks can issue these bonds only on electronic platform and only institutional investors could subscribe to them.
3. As per RBI guidelines, Banks cannot skip paying interest on these bonds even if their capital ratios fall below certain threshold level.

Which of the above statements is/are correct?

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

Solution: a)

AT-1 bonds are unsecured, perpetual, high-risk bonds that banks issue to shore up their core capital base to meet the Basel III norms. Banks can skip paying interest on these bonds if their capital ratios fall below certain threshold level.

Market regulator Securities and Exchange Board of India (Sebi) tightened its regulations of additional tier-1 bonds or AT-1 bonds and ensured that these risky instruments are less accessible to retail investors. As per latest norms, **banks can issue these bonds only on electronic platform, only institutional investors could subscribe to them.** Minimum allotment for these bonds is set at ₹1 cr

"These instruments have certain unique features which, inter-alia, grant the issuer (i.e. banks, in consultation with RBI) a discretion in terms of writing down the principal / interest, to skip interest payments, to make an early recall etc. without commensurate right for investors to legal recourse, even if such actions of the issuer might result in potential loss to investors,"

"The absolute right, given to the RBI, to direct a bank to write down the entire value of its outstanding AT1 instruments/bonds, if it thinks the bank has passed the Point of Non-Viability (PONV), or requires a public sector capital infusion to remain a going concern.

[Source](#)

6) Consider the following statements regarding Geographical indication (GI).

1. A geographical indication right enables those who have the right to use the indication to prevent its use by a third party whose product does not conform to the applicable standards.
2. A protected geographical indication does not enable the holder to prevent someone from making a product using the same techniques as those set out in the standards for that indication.
3. Since industrial products are machine made, Geographical indications cannot be used for industrial products.

Which of the above statements is/are correct?

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

Solution: b)

A geographical indication right enables those who have the right to use the indication to prevent its use by a third party whose product does not conform to the applicable standards. For example, in the jurisdictions in which the Darjeeling geographical indication is protected, producers of Darjeeling tea can exclude use of the term "Darjeeling" for tea not grown in their tea gardens or not produced according to the standards set out in the code of practice for the geographical indication.

However, a protected geographical indication does not enable the holder to prevent someone from making a product using the same techniques as those set out in the standards for that indication. Protection for a geographical indication is usually obtained by acquiring a right over the sign that constitutes the indication. **Geographical indications are typically used for agricultural products, foodstuffs, wine and spirit drinks, handicrafts, and industrial products.**

How long the registration of Geographical Indication is valid?

- The registration of a geographical indication is valid for a period of 10 years.
- It can be renewed from time to time for further period of 10 years each.

Source

7) Consider the following statements regarding New Development Bank (NDB).

1. New Development Bank is a multilateral development bank established by the BRICS states during Second BRICS Summit.

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2. The Bank shall support public or private projects through loans, guarantees and equity participation and also provide technical assistance for projects to be supported by the Bank.

3. The initial subscribed capital of the bank was equally distributed among the founding members.

Which of the above statements is/are correct?

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

Solution: c)

The New Development Bank (NDB), formerly referred to as the BRICS Development Bank, is a multilateral development bank established by the BRICS states. According to the Agreement on the NDB, "the Bank shall **support public or private projects through loans**, guarantees, equity participation and other financial instruments." Moreover, the NDB "shall cooperate with international organizations and other financial entities, and **provide technical assistance for projects to be supported by the Bank.**"

It was **established in 2014, at the 6th BRICS Summit** at Fortaleza, Brazil.

The initial authorized capital of the bank is \$100 billion divided into 1 million shares having a par value of \$100,000 each. The initial subscribed capital of the NDB is \$50 billion divided into paid-in shares (\$10 billion) and callable shares (\$40 billion). **The initial subscribed capital of the bank was equally distributed among the founding members.** The Agreement on the NDB specifies that every member will have one vote no one would have any veto powers.

8) Consider the following statements regarding Asian Development Bank (ADB).

1. Asian Development Bank (ADB) is a regional development bank which is dedicated to reducing poverty in Asia and the Pacific through inclusive economic growth.

2. The bank admits the members of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and non-regional developed countries.

3. The ADB was modeled closely on New Development Bank, where initial subscribed capital of the bank was equally distributed among the founding members.

Which of the above statements is/are correct?

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

Solution: b)

About ADB:

- It is a regional development bank.
- established on 19 December 1966.
- headquartered — Manila, Philippines.
- official United Nations Observer.
- **The bank admits the members of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP, formerly the Economic Commission for Asia and the Far East or ECAFE) and non-regional developed countries.**
- ADB now has 68 members, 49 from within Asia.
- It is **modeled closely on the World Bank**, and has a **similar weighted voting system** where votes are distributed in proportion with members' capital subscriptions.

As of 31 December 2019, ADB's five largest shareholders are Japan and the United States (each with 15.6% of total shares), the People's Republic of China (6.4%), India (6.3%), and Australia (5.8%).

Roles and functions:

- **Dedicated to reducing poverty in Asia and the Pacific** through inclusive economic growth, environmentally sustainable growth, and regional integration.
- This is carried out through investments – in the form of loans, grants and information sharing – in infrastructure, health care services, financial and public administration systems, helping nations prepare for the impact of climate change or better manage their natural resources, as well as other areas.

Source

9) Consider the following statements regarding Coal Sector in India.

1. Coal Mines (Special Provisions) Act, 2015 permits the Government to auction coal mines to the private sector for both captive and Commercial purposes.
2. Coal Mines (Special Provisions) Act, 2015 extends to the whole of India.
3. India allows 100% FDI in the coal sector.

Which of the above statements is/are incorrect?

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

Solution: d)

The objective of Coal Mines (Special Provisions) Act, 2015 is to empower the government to allocate the coal mines on the basis of competitive bidding to ensure continuity in coal mining operations and promote optimum utilisation of coal resources.

The **Coal Mines (Special Provisions) Act, 2015, permits the government to auction coal mines to the private sector for captive and commercial purposes.** The government has auctioned 24 coal blocks to private companies till March 2019, and will be further auctioning coal blocks for commercial mining by both Indian and foreign companies.

This act extends to the whole of India.

Source

Source

10) Consider the following statements regarding International Financial Services Centres Authority.

1. International Financial Services Centres Authority is a statutory regulatory body under the Department of Economic Affairs to regulate all financial services in International Financial Services Centres (IFSCs) in the country.
2. The authority exercise the powers of RBI in respect of financial services performed in the international financial services centres in the country.
3. IFSCA has members each nominated from RBI, IRDAI, SEBI and PFRDA.

Which of the above statements is/are correct?

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

Solution: d)

About the International Financial Services Centres Authority:

- It is a statutory body established in 2020.
- It works under the **Department of Economic Affairs, Ministry of Finance.**
- Headquartered in Gandhinagar, Gujarat.

The Authority will function as a unified regulator and is empowered to exercise the powers of RBI, SEBI, IRDAI and PFRDA in respect of financial services, financial products and financial institutions performed/located in the international financial services centres in the country.

Besides the Chairman, **IFSCA has a member each nominated from RBI, IRDAI, SEBI and PFRDA**. There are also two members from the Central Government and full-time or part time members in the Authority.

[Source](#)

11) In India, the sectors where FDI is not allowed are:

1. Investment in Chit Funds
2. Tobacco industry
3. All Agricultural or Plantation Activities
4. Satellite and its associated activities

Select the correct answer code:

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

Solution: b)

Sectors in the Indian economy where FDI is not allowed are:

- Atomic Energy Generation
- Cigars, Cigarettes, or any related tobacco industry
- Lotteries (online, private, government, etc)
- Investment in Chit Funds
- Agricultural or Plantation Activities (although there are many exceptions like horticulture, fisheries, tea plantations, Pisciculture, animal husbandry, etc)
- Housing and Real Estate (except townships, commercial projects, etc)
- Trading in TDR's (Transferable development rights)
- Any Gambling or Betting businesses

[Source](#)

12) Consider the following statements regarding Government Security (G-Sec) and Treasury Bills (T-bills).

1. 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).
2. They are not available for small and retail investors.

Which of the above statements is/are incorrect?

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

Solution: b)

What is a Government Security (G-Sec)?

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. Treasury bills are zero coupon securities and pay no interest. Instead, they are issued at a discount and redeemed at the face value at maturity.

Retail participation in Government securities has been allowed since many years. But there are not many takers.

[Source](#)



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2. Ecology and Environment

- 1) Consider the following statements regarding Environment Impact Assessment (EIA) In India.
1. India notified its first EIA norms in 2006, Under the Environment (Protection) Act, 1986.
 2. EIA provides a legal framework for regulating activities that access, utilise, and affect natural resources.
 3. The public hearing is a mandatory step in the process of environmental clearance for all developmental projects.

Which of the above statements is/ are correct?

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

Solution: a)

Under the Environment (Protection) Act, 1986, India notified its first EIA norms in 1994, setting in place a legal framework for regulating activities that access, utilise, and affect (pollute) natural resources. The 1994 EIA notification was replaced with a modified draft in 2006.

The public hearing is a mandatory step in the process of environmental clearance for certain developmental projects. This provides a legal space for people of an area to come face-to-face with the project proponent and the government and express their concerns.

[Source](#)

- 2) Industrial projects located in which of the following notified ecologically sensitive areas would require environmental clearance irrespective of the type of project?

1. Religious and historic places
2. Gulf areas
3. Tribal settlements
4. International border areas

Select the correct answer code:

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

Solution: d)

Industrial projects located in any of the following notified ecologically fragile/sensitive areas would require environmental clearance irrespective of the type of project:

- Religious and historic places
- Archaeological monuments
- Scenic areas
- Hill resorts
- Beach resorts
- Coastal areas rich in mangroves, corals, breeding grounds of specific species
- Estuaries
- Gulf areas
- Biosphere reserves
- National parks and sanctuaries
- National lakes and swamps
- Seismic zones

- Tribal settlements
- Areas of scientific and geological interest
- Defence installations, specially those of security importance and sensitive to pollution
- Border areas (international)
- Airports

[Source](#)

3) Consider the following statements regarding Bats.

1. Bats are the largest mammalian group.
2. They use sonar-based echolocation mechanism to capture prey.
3. They occur on all continents except Antarctica and are particularly diverse in South Asia.

Which of the above statements is/are correct?

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

Solution: c)

Bats are the only mammals capable of true flight and have a unique sonar-based echolocation mechanism to capture prey at night.

Bats are the largest mammalian group after rodents, with over 1,300 species making up a quarter of all mammals. They occur on all continents except Antarctica and are particularly diverse in South Asia, with 114 species of insect-eating bats and 14 fruit bats, also known as “flying foxes”, occurring in India.

[Source](#)

4) Consider the following statements regarding Bats.

1. Bats play a vital role in seed dispersal and forest regeneration.
2. Bats are major pollinators for many species of mangroves.
3. Bats are a major problem for agriculture.

Which of the above statements is/are correct?

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

Solution: b)

Studies have found that **bats play a vital role in pollination**, mainly of large-flowered plants, and in crop protection.

About 29 per cent of all bats depend upon plants for food.

Nectar-feeding bats are major pollinators for 528 species of ecologically and economically important plants. Being arboreal mammals, bats are major pollinators of rainforest trees in the Western Ghats, as well as 141 species of fruit trees in the tropics, including economically important species like mahua, neem, wild banana and palms.

Bats are major pollinators for many species of mangroves which are important for coastal ecosystems and local livelihoods.

Insectivorous bats, which make up 70 per cent of all bat species, are voracious predators of nocturnal insects and crop pests, thus their diversity contributes directly to enhancing crop productivity with tremendous economic impact.

Bats contribute significantly to soil fertility and nutrient distribution due to their large numbers, high mobility and varied habitats for roosting and foraging. **Bat guano (droppings) provides organic input to soil and facilitates nutrient transfer, contributing to soil fertility and agricultural productivity.**

Several species of bats, in fact, contribute to human health by reducing populations of mosquitoes and other insect vectors that spread malaria, dengue, chikungunya and other diseases.

[Source](#)

5) Which of the following practices can reduce emissions from agriculture?

1. Alternate wetting and drying of paddy.
2. Increasing the productivity of milk and meat production.
3. Organic agriculture.

Select the correct answer code:

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

Solution: d)

There are a number of practices that can reduce emissions from agriculture. One is **alternate wetting and drying of paddy**. "By reducing the frequency of irrigation (letting the fields drain periodically), methane emissions from flooded rice production can be cut in half.

Another method that can work is **increasing the productivity of milk and meat production**. "Increasing animal and herd productivity means that fewer animals are required to produce the same amount of milk or meat, which also reduces the emissions generated in producing that food."

Many of the practices used in organic agriculture are climate smart. Organic agriculture enhances natural nutrient cycling and builds soil organic matter, which can also support resilience to climate change and sequester carbon in soils.

[Source](#)

6) Consider the following statements regarding Central Zoo Authority (CZA).

1. Central Zoo Authority (CZA) is a statutory authority constituted under the provisions of Environment Protection Act, 1986.
2. It is an affiliate member of the World Association of Zoos and Aquariums (WAZA).
3. Every zoo in the country is required to obtain recognition from the Authority for its operation.

Which of the above statements is/are correct?

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

Solution: b)

The Central Zoo Authority (CZA) is the body of the government of India responsible for oversight of zoos. It is an **affiliate member of the World Association of Zoos and Aquariums (WAZA)**.

The CZA was formed to bring Indian zoos up to international standards.

The Central Zoo Authority has been constituted under the section 38A of **Wild Life (Protection) Act 1972**. The Authority consists of a Chairman, ten members and a Member Secretary.

Every zoo in the country is required to obtain recognition from the Authority for its operation. Zoos which have no potential to come up to the prescribed standards and norms may be refused recognition and asked to close down.

[Source](#)

7) Consider the following statements regarding Namdapha National Park.

1. Namdapha National Park lies in the international border between India and Bhutan.
2. Noa-Dihing River, a tributary of the Brahmaputra flows through it.
3. It is India's only reserve to have four big cat species the tiger, leopard, clouded

and snow leopard.

Which of the above statements is/are correct?

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

Solution: c)

Namdapha, a National Park and Tiger Reserve, lies in the international border between India and Myanmar (Burma) within Changlang District in the state of Arunachal Pradesh in the northeast India. Namdapha National Park is located at a few kilometre away from Miao amidst misty blue hills along the turbulent **Noa-Dihing river** lies in the sprawling tropical rain forest.

It is only park in the World to **have the four Feline species of big cat** namely the Tiger (*Panthera Tigris*), Leopard (*Panthera Pardus*), Snow Leopard (*Panthera Uncia*) and Clouded Leopard (*Neofelis Nebulosa*).

[Source](#)

8) Which of the following programmes on air pollution are applicable to Delhi?

1. National Clean Air Programme (NCAP)
2. Graded Response Action Plan
3. Yuddh Pradushan Ke Virudh

Select the correct answer code:

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

Solution: d)

Yuddh Pradushan Ke Virudh:

- Launched by Delhi Government.
- It is an anti-pollution campaign.
- Seeks to reduce air pollution levels in Delhi during winter.
- The campaign will include release of a Green Delhi app, creation of a war room to monitor progress, processing liquid solution for farms in order to curb stubble burning, and hotspot-specific action plans.

9) Consider the following statements regarding Natural Gas.

1. Natural gas consists primarily of Nitrogen but also includes small percentage of carbon dioxide and methane.

2. Natural gas is found in deep underground rock formations or associated with other hydrocarbon reservoirs in coal beds.

3. It is used as a chemical feedstock in the manufacture of plastics and organic chemicals.

Which of the above statements is/are correct?

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

Solution: c)

Natural gas is a naturally occurring hydrocarbon gas mixture consisting primarily of methane, but commonly including varying amounts of other higher alkanes, and sometimes a small percentage of carbon dioxide, nitrogen, hydrogen sulfide, or helium. It is formed when layers of decomposing plant and animal matter are exposed to intense heat and pressure under the surface of the Earth over millions of years.

Natural gas is a non-renewable hydrocarbon used as a source of energy for heating, cooking, and electricity generation. It is also used as a fuel for vehicles and as a **chemical feedstock in the manufacture of plastics and other commercially important organic chemicals**.

Natural gas is found in deep underground rock formations or associated with other hydrocarbon reservoirs in coal beds and as methane clathrates.

[Source](#)

10) Consider the following statements regarding Stockholm Convention on Persistent Organic Pollutants (POPs)

1. Stockholm Convention on Persistent Organic Pollutants is an international environmental treaty, that aims to eliminate or restrict the production and use of persistent organic pollutants (POPs).

2. India has ratified the ban on all chemicals that are hazardous to health and environment listed under the Stockholm Convention.

3. Union Environment Ministry has notified the Regulation of Persistent Organic Pollutants Rules under the provisions of Environment (Protection) Act, 1986.

Which of the above statements is/are correct?

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

Solution: b)

The Union Cabinet recently ratified the ban on seven chemicals that are hazardous to health and environment listed under the Stockholm Convention. These chemicals are called Persistent Organic Pollutants (POPs).

The **Environment Ministry had notified the Regulation of Persistent Organic Pollutants Rules, on March 5, 2018 under the provisions of Environment (Protection) Act, 1986**. The Act prohibited the manufacture, trade, use, import and export seven chemicals.

It also indicates the resolve of the government to take action on POPs by implementing control measures, develop inventories of the chemicals' stockpiles and review as well as update its National Implementation Plan (NIP).

The ratification process would enable India to access Global Environment Facility (GEF) financial resources in updating the NIP.

Source

11) Consider the following statements regarding Persistent Organic Pollutants (POPs).

1. Persistent Organic Pollutants (POPs) have the property of long-range environmental transport (LRET).
2. As we move up the food chain, concentrations of POPs tend to decrease so that animals at the top of the food chain tend to have the low concentrations of these chemicals.
3. Exposure to POPs can lead to cancer and diseases of immune system.

Which of the above statements is/are correct?

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

Solution: b)

Exposure to POPs can lead to cancer, damage to central & peripheral nervous systems, diseases of immune system, reproductive disorders and interference with normal infant and child development.

Uniqueness of POPs:

- POPs are lipophilic, which means that they accumulate in the fatty tissue of living animals and human beings.
- In fatty tissue, the concentrations can become magnified by up to 70 000 times higher than the background levels.
- **As you move up the food chain, concentrations of POPs tend to increase** so that animals at the top of the food chain such as fish, predatory birds, mammals, and humans tend to have the greatest concentrations of these chemicals.

Source

12) Consider the following statements regarding coalbed methane (CBM).

1. Coalbed methane (CBM) is an unconventional form of natural gas found in coal deposits or coal seams.
2. India has the largest coal reserves in the world, and CBM has been looked at as a clean alternative fuel.
3. CBM cannot be used as feedstock for fertilisers.

Which of the above statements is/are incorrect?

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

Solution: d)

India has the fifth-largest coal reserves in the world, and CBM has been looked at as a clean alternative fuel with significant prospects.

The country's coal and CBM reserves are found in 12 states of India, with the Gondwana sediments of eastern India holding the bulk.

The Damodar Koel valley and Son valley are prospective areas for CBM development.

What is coalbed methane (CBM)?

It is an unconventional form of natural gas found in coal deposits or coal seams.

CBM is formed during the process of coalification, the transformation of plant material into coal.

CBM can be used

- In Power generation.
- As Compressed natural gas (CNG) auto fuel.
- **As feedstock for fertilisers.**

- Industrial uses such as in cement production, rolling mills, steel plants, and for methanol production.

13) Consider the following statements regarding sulphur dioxide (SO₂) emissions.

1. India is the largest emitter of anthropogenic sulphur dioxide (SO₂).
2. In India, Sulphur dioxide (SO₂) emissions have been increasing significantly in the last four years.
3. Thermal power stations are the biggest emission hotspots in India.

Which of the above statements is/are correct?

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

Solution: b)

For the first time in four years India's sulphur dioxide (SO₂) emissions recorded a significant decline of approximately 6% in 2019 compared to 2018, the steepest drop in four years, according to a report from Greenpeace India and the Centre for Research on Energy and Clean Air (CREA).

However, **India continues to occupy the top spot among emitters for the fifth consecutive year.**

In 2019, India emitted 21% of global anthropogenic (human-made) SO₂ emissions — or about 5,953 kilotons a year — nearly double that of second-ranked global emitter, Russia at 3,362 kt/year. China occupied the third position at 2,156 kt per annum.

As per the report, **the biggest emission hotspots in India, are thermal power stations** (or clusters of power stations) at Singrauli, Neyveli, Sipat, Mundra, Korba, Bonda, Tamnar, Talcher, Jharsuguda, Kutch, Surat, Chennai, Ramagundam, Chandrapur, Visakhapatnam and Koradi.

Source

14) Which of the following sources produce sulphur dioxide emissions?

1. Volcanoes
2. Phytoplankton
3. Burning of coal and oil
4. Smelter ovens

Select the correct answer code:

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

Solution: d)

Natural sources (volcanoes, fires, phytoplankton) produce sulphur dioxide, but **burning sulphur-rich fossil fuels—primarily coal, oil, and petroleum**—is the main source of the gas. **Smelter ovens**, which are used to concentrate metals found in ore, also produce it.

In addition to harming human health, Sulphur dioxide reacts with water vapour to produce acid rain. Sulphur dioxide also can react in the atmosphere to form aerosol particles, which can contribute to outbreaks of haze and influence the climate.

[Source](#)

15) Consider the following statements regarding Animal Discoveries 2019 and Plant Discoveries 2019.

1. Animal Discoveries 2019 was released by Zoological Survey of India (ZSI) and Plant Discoveries 2019 was released by Botanical Survey of India (BSI).
2. ZSI uses DNA barcoding, genome sequencing, and X-rays for the identification of new species.
3. Maximum plant discoveries were made from the eastern Himalayas.

Which of the above statements is/are correct?

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

Solution: a)

Zoological Survey of India (ZSI) and the Botanical Survey of India (BSI) recently released Animal Discoveries 2019 and Plant Discoveries 2019.

Along with conventional taxonomy, the ZSI has introduced modern methods such as DNA barcoding, entire genome sequencing, and X-rays for the identification of new species.

Plant Discoveries 2019 lists 180 new plant species and 73 new records discovered from the country.

New records in a country refer to animal or plant species discovered in other parts of the world and recorded for the first time in the country.

The number of plant species found in India accounts roughly for 12% of all flora species in the world.

Both the ZSI and BSI have been releasing Animal Discoveries and Plant Discoveries since 2007, and this is the 13th publication in the series.

Data provided by the BSI stated that **28% of all plant discoveries** in 2018 were made from the **Western Ghats** during 2019; **followed by the eastern Himalayas** (21%); the east coast (11%); and eastern plains (10%). The west coast has contributed 7% of the total discoveries, while the western Himalayas have contributed 6% of the discoveries. "**Maximum (flora) discoveries were made from the State of Kerala**, followed by Maharashtra, Tamil Nadu and Arunachal Pradesh.

Source

16) Consider the following statements regarding heat dome.

1. High-pressure circulation in the atmosphere acts like a dome, trapping heat at the surface and favouring the formation of a heat wave.
2. Recently the high temperature recorded at the west coast of USA was the result of heat dome.

Which of the above statements is/are correct?

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

Solution: c)

High-pressure circulation in the atmosphere acts like a dome or cap, trapping heat at the surface and favouring the formation of a heat wave.

A heat dome occurs when the **atmosphere traps hot ocean air** like a lid or cap.

A team of scientists investigated what triggers heat domes and found the main cause was a strong change (or gradient) in ocean temperatures from west to east in the tropical Pacific Ocean during the preceding winter. Recently the high temperature recorded at the west coast of USA was the result of heat dome.

California's Death Valley registered a temperature of 54.4 degrees Celsius or 129.9 degrees Fahrenheit on August 16, 2020, which, once verified, could be the hottest temperature ever recorded on Earth.

[Source](#) [Source](#)

17) Miyawaki method, sometimes seen in news is related to

- a) Waste water treatment
- b) Afforestation technique
- c) Water storage technique
- d) Traditional system of medicine

Solution: b)

Miyawaki method originated in Japan, and is now increasingly adopted in other parts of the world, including Indian urban spaces. It has revolutionised the concept of urban afforestation by turning backyards into mini-forests.

Named after the Japanese botanist and plant ecologist Akira Miyawaki. Using this, it's possible to grow a variety of native species in as little a space as 600 sq.ft.

By promoting natural vegetation on land destroyed by natural calamities and man-induced mistakes, Miyawaki managed to raise mini forests along the coastline of Japan.

In contrast to conventional planting techniques, this method allows for **planting more number of trees in small spaces**. The trees grow faster too and are free of chemicals and fertilisers. The advantage of Miyawaki method is that the saplings need minimum maintenance.



[Source](#)

18) Consider the following statements

1. TX2 goal is a global commitment that was set by the Governments of the 43 tiger range countries to double the number of wild tigers by 2030.
2. TX2 goal was launched by World Wildlife Foundation (WWF) at the St Petersburg Tiger Summit held in Russia.
3. The Global Tiger Forum (GTF) is the only inter- governmental international body established with members from willing countries to embark on a global campaign to protect the Tiger.

Which of the above statements is/are correct?

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

Solution: c)

The TX2 goal is a global commitment to double the world's wild tigers by 2022. TX2 stands for 'Tigers times two', signalling the goal to double wild tigers.

It was launched by World Wide Fund For Nature (formerly World Wildlife Fund) at the 2010 St Petersburg Tiger Summit held in Russia. Under it, 13 tiger range countries had agreed to double the world tiger population by 2022

The GTF is the only intergovernmental international body established with members from willing countries to embark on a global campaign to protect the Tiger.

19) Thwaites Glacier, recently seen in news is located in

- a) Finland
- b) Iceland
- c) Svalbard
- d) Antarctica

Solution: d)

In the Antarctic floats a massive glacier, roughly the size of Britain, whose melting has been a cause of alarm for scientists over the years.

Called the Thwaites Glacier, it is 120 km wide at its broadest, fast-moving and melting fast over the years. Because of its size (1.9 lakh square km), it contains enough water to raise the world sea level by more than half a metre.

Thwaites is important for Antarctica as it slows the ice behind it from freely flowing into the ocean. Because of the risk it faces — and poses — Thwaites is often called the Doomsday Glacier.

20) Which of the following are mainly the primary sources of production of edible oil in India?

- 1. Soybean
- 2. Groundnut
- 3. Coconut
- 4. Rice bran
- 5. Mustard

Select the correct answer code:

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

Solution: b)

Soybean, rapeseed & mustard, groundnut, sunflower, safflower & niger are the primary sources while oil palm, coconut, rice bran, cotton seeds & tree-borne oilseeds are the secondary sources of production of edible oil in India.

[Source](#)

[Source](#)

21) Consider the following statements regarding Future Earth.

- 1. Future Earth is a 10-year international research program which aims to build knowledge about the environmental and human aspects of Global change, and to find solutions for sustainable development.
- 2. Future Earth harnesses the experience and reach of thousands of scientists and innovators from across the globe.
- 3. It forms strategic partnerships with international organizations that support global sustainability research and action.

Which of the above statements is/are correct?

- a) 1, 2
- b) 2, 3

- c) 1, 3
- d) 1, 2, 3

Solution: d)

Future Earth is a 10-year international research program which aims to build knowledge about the environmental and human aspects of Global change, and to find solutions for sustainable development. It aims to increase the impact of scientific research on sustainable development.

We're looking closely at the interconnectedness of Earth's major systems—climate, water, land, ocean, urban, economic, energy, health, biodiversity, and governance systems—and developing evidence-based strategies for global sustainable development.

Future Earth harnesses the experience and reach of thousands of scientists and innovators from across the globe – including a variety of partners and funders in the social and government sectors.

Future Earth forms strategic partnerships with international organizations that support global sustainability research and action. Strategic partnerships range from accredited observer status to formal memoranda of understanding or statements of collaboration.

[Source](#)

[Source](#)

22) Consider the following statements regarding Sigur Plateau.

1. The Sigur Plateau is notable as an important wildlife corridor maintaining connectivity between the Vindhya Range and the Satpura Range.
2. Sigur Plateau is known for large number of Elephant and Tiger population.

Which of the above statements is/are correct?

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

Solution: b)

Sigur Plateau is a plateau in the north and east of Nilgiri District in the Nilgiri Hills of Tamil Nadu.

The Sigur Plateau is notable as an important wildlife corridor maintaining connectivity between the Western Ghats and the Eastern Ghats to sustain elephant and tiger numbers and their genetic diversity.

It is an important link between several contiguous protected areas forming the Nilgiri Biosphere Reserve, the largest protected forest area in India. This area supports over 6,300 elephants, ^[5] that represents the largest single population of elephants and tigers in India.

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

1. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is a United Nations body established for the conservation and sustainable use of biodiversity.
2. The United Nations Environment Programme (UNEP) provides secretariat services to IPBES.
3. It is intended to serve a similar role to the Intergovernmental Panel on Climate Change.

Which of the above statements is/are correct?

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

Solution: c)

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. 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.**

The governing body of IPBES – made up of the representatives of IPBES member States – usually meets once per year.

Observers: Any State not yet a member of IPBES; the Convention on Biological Diversity (CBD) and other biodiversity-related conventions; related UN bodies; as well as many other relevant organizations and agencies.

It is intended to serve a similar role to the Intergovernmental Panel on Climate Change.

[Source](#)

[Source](#)

24) Consider the following statements regarding Blue Flag certification.

1. Blue Flag beaches are considered the cleanest beaches of the world.

2. India is the first country in the world to receive the Blue Flag Certification for maximum beaches in a single attempt.

3. Intergovernmental Panel on Climate Change (IPCC) is one of the jury for selecting beaches for Blue Flag Certification.

Which of the above statements is/are correct?

a) 1, 2

b) 1, 3

c) 2, 3

d) 1, 2, 3

Solution: a)

Eight beaches in India have been awarded the coveted 'Blue Flag' certification by an eminent international jury, which comprises members of the United Nations Environment Programme (UNEP), United Nations World Tourism Organization (UNWTO), Foundation for Environmental Education (FEE) and International Union for Conservation of Nature (IUCN).

India is now the first country in the world to receive the Blue Flag Certification for 8 beaches in a single attempt.

The 'Blue Flag' is a certification that can be obtained by a beach, marina, or sustainable boating tourism operator, and serves as an eco-label. The certification is awarded by the Denmark-based non-profit Foundation for Environmental Education, which sets stringent environmental, educational, safety-related and access-related criteria that applicants must meet and maintain. It is **awarded annually** to beaches and marinas in FEE member countries.

The award is given to the safest, cleanest, and environment-friendly beaches of the world.

[Source](#)

25) Which of the following activities are permitted in the Coastal Regulation Zone (CRZ) of Blue Flag Certified beaches?

1. Grey water treatment plant

2. CCTV surveillance and control room

- 3. Solar power plant
- 4. Landscaping lighting

Select the correct answer code:

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

Solution: d)

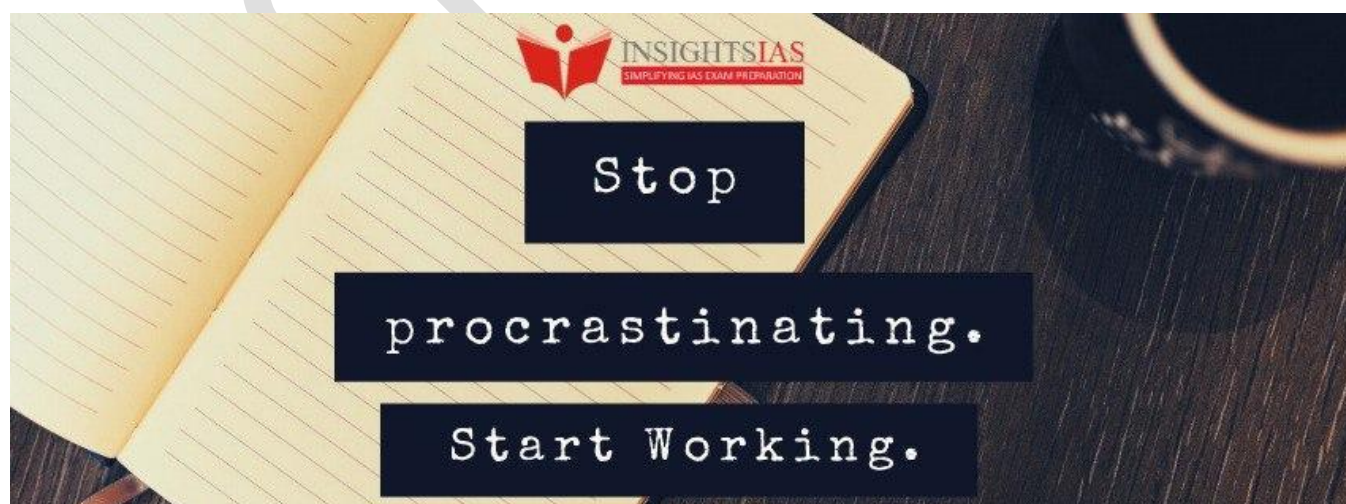
The Blue Flag certification requires beaches to create certain infrastructure.

Central Government declares that for the purpose of Blue Flag Certification in such identified beaches, the following activities and facilities shall be permitted in the Coastal Regulation Zone (CRZ), including Islands, subject to maintaining a minimum distance of 10 meters from HTL (High Tide Line)

- (a) Portable toilet blocks, change rooms and shower panels;
- (b) Grey water treatment plant;
- (c) Solid waste management plant;
- (d) Solar power plant;
- (e) Purified drinking water facility;
- (f) Beach access pathways;
- (g) Landscaping lighting;
- (h) Seating benches and sit-out umbrellas;
- (i) Outdoor play / fitness equipment;
- (j) CCTV surveillance and control room;
- (k) First aid station;
- (l) Cloak room facility;
- (m) Safety watch towers and beach safety equipment;
- (n) Beach layout, environment information boards and other signages;
- (o) Fencing, preferably vegetative;
- (p) Parking facilities;
- (q) Entry gate, tourist facilitation centre; and
- (r) Other associated facilities or infrastructure, as per requirements of Blue Flag Certification.

[Source](#)

[Source](#)



3. Government Schemes and Programmes

1) Consider the following statements

1. AGMARK is legally enforced by the Bureau of Indian Standards Act, 1986.
2. The Directorate of Marketing and Inspection, Ministry of Commerce and Industry is responsible for the implementation of AGMARK certification scheme.

Which of the above statements is/are correct?

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

Solution: d)

AGMARK is a certification mark employed on agricultural products in India, assuring that they conform to a set of standards approved by the **Directorate of Marketing and Inspection, an agency of the Ministry of Agriculture and Farmer Welfare**.

The AGMARK is legally enforced in India by the **Agricultural Produce (Grading and Marking) Act of 1937 (and amended in 1986)**.

2) Which of the following certification marks in India are correctly matched?

1. BIS hallmark: Certifies the purity of gold jewellery
2. FPO mark: Mandatory for all food products
3. Ecomark: For products conforming to a set of standards aimed at the least impact on the ecosystem
4. ISI mark: For industrial product.

Select the correct answer code:

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

Solution: b)

The state enforced certification marks presently in India are:

- Agmark for all agricultural products.
- BIS hallmark: certifies the purity of gold jewellery.
- Ecomark is a certification mark issued by the Bureau of Indian Standards to products conforming to a set of standards aimed at the least impact on the ecosystem.
- **FPO mark. A mandatory mark for all processed fruit products in India.**
- India Organic certification mark for organically farmed food products.
- ISI mark. For industrial product.
- **FSSAI for all food products.**

3) At present, the AGMARK standards cover quality guidelines for which of the following commodities?

1. Basmati Rice
2. Cotton
3. Arecanuts
4. Raw Meat (Chilled or Frozen)
5. Tobacco
6. Compounded Asafoetida

Select the correct answer code:

- a) 1, 3, 4, 5
- b) 1, 2, 3, 4, 6

- c) 1, 2, 3, 4, 5, 6
- d) 1, 2, 3, 4

Solution: c)

[Source](#)

4) Consider the following statements.

1. India became the world's largest sugar producer in 2018-2019, beating out Brazil.
2. In India the sugar prices are controlled by the Government, so as to protect the sugarcane farmers.

Which of the above statements is/are correct?

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

Solution: a)

India became the world's largest sugar producer in 2018/2019, beating out Brazil for the first time in 16 years.

The government protect farmers by deciding the price of sugarcane, called the fair and remunerative price (FRP). But on the other hand, **sugar prices are determined by market sentiments and market forces**, and the government can't have much direct control over it.

5) Consider the following statements regarding Pashu Aadhaar.

1. Pashu Aadhaar contains a 12-digit UID that aims at enhancing traceability of livestock and their products.
2. It is developed by Ministry of Electronics and Information Technology.

Which of the above statements is/are correct?

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

Solution: a)

Information Network for Animal Productivity and Health (INAPH), known as Pashu Aadhaar, is introduced with the aim of enhancing traceability of our livestock and their products.

This unique identification number that is currently being developed will track the population of livestock. The Information Network for Animal Productivity and Health (INAPH) is being developed by the National Dairy Development Board (NDDB).

Just like Aadhaar cards, INAPH will also assign a **unique identification number to each animal**, alongside a host of other related data that will help in managing the country's vast livestock resources. The INAPH is being touted as the world's largest existing database of animals.

The first phase of the project would involve taking stock of India's 94 million "in milk" female cow and buffalo population.

During the process, every animal will be provided with an ear tag that would contain their own 12-digit UID. The INAPH will contain data on the bovines' species, breed, pedigree, and information related to calving, milk production, vaccination, and the like.

[Source](#)

6) Consider the following statements regarding Animal Husbandry Infrastructure Development Fund (AHIDF).

1. The AHIDF will incentivise infrastructure investments in dairy, meat processing and animal feed plants.
2. Farmer Producer Organizations (FPOs) and MSMEs are the eligible beneficiaries under the Scheme.
2. The private sector is incentivising dairy cooperative investment under Dairy Processing Infrastructure Development Fund (DIDF) where 100% funding will be from the private sector.
- Which of the above statements is/are correct?

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

Solution: b)

Animal Husbandry Infrastructure Development Fund (AHIDF) approved by Cabinet in pursuance of recently announced Atma Nirbhar Bharat Abhiyan stimulus package.

Size of the fund is 15000 crore.

This Fund will incentivise infrastructure investments in dairy, meat processing and animal feed plants.

Who is eligible? **Farmer Producer Organizations (FPOs), MSMEs, Section 8 Companies, Private Companies and individual entrepreneur with only 10% margin money contribution by them.** The balance 90% would be the loan component to be made available by scheduled banks.

The Centre is incentivising dairy cooperative investment under Dairy Processing Infrastructure Development Fund (DIDF).

Source

- 7) Consider the following statements regarding Infrastructure Investment Trust(s) (InvIT).
- 1. Infrastructure investment trusts are institutions similar to mutual funds, which pool investment from various categories of investors and invest only in completed infrastructure projects.
 - 2. National Highways Authority of India's (NHAI) InvIT is a Trust established by NHAI under the Indian Trust Act, 1882 and SEBI regulations.
 - 3. In India, InvITs are allowed to be formed in roads, power transmission, gas transmission and telecom towers sectors.

Which of the above statements is/are correct?

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

Solution: b)

Infrastructure investment trusts are institutions similar to mutual funds, which pool investment from various categories of investors and invest them into **completed and revenue-generating infrastructure projects**, thereby creating returns for the investor. The capital market regulator notified the Sebi (Infrastructure Investment Trusts) Regulations, 2014 on September 26, 2014, and these trusts are likely to help facilitate investment in the infrastructure sector.

NHAI's InvIT will be a Trust established by NHAI under the Indian Trust Act, 1882 and SEBI regulations.

The Indian InvIT market is not yet mature and has supported formation of 10 InvITs till date — in roads, power transmission, gas transmission and telecom towers sectors.

[Source](#)

8) Consider the following statements regarding National Commission for Protection of Child Rights (NCPCR).

1. National Commission for Protection of Child Rights (NCPCR) is a statutory body under the administrative control of the Ministry of Women & Child Development.
2. The Commission's Mandate is to ensure that all Laws, Policies and Programmes are in consonance with UN Convention on the Rights of the Child.
3. It enquires into complaints of violations of child rights and take suo moto cognisance of serious cases of violation of child rights.

Which of the above statements is/are correct?

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

Solution: d)

The National Commission for Protection of Child Rights (NCPCR) was set up in March 2007 under the Commissions for Protection of Child Rights (CPCR) Act, 2005, an Act of Parliament (December 2005). National Commission for Protection of Child Rights (NCPCR) is a **statutory body under the administrative control of the Ministry of Women & Child Development**, Government of India. The Commission's Mandate is to ensure that all Laws, Policies, Programmes, and Administrative Mechanisms are in consonance with the Child Rights perspective as enshrined in the Constitution of India and also the UN Convention on the Rights of the Child. The Child is defined as a person in the 0 to 18 years age group.

One of the Core Mandates of the Commission is to inquire into complaints of violations of child rights. The commission is also required to take suo moto cognisance of serious cases of violation of child rights and to examine factors that inhibit the enjoyment of rights of children.

[Source](#)

9) Consider the following statements regarding The National Commission for Protection of Child Rights (NCPCR).

1. The National Commission for Protection of Child Rights (NCPCR) emphasizes the principle of universality of child rights and recognizes the tone of urgency in all the child related policies of the country.
2. It examines all factors that inhibit the enjoyment of rights of children affected by terrorism, communal violence, riots, natural disaster, domestic violence and HIV/AIDS.

Which of the above statements is/are correct?

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

Solution: c)

The National Commission for Protection of Child Rights (NCPCR) emphasizes the principle of universality and inviolability of child rights and recognizes the tone of urgency in all the child related policies of the country.

It examines all factors that inhibit the enjoyment of rights of children affected by terrorism, communal violence, riots, natural disaster, domestic violence, HIV/AIDS, trafficking, maltreatment, torture and exploitation, pornography and prostitution and recommend appropriate remedial measures.

[Source](#)

10) Which of the following are the functions of National Commission for Protection of Child Rights (NCPCR)?

1. Look into matters relating to children in need of special care and protection.
2. Undertake and promote research in the field of child rights.
3. Spread child rights literacy among various sections of society.

4. Inspect any juvenile custodial home under the control of the Central Government where children are detained for the purpose of reformation.

Select the correct answer code:

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

Solution: d)

The Commission shall perform the following functions, namely:

- Present to be central government, annually and at such other intervals, as the commission may deem fit, reports upon working of those safeguards;
- **Study treaties and other international instruments** and undertake periodic review of existing policies, programmes, and other activities on child rights and make recommendations for their effective implementation in the best interest of children.
- **Undertake and promote research in the field of child rights.**
- **Spread child rights literacy** among various sections of society and promote awareness of the safeguards available for protection of these rights through publications, media, seminars and other available means.
- **Inspect or cause to be inspected any juvenile custodial home** or any other place of residence or institution meant for children, under the control of the Central Government or any State Government or any other authority including any institution run by a social organization, where children are detained or lodged for the purpose of treatment, reformation or protection and take up with these authorities for remedial action, if found necessary.

[Source](#)

11) Consider the following statements regarding Graded Response Action Plan (GRAP).

1. Graded Response Action Plan (GRAP) was approved by the Supreme Court and was prepared by Environment Pollution (Prevention & Control) Authority.
2. The plan includes action by various state governments to be taken throughout the year to tackle industrial, vehicular and combustion emissions.
3. The state authorities and public health department can impose penalties on various private contractors and entities for flouting anti-air pollution rules as per the guidelines of the Graded Response Action Plan.

Which of the above statements is/are correct?

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

Solution: b)

The Noida Authority said it issued penalties worth Rs 11,15,000 on various private contractors and entities for flouting anti-air pollution guidelines and rules.

It said the action has been taken as per the guidelines of the Graded Response Action Plan (GRAP).

What is GRAP?

- Approved by the Supreme Court in 2016.
- The plan was prepared by EPCA.
- It works only as an emergency measure.

As such, the plan does not include action by various state governments to be taken throughout the year to tackle industrial, vehicular and combustion emissions.

When the air quality shifts from poor to very poor, the measures listed have to be followed since the plan is incremental in nature.

Source

12) Consider the following statements regarding Real Estate Investment Trusts (REITs).

1. Structured on the lines of mutual funds, REITs are securities linked to real estate that can be traded on the stock exchange.
2. The minimum investment requirement is ₹ 5 lakh for the retail investors.
3. 80% of the value of REITs should be invested in rent-generating assets.

Which of the above statements is/are correct?

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

Solution: c)

The Real Estate Investment Trust (REITs) was formally inaugurated in India in 2019. Structured on the lines of mutual funds, REITs are securities linked to real estate that can be traded on the stock exchange after their listing. However, unlike mutual funds, physical real estate is the underlying asset in REITs.

SEBI has reduced investment limit from Rs 2 lakh to Rs 50,000 in the 2019 amendment which enhances the prospects for REITs.

REITs are far less volatile than the stock market, FDs, mutual funds and gold as regulations maintain that 80% of the REITs listings must be of rent-generating assets.

According to Sebi rules, REITs are to distribute 90% or more of its earnings—be it dividend, interest or rent—to investors or unit holders at least twice a year.

[Source](#)

[Source](#)

13) Consider the following statements regarding Child Welfare Committees (CWCs).

1. As per Juvenile Justice (Care and Protection of Children) Act, 2015, Child Welfare Committees (CWCs) are to be constituted by Central Government for every district.
2. The Committee shall consist of at least one woman member.
3. The Committee has the full authority of disposing of cases for the care, protection and treatment of the children.

Which of the above statements is/are correct?

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

Solution: b)

As per the Section 27(1) of **Juvenile Justice (Care and Protection of Children) Act, 2015 (JJ Act)**, **Child Welfare Committees (CWCs) are to be constituted by State Government for every district**, for exercising the powers and to discharge the duties conferred on such Committees in relation to children in need of care and protection under JJ Act, 2015.

Composition of the committees:

- The Committee shall consist of a Chairperson, and four other members as the State Government may think fit to appoint, of whom **at least one shall be a woman** and another, an expert on the matters concerning children.

The Committee shall have the authority to dispose of cases for the care, protection, treatment, development and rehabilitation of the children in need of care and protection, as well as to provide for their basic needs and protection.

[Source](#)

14) Consider the following statements regarding Production linked incentive scheme.

1. Under the National Policy on Electronics 2019, the Ministry of Electronics and Information Technology (MeitY) introduced a Production Linked Incentive Scheme for Large Scale Electronics Manufacturing.
2. The scheme provides for an incentive of 4-6 per cent on incremental sales of mobile phones and specified electronic components manufactured in India.
3. The scheme is applicable to only domestic companies.

Which of the above statements is/are correct?

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

Solution: a)

Under the **National Policy on Electronics 2019**, introduced to position India as a global hub for electronics system design and manufacturing, the **Ministry of Electronics and Information Technology (MeitY)** has **introduced a Production Linked Incentive Scheme for Large Scale Electronics Manufacturing (Scheme)** with effect from April 1, 2020.

The **scheme provides for an incentive of 4-6 per cent on incremental sales (as compared to the base year, i.e., 2019-20) of mobile phones and specified electronic components (such as semiconductors, diodes, printed circuit boards, etc) manufactured in India**, to eligible companies, **for a period of five years** in the following three categories: (a) mobile phones manufactured and sold by domestic companies; (b) mobile phones manufactured and sold by other companies (invoice value of ₹15,000 and above); and (c) specified electronic components.

All electronic manufacturing companies which are **either Indian or have a registered unit in India** will be eligible to apply for the scheme. These companies can either create a new unit or seek incentives for their existing units from one or more locations in India.

Any additional expenditure incurred by companies on plant, machinery, equipment, research and development and transfer of technology for manufacture of mobile phones and related electronic items will be eligible for the incentive scheme.

However, all investment done by companies on land and buildings for the project will not be considered for any incentives or determine eligibility of the scheme.

[Source](#)

[Source](#)

15) Consider the following statements regarding Patents.

1. A Patent is a statutory right for an invention granted for a limited period of time to the patentee by the Government, in exchange of full disclosure of his invention for excluding others, from making, using, selling, importing the patented product or process for producing that product for those purposes without his consent.
2. The term of every patent granted is 20 years from the date of filing of application.
3. The Indian Patent is effective worldwide.

Which of the above statements is/are correct?

- a) 1, 2
- b) 2, 3
- c) 1, 2, 3

d) 1, 3

Solution: a)

A Patent is a **statutory right** for an invention granted for a limited period of time to the patentee by the Government, in exchange of full disclosure of his invention for excluding others, from making, using, selling, importing the patented product or process for producing that product for those purposes without his consent.

The term of every patent granted is 20 years from the date of filing of application.

The patent system in India is governed by the Patents Act, 1970 (No.39 of 1970) as amended by the Patents (Amendment) Act, 2005 and the Patents Rules, 2003. The Patent Rules are regularly amended in consonance with the changing environment, most recent being in 2016.

Patent protection is a territorial right and therefore it is effective only within the territory of India. There is no concept of global patent.

Source

16) Consider the following statements regarding Labour Bureau.

1. Labour Bureau is the data and survey wing of the union ministry of Commerce and Industry.
2. Labour Bureau aims to achieve in producing quality data on rural, agriculture and industrial workers.
3. The foundations of Labour Bureau can be traced to the Royal Commission on Labour setup before India's Independence.

India's Independence.

Which of the above statements is/are correct?

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

Solution: c)

At least 80 years after it was established, the **Labour Bureau, the data and survey wing of the union labour ministry**, has finally got a logo that encapsulates the essence of **three core areas - rural, agriculture and industrial workers**.

The logo represents three goals that **Labour Bureau aims to achieve in producing quality data** -- accuracy, validity and reliability.

The foundations of Labour Bureau can be traced to the Royal Commission on Labour in 1931, which underlined the need for systematic collection of labour statistics relating to living, working and socio-economic conditions of industrial labour.



[Source](#)

17) Consider the following statements regarding PARAKH.

1. Parakh is the National Assessment Centre for student assessment and evaluation for all school boards across the country.
2. Included in the National Education Policy 2020, this autonomous institution is under the Union Education Ministry.
3. It will also guide standardised testing to monitor learning outcomes at the State and national levels.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3

d) 1, 2, 3

Solution: d)

The Strengthening Teaching-Learning and Results for States (STARS) project is partly funded by the World Bank.

A major component of the project is the establishment of **PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development)** as a **National Assessment Centre**. Included in the **National Education Policy 2020**, this **autonomous institution under the Union Education Ministry** will set norms for student assessment and evaluation for all school boards across the country, most of which currently follow norms set by State governments. It will also guide standardised testing to monitor learning outcomes at the State and national levels.



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4. Science and Technology

1) Which of the following are the applications of Nanobots

1. Targeted drug-delivery
2. Unblock blood vessels in heart
3. Taking biopsies in inaccessible areas of the body

Select the correct answer code:

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

Solution: b)

Scientists are exploring the use of **nanobots for a number of healthcare uses**, not only for fighting cancer, but also to **unblock blood vessels** in hard to reach areas, taking biopsies or measuring the level of certain chemicals in otherwise inaccessible areas of the body. A nanobot is a device typically ranging from 0.1-10 micrometres (a micrometre is one millionth of a metre), roughly the size of a red blood cell or smaller. This is too small to add a traditional robotic element like a motor, computer chip or camera.

Source

2) Phage therapy, sometimes seen in news is related to

- a) Efficient diagnosis of rare genetic diseases
- b) Treatment for cardiovascular disease and diabetes
- c) Treatment for people suffering from antibiotic-resistant infections
- d) Treatment for people suffering from mental disorder

Solution: c)

Phage therapy is a treatment for people suffering from chronic or antibiotic-resistant infections.

Phage therapy or viral phage therapy is the therapeutic use of bacteriophages to treat pathogenic bacterial infections. Bacteriophages, known as phages, are a form of viruses. Phages attach to bacterial cells, and inject a viral genome into the cell. The viral genome effectively replaces the bacterial genome, halting the bacterial infection.

3) Consider the following statements regarding Torrefaction technology.

1. Torrefaction is a Swedish technology that converts rice stubble into bio-manure.
2. The technology involves heating up straw, grass, saw mill residue and wood biomass under very high temperature.

Which of the above statements is/are correct?

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

Solution: b)

Pollution from stubble burning in winter is the key contributor to the sharp decline in air quality in Delhi. But stubble burning continues unabated. To find a solution to this issue, India is testing a Swedish technology — **torrefaction that can convert rice stubble into 'bio-coal'**.

The technology involves heating up straw, grass, saw mill residue and wood biomass to 250 degrees Celsius - 350 degrees Celsius. This changes the elements of the biomass into 'coal-like' pellets. These pellets can be used for combustion along with coal for industrial applications like steel and cement production

4) Consider the following statements regarding Cannabidiol (CBD) oil, recently seen in news.

1. CBD oil is an extract from the cannabis plant.
2. There is enough scientific evidence to prove that CBD oil can safely and effectively treat cancer.
3. CBD oil manufactured under a licence issued by the Drugs and Cosmetics Act, 1940 can be legally used.

Which of the above statements is/are correct?

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

Solution: c)

CBD oil is an extract from the cannabis plant.

There is not enough robust scientific evidence to prove that CBD oil can safely and effectively treat cancer.

The Narcotic Drugs and Psychotropic Substances Act, 1985 (NDPS Act) outlaws the recreational use of cannabis. **CBD oil manufactured under a licence issued by the Drugs and Cosmetics Act, 1940 can be legally used.** However, the use of cannabis as a medicine is not much prevalent in India.

[Source](#)

5) Consider the following statements regarding Brucellosis.

1. Brucellosis is a bacterial disease that mainly infects cattle, swine, goats, sheep and dogs.
2. Humans get infected if they come in direct contact with infected animals and not by eating or drinking contaminated animal products.
3. Human to human transmission of the virus is rare.

Which of the above statements is/are correct?

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

Solution: c)

Brucellosis is a bacterial disease that mainly infects cattle, swine, goats, sheep and dogs. **Humans can get infected if they come in direct contact with infected animals or by eating or drinking contaminated animal products or by inhaling airborne agents.** According to the WHO, most cases of the disease are caused by ingesting unpasteurised milk or cheese from infected goats or sheep.

Symptoms of the disease include fever, sweats, malaise, anorexia, headache and muscle pain. While some signs and symptoms can last for long periods of time, others may never go away. These include recurrent fevers, arthritis, swelling of the testicles and scrotum area, swelling of the heart, neurologic symptoms, chronic fatigue, depression and swelling of the liver or spleen.

Human to human transmission of the virus is rare.

[Source](#)

6) Consider the following statements regarding African Swine Fever (ASF).

1. ASF is a severe viral disease that affects wild and domestic pigs typically resulting in an acute haemorrhagic fever.

2. The disease has a case fatality rate (CFR) of almost 100 per cent.
3. Biological vectors such as ticks can transmit the disease.

Which of the above statements is/are correct?

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

Solution: d)

African Swine Fever (ASF): Amid the COVID-19 lockdown, an outbreak of ASF killed thousands of pigs in Assam and Arunachal Pradesh. **ASF is a severe viral disease that affects wild and domestic pigs typically resulting in an acute haemorrhagic fever.** The disease has a case fatality rate (CFR) of almost 100 per cent. Its routes of transmission include direct contact with an infected or wild pig (alive or dead), indirect contact through ingestion of contaminated material such as food waste, feed or garbage, or through biological vectors such as ticks.

7) Which of the following sectors have the applications from the Cyber Physical System?

1. Healthcare
2. Smart Buildings
3. Transportation
4. Robotics

Select the correct answer code:

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

Solution: c)

Cyber-Physical System (CPS) is composed of a collection of devices interacting with each other and communicating with the physical world. It integrates computation and communication aspects together with control and monitoring techniques.

Various CPS applications can be found in almost all areas of human life, such as manufacturing systems, smart grids, robotics, transportation systems, medical devices, military, home area networks and smart buildings, etc.

8) Which of the following can be carried out using Artificial Intelligence?

1. Early detection and prevention of diseases for patients.
2. Auto reply to specific queries on a web portal.
3. Shorten the preclinical drug identification and design process
4. Water management and pest control

Select the correct answer code:

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

Solution: c)

Machine Learning-based deep-learning algorithms in AI can give insights to healthcare providers in predicting future events for patients. It can also aid in the **early detection and prevention of diseases by capturing the vitals of patients.**

Hospitals in Tamil Nadu are using Machine Learning algorithms to **detect diabetic retinopathy** and help address the challenge of shortage of eye doctors. For the COVID-19 response, an AI-enabled Chatbot was used by MyGov for ensuring communications.

AI-based applications have helped biopharmaceutical companies to significantly **shorten the preclinical drug identification and design process** from several years to a few days or months.

AI-based solutions on **water management, crop insurance and pest control** are also being developed. Technologies like image recognition, drones, and automated intelligent monitoring of irrigation systems can help farmers kill weeds more effectively, harvest better crops and ensure higher yields.

ICRISAT has developed an AI-power sowing app, which utilises weather models and data on local crop yield and rainfall to more accurately predict and advise local farmers on when they should plant their seeds.

An **AI-based flood forecasting** model that has been implemented in Bihar is now being expanded to cover the whole of India.

[Source](#)

9) Consider the following statements regarding Chandra X-ray Observatory.

1. Chandra X-ray Observatory is a telescope specially designed to detect X-ray emission from very hot regions of the Universe such as exploded stars, clusters of galaxies, and matter around black holes.
2. It is a Flagship-class space telescope launched by ISRO.

Which of the above statements is/are correct?

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

Solution: a)

NASA's Chandra X-ray Observatory is a telescope specially designed to detect X-ray emission from very hot regions of the Universe such as exploded stars, clusters of galaxies, and matter around black holes. Because X-rays are absorbed by Earth's atmosphere, Chandra must orbit above it, up to an altitude of 139,000 km (86,500 mi) in space.

Since its launch on July 23, 1999, the Chandra X-ray Observatory has been NASA's flagship mission for X-ray astronomy, taking its place in the fleet of "Great Observatories."

[Source](#)

10) Which of the following statement is correct regarding Sagittarius A*?

- a) It is the Supermassive black hole
- b) It is located at the Galactic center of the Milky Way galaxy
- c) Both a and b
- d) Neither a nor b

Solution: c)

Based on mass and increasingly precise radius limits, astronomers have concluded that **Sagittarius A* is the Milky Way's central supermassive black hole.**

[Source](#)

[Source](#)

11) Nuclear science is being utilized in which of the following areas of agriculture in India?

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1. Development of high yielding crop seeds
2. Fertilizer and pesticide related studies
3. Radiation processing of food items

Select the correct answer code:

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

Solution: d)

The nuclear agriculture programme of Bhabha Atomic Research Centre (BARC) covers development of high yielding crop seeds using nuclear techniques, fertilizer and pesticide related studies, radiation processing of food items and other areas.

[Source](#)

12) Consider the following statements regarding Black holes.

1. A black hole is an astronomical object with a gravitational pull so strong that nothing, not even light, can escape from it.
2. The area outside the boundary of Black holes, called the event horizon does emit all kinds of radiations, even visible light.

Which of the above statements is/are incorrect?

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

Solution: d)

Black holes do not emit or radiate anything, even light. So, there is no way their image can be captured. But the area just outside its boundary, called the **event horizon, which has vast amounts of gas, clouds and plasma swirling violently, does emit all kinds of radiations, even visible light.**

[Source](#)

13) Consider the following statements regarding CRISPR-Cas9.

1. CRISPR technology allows to easily alter DNA sequences and modify gene function.
2. It can be used to correct sickle cell anemia, a genetic blood disorder.
3. Gene editing system does not occur naturally in organisms.

Which of the above statements is/are correct?

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

Solution: a)

Indian scientists have developed a new variant of currently popular **gene editing tool, CRISPR-Cas9**, and have shown that this variant can increase precision in editing genome while avoiding unintended changes in DNA. The researchers have also shown that this type of gene editing can be **used to correct sickle cell anemia, a genetic blood disorder.**

By reprogramming and using a **naturally occurring gene editing system - CRISPR-Cas9 - found in bacteria**, scientists globally have been engaged in 'editing' genome of various organisms.

CRISPR-Cas9 stands for 'Clustered regularly interspaced short palindromic repeats and CRISPR-associated protein 9.' This protein can be programmed to go to a desired location in the genome and correct or edit defective strands (such as those involved in certain diseases) of DNA. The technology, when perfected, may be used to treat several genetic disorders.

[Source](#)

14) Consider the following statements regarding DNA barcoding.

1. DNA barcoding is a method of species identification using a short section of DNA from a specific gene.
2. DNA barcoding is used to obtain taxonomic information about unidentified organisms.
3. The Zoological Survey of India (ZSI) has joined the International Barcode of Life Consortium which is

part of UNEP, for the expansion of the global reference database.

Which of the above statements is/are correct?

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

Solution: a)

The Union Cabinet apprised a Memorandum of Understanding (MoU) signed between the Zoological Survey of India (ZSI) and **International Barcode of Life (iBOL), a Canadian not-for-profit corporation.**

iBOL is a research alliance involving nations that have committed both human and financial resources to enable expansion of the global reference database, the development of informatics platforms, and the analytical protocols needed to use the reference library to assess, and describe biodiversity.

The MoU will enable ZSI to participate at the global-level programmes like Bioscan and Planetary Biodiversity Mission.

ZSI is a subordinate organization under the Ministry of Environment, Forest and Climate Change. (ANI).

DNA barcoding, a methodology for rapidly and accurately identifying species by sequencing a short segment of standardized gene regions and comparing individual sequences to a reference database.

DNA barcoding is increasingly used to obtain taxonomic information about unidentified organisms.

[Source](#)

15) Consider the following statements regarding Rudram missile.

1. Rudram is India's first indigenous anti-radiation missile.
2. It is an air-to-surface missile, designed and developed by the Defence Research and Development

Organisation (DRDO).

3. Anti-radiation missiles are designed to detect, track and neutralise the adversary's radar, communication assets and other radio frequency sources.

Which of the above statements is/are correct?

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

Solution: c)

India's first indigenous anti-radiation missile, Rudram, developed for the Indian Air Force, was successfully flight-tested from a Sukhoi-30 MKI jet off the east coast.

Anti-radiation missiles are designed to detect, track and neutralise the adversary's radar, communication assets and other radio frequency sources, which are generally part of their air defence systems.

Rudram is an air-to-surface missile, designed and developed by the Defence Research and Development Organisation (DRDO).

Once the Rudram missile locks on the target, it is capable of striking accurately even if the radiation source switches off in between. The missile has an operational range of more than 100 km (up to 200 km depending upon the launch conditions).

[Source](#)

16) Which of the following types of inventions are not patentable in India?

1. A method of agriculture or horticulture
2. A literary, dramatic, musical or artistic work
3. Artificial intelligence led innovations without human intervention.
4. Inventions relating to atomic energy

Select the correct answer code:

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

Solution: d)

[Source](#)

17) Consider the following statements regarding OSIRIS-REx mission.

1. OSIRIS-REx mission is NASA's first mission meant to return a sample from the ancient asteroid Bennu.
2. Asteroid Bennu has undergone drastic changes since its formation over billions of years ago and the sample helps in studying these changes.

Which of the above statements is/are correct?

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

Solution: a)

OSIRIS-REx mission is NASA's first mission meant to return a sample from the ancient asteroid. The mission is essentially a seven-year-long voyage and will conclude when at least 60 grams of samples are delivered back to the Earth. As per NASA, the mission promises to bring the largest amount of extraterrestrial material back to our planet since the Apollo era.

Significantly, **Bennu hasn't undergone drastic changes since its formation over billions of years ago and therefore it contains chemicals and rocks dating back to the birth of the solar system.** It is also relatively close to the Earth.

Because of Bennu's age, it is likely to contain material that contains molecules that were present when life first formed on Earth.

[Source](#)

18) Scientists usually study asteroids for which of the following reasons?

1. Asteroids provide information about the formation and history of planets and the sun.
2. To look for asteroids that might be potentially hazardous.
3. Asteroids offer a source of volatiles and an extraordinarily rich supply of minerals.

Select the correct answer code:

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

Solution: d)

The scientific interest in asteroids is due largely to their status as the remnant debris from the inner solar system formation process. Because some of these objects can collide with the Earth, asteroids are also important for having significantly modified the Earth's biosphere in the past. They will continue to do so in the future. In addition, **asteroids offer a source of volatiles and an extraordinarily rich supply of minerals** that can be exploited for the exploration and colonization of our solar system in the twenty-first century.

Scientists study asteroids to look for **information about the formation and history of planets and the sun** since asteroids were formed at the same time as other objects in the solar system. Another reason for tracking them is to **look for asteroids that might be potentially hazardous**.

[Source](#)

[Source](#)

19) Nanotechnology has applications in which of the following areas?

1. Food Packaging
2. Fuel cells and Solar Cells
3. Better Air and Water Quality
4. Chemical Sensors

Select the correct answer code:

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

Solution: d)

Nanotechnology Applications in:

- **Medicine:** Researchers are developing customized nanoparticles the size of molecules that can deliver drugs directly to diseased cells in your body.
- **Electronics:** increase the capabilities of electronics devices while we reduce their weight and power consumption.
- **Food:** Nanotechnology is having an impact on several aspects of food science, from how food is grown to how it is packaged. Companies are developing nanomaterials that will make a difference not only in the taste of food, but also in food safety, and the health benefits
- **Fuel cells:** Nanotechnology is being used to reduce the cost of catalysts used in fuel cells
- **Better Air Quality:** Nanotechnology can improve the performance of catalysts used to transform vapours escaping from cars or industrial plants into harmless gasses.
- **Better Water Quality:** Nanotechnology is being used to develop solutions to different problems in water quality.

[Source](#)

20) Consider the following statements regarding Feluda test.

1. Feluda test is a low-cost paper-based test strip to detect Covid-19.
2. It uses CRISPR-Cas technology for the detection of genes specific to SARS-CoV-2 virus.
3. It has 100 percent sensitivity and specificity for detecting positive and negative cases.

Which of the above statements is/are correct?

- a) 1, 3
- b) 1, 2

- c) 2, 3
- d) 2 only

Solution: b)

Feluda is the acronym for FNCAS9 Editor Linked Uniform Detection Assay.

It has a **sensitivity of 96 per cent and specificity of 98 per cent** which means that the test can detect positive and negative cases both up to 96 or 98 per cent of the time.

The test uses indigenously developed **CRISPR gene-editing technology**. It is the world's first diagnostic test that uses specially adapted Cas9 protein to successfully detect the virus.

[Source](#)

21) Which of the following are considered as main drivers of antimicrobial resistance?

1. Misuse and overuse of antimicrobials
2. Lack of access to clean water and hygiene for animals
3. Poor infection and disease prevention in health-care facilities

Select the correct answer code:

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

Solution: d)

AMR occurs naturally over time, usually through genetic changes. Antimicrobial resistant organisms are found in people, animals, food, plants and the environment (in water, soil and air). They can spread from person to person or between people and animals, including from food of animal origin. The main drivers of antimicrobial resistance include the **misuse and overuse of antimicrobials; lack of access to clean water, sanitation and hygiene (WASH) for both humans and animals; poor infection and disease prevention and control in health-care facilities and farms;** poor access to quality, affordable medicines, vaccines and diagnostics; lack of awareness and knowledge; and lack of enforcement of legislation.

[Source](#)

5. International Relations and Organisations

1) Consider the following statements

1. Permanent Court of Arbitration (PCA) was established by the Convention for the Pacific Settlement of International Disputes.
2. India is a signatory to the 1951 United Nations Convention and 1967 Protocol Relating to the Status of Refugees.

Which of the above statements is/are incorrect?

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

Solution: b)

The PCA was established by the Convention for the Pacific Settlement of International Disputes, concluded at The Hague in 1899.

The PCA was the first permanent intergovernmental organization to provide a forum for the resolution of international disputes through arbitration and other peaceful means.

India is not party to, nor has it acceded to, the 1951 UN Refugee Convention on Refugees, nor the 1967 Protocol to that Convention.

[Source](#)

2) The International Energy Agency's mandate focus on

1. Energy security
2. Economic development
3. Environmental protection

Select the correct answer code:

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

Solution: d)

The Agency's mandate has broadened to focus on the "3Es" of effectual energy policy: energy security, economic development, and environmental protection.

3) Consider the following statements regarding the roles and functions of Financial Action Task Force (FATF).

1. FATF set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering and terrorist financing.
2. FATF does not involve in monitoring countries' progress in implementing its Recommendations.

Which of the above statements is/are correct?

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

Solution: a)

The Financial Action Task Force (FATF) was established in July 1989 by a Group of Seven (G-7) Summit in Paris.

The objectives of the FATF are to set standards and promote effective implementation of legal, regulatory and operational measures for **combating money laundering, terrorist financing and other related threats to the integrity of the international financial system**. Starting with its own members, the **FATF monitors countries' progress in implementing the FATF Recommendations**; reviews money laundering and terrorist financing techniques and counter-measures; and, promotes the adoption and implementation of the FATF Recommendations globally.

In April 2012, it added efforts to counter the financing of proliferation of weapons of mass destruction.

[Source](#)

- 4) The Stockholm Declaration adopted in 1972 is related to
- Non-Proliferation of Nuclear Weapons
 - Right to healthy environment
 - Protecting human rights
 - Elimination of child labour

Solution: b)

The **Declaration of the United Nations Conference on the Human Environment, or Stockholm Declaration**, was adopted on June 16, 1972 by the United Nations Conference on the Human Environment at the 21st plenary meeting as the first document in international environmental law to recognize the right to a healthy environment. In the declaration, the nations agreed to accept responsibility for any environmental effects caused by their actions.

A signatory to the Stockholm Declaration (1972) on Environment, India enacted laws to control water (1974) and air (1981) pollution soon after.

[Source](#)

[Source](#)

- 5) Consider the following statements regarding Financial Action Task Force (FATF).
- As a policy-making body, the FATF works to generate the necessary political will to bring about national legislative and regulatory reforms in the areas of money laundering and terrorist financing.
 - More than 200 countries and jurisdictions are committed to implement the recommendations of FATF.
 - FATF does not have the power to hold countries accountable if countries do not comply to FATF standards.

Which of the above statements is/are correct?

- 1, 2
- 1, 3
- 2, 3
- 1, 2, 3

Solution: a)

As a policy-making body, the FATF works to generate the necessary political will to bring about national legislative and regulatory reforms in these areas.

With more than 200 countries and jurisdictions committed to implementing them.

The FATF also works to stop funding for weapons of mass destruction.

The FATF monitors countries to ensure they implement the FATF Standards fully and effectively, and holds countries to account that do not comply.

[Source](#)

6) Countries that are included in the FATF Grey list may face which of the following

1. Economic sanctions from IMF and World Bank.
2. Problem in getting loans from other countries.
3. International boycott.

Select the correct answer code:

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

Solution: d)

Black List: Countries known as Non-Cooperative Countries or Territories (NCCTs) are put in the blacklist. These countries support terror funding and money laundering activities. The FATF revises the blacklist regularly, adding or deleting entries.

Grey List: Countries that are considered safe haven for supporting terror funding and money laundering are put in the FATF grey list. This inclusion serves as a warning to the country that it may enter the blacklist.

Considered in the grey list may face:

- Economic sanctions from IMF, World Bank, ADB.
- Problem in getting loans from IMF, World Bank, ADB and other countries.
- Reduction in international trade.
- International boycott.

7) Consider the following statements regarding Global Partnership for Artificial Intelligence (GPAI).

1. India is a founder member of Global Partnership for Artificial Intelligence (GPAI).
2. World Economic Forum hosts the Secretariat of the new GPAI.

Which of the above statements is/are correct?

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

Solution: a)

India recently joined international and multi-stakeholder initiative Global Partnership for Artificial Intelligence (GPAI) on artificial intelligence as its founder member.

This multi-stakeholder international partnership will promote responsible and human centric development and use of AI.

GPAI will bring together experts from the industry, civil society, governments, and academia to collaborate to promote responsible evolution of AI.

GPAI is supported by a Secretariat, hosted by Organization for Economic Cooperation and Development (OECD).

[Source](#)

8) Consider the following statements regarding Indian Ocean Conference.

1. Indian Ocean Conference has been initiated by Indian Ocean Rim Association.

2. It is an annual conference that aims to bring together Heads of States/Governments, Ministers, thought leaders, scholars, diplomats, bureaucrats and practitioners from across the region on a single platform.
3. Fishing in the Indian Ocean now accounts for almost 50% of the world's total.

Which of the above statements is/are correct?

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

Solution: b)

Fourth Indian Ocean Conference 2019 was held in Male, capital of Maldives.

Indian Ocean Conference is Initiated by India Foundation along with its partners from Singapore, Sri Lanka and Bangladesh.

It is an annual effort to bring together Heads of States/Governments, Ministers, Thought Leaders, scholars, diplomats, bureaucrats and practitioners from across the region.

Indian Ocean is also rich in natural resources. 40% of the world's offshore oil production takes place in the Indian Ocean basin.

Fishing in the Indian Ocean now accounts for almost 15% of the world's total.

9) RAISE 2020 summit, recently seen in news is related to

- a) Sustainable Development
- b) Renewable Energy
- c) Artificial Intelligence
- d) Energy Efficient Technology

Solution: c)

The RAISE 2020 summit (Responsible AI for Social Empowerment) has brought issues around artificial intelligence (AI) to the centre of policy discussions.

[Source](#)

10) Which of the following are the member states of Shanghai Co-operation Organisation (SCO).

1. Kazakhstan
2. Kyrgyzstan
3. Uzbekistan
4. Turkmenistan
5. Russia

Select the correct answer code:

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

Solution: a)

Presently, the SCO comprises eight member states, namely the Republic of India, the Republic of Kazakhstan, the People's Republic of China, the Kyrgyz Republic, the Islamic Republic of Pakistan, the Russian Federation, the Republic of Tajikistan, and the Republic of Uzbekistan;

11) Consider the following statements regarding Group of 7 (G7) countries

1. G7 is a group consisting of Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.
2. European Union is not represented within the G7.

3. G7 countries represent more than 70% of the net global wealth.

Which of the above statements is/are correct?

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

Solution: a)

The Group of Seven (G7) is an international intergovernmental economic organization consisting of seven major developed countries: Canada, France, Germany, Italy, Japan, the United Kingdom and the United States, which are the largest IMF-advanced economies in the world.

As of 2018, the seven countries involved represent 58% of the global net wealth.

The European Union (EU) is sometimes considered to be a de-facto eighth member of the G-7, since it holds all the rights and responsibilities of full members except to chair or host the meeting.

[Source](#)

12) Consider the following statements regarding United Nations Peacekeeping.

- 1. United Nations Peacekeeping helps countries torn by conflict create conditions for lasting peace.
- 2. Its first mission involved the establishment of the UN Truce Supervision Organization (UNTSO), which served to observe and maintain ceasefire during the 1948 Arab-Israeli War.
- 3. UN Peacekeeping is guided by the principle of complete Non-use of force.

Which of the above statements is/are correct?

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

Solution: c)

United Nations Peacekeeping was created in 1948. Its **first mission involved the establishment of the UN Truce Supervision Organization (UNTSO)**, which served to observe and maintain ceasefire during the 1948 Arab-Israeli War.

United Nations Peacekeeping helps countries torn by conflict create conditions for lasting peace. Peacekeeping has proven to be one of the most effective tools available to the UN to assist host countries navigate the difficult path from conflict to peace.

UN Peacekeeping is guided by three basic principles:

- Consent of the parties.
- Impartiality
- Non-use of force except in self-defence and defence of the mandate.

[Source](#)

13) Consider the following statements about Special 301 Report.

- 1. It is prepared annually by the World Bank.
- 2. The Report includes a list of "Priority Foreign Countries", "Priority Watch List" and a "Watch List" countries which are judged on the basis of intellectual property laws.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only

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

Solution: b)

The Special 301 Report is prepared annually by the **Office of the United States Trade Representative (USTR)** that identifies trade barriers to United States companies and products due to the intellectual property laws, such as copyright, patents and trademarks, in other countries.

The annual Special 301 Report includes a list of "**Priority Foreign Countries**", that are judged to have inadequate intellectual property laws; these countries may be subject to sanctions. In addition, the report contains a "**Priority Watch List**" and a "**Watch List**", containing countries whose intellectual property regimes are deemed of concern.

Source

- 14) At the International level, which of the following Acts/ Agreements regulates Geographical Indications?
1. Paris Convention for the Protection of Industrial Property
 2. Trade-Related Aspects of Intellectual Property Rights (TRIPS)
 3. Geographical Indications of Goods (Registration and Protection) Act, 1999

Select the correct answer code:

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

Solution: a)

Who accords and regulates Geographical Indications?

At the International level: Geographical Indications are covered as a component of intellectual property rights (IPRs) under the Paris Convention for the Protection of Industrial Property. GI is also governed by the World Trade Organisation's (WTO's) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

In India, Geographical Indications registration is administered by the Geographical Indications of Goods (Registration and Protection) Act, 1999 which came into force with effect from September 2003.

- 15) Consider the following statements regarding Antarctic Treaty, 1961
1. More than 100 countries are parties to Antarctic treaty.
 2. According to treaty, Antarctica shall continue forever to be used exclusively for peaceful purposes.
 3. It prohibits military activity, except in support of science and prohibits nuclear explosions and the disposal of nuclear waste.

Which of the above statements is/are correct?

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

Solution: b)

The Antarctic Treaty and related agreements, collectively known as the Antarctic Treaty System (ATS), regulate international relations with respect to Antarctica, Earth's only continent without a native human population. The treaty entered into force in 1961 and **currently has 54 parties**.

The main objective of the ATS is to ensure in the interests of all humankind that **Antarctica shall continue forever to be used exclusively for peaceful purposes** and shall not become the scene or object of international

discord. Pursuant to Article 1, the **treaty forbids any measures of a military nature, but not the presence of military personnel or equipment for the purposes of scientific research.**

Any nuclear explosions in Antarctica and the disposal there of radioactive waste material shall be prohibited.

[Source](#)

16) Consider the following statements regarding Asia-Pacific Economic Cooperation (APEC).

1. Asia-Pacific Economic Cooperation (APEC) is an inter-governmental forum for Pacific Rim member economies that promotes free trade throughout the Asia-Pacific region.
2. APEC is recognized as one of the highest-level multilateral blocs and oldest forums in the Asia-Pacific region.
3. China, Russia and India are the members of APEC.

Which of the above statements is/are correct?

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

Solution: b)

Asia-Pacific Economic Cooperation (APEC) is an inter-governmental forum for 21 Pacific Rim member economies that promotes free trade throughout the Asia-Pacific region.

Headquartered in Singapore, the APEC is recognized as one of the highest-level multilateral blocs and oldest forums in the Asia-Pacific region, and exerts a significant global influence.

India has requested membership in APEC, and received initial support from the United States, Japan, Australia and Papua New Guinea.

17) Consider the following statements regarding World Food Programme (WFP).

1. The World Food Programme (WFP) is the food-assistance branch of the United Nations and is the world's largest humanitarian agency combating hunger.
2. The 2020 Nobel Peace Prize was awarded to the World Food Programme (WFP).
3. The World Food Programme became the first UN organisation to receive the Nobel Peace Prize.

Which of the above statements is/are correct?

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

Solution: a)

The Norwegian Nobel Committee announced the 2020 Nobel Peace Prize to the UN agency World Food Programme (WFP), "for its efforts to combat hunger, for its contribution to bettering conditions for peace in conflict-affected areas and for acting as a driving force in efforts to prevent the use of hunger as a weapon of war and conflict".

The WFP is the 28th organisation awarded the Nobel Peace Prize since its inception in 1901. The office of UNHCR won the award in 1954 and 1981.

Today, the WFP is the world's largest humanitarian agency combating hunger.

Source

18) Consider the following statements regarding Shanghai Cooperation Organisation (SCO).

1. The SCO is the second largest regional organisation in the world in terms of geographical coverage and population.
2. The Heads of State Council (HSC) is the supreme decision-making body in the SCO.
3. The SCO has been an observer in the UN General Assembly.

Which of the above statements is/are correct?

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

Solution: c)

The Shanghai Cooperation Organisation is a Eurasian permanent intergovernmental international organisation created in June 2001.

Known as the "**alliance of the East**", the **SCO is the largest regional organisation in the world in terms of geographical coverage and population**, covering three-fifths of the Eurasian continent and nearly half of the human population. SCO represents around 42 per cent of the world's population and 20 per cent of the global GDP. The SCO is seen as a counter-balance to Nato, limiting the influence of United States of America (USA) in Central Asia.

The **Heads of State Council (HSC) is the supreme decision-making body in the SCO**. It meets once a year and adopts decisions and guidelines on all important matters of the organisation.

The SCO has established relations with the United Nations in 2004 (where it is an **observer in the General Assembly**).

[Source](#)

19) Consider the following statements regarding Asia/Pacific Group on Money Laundering (APG).

1. Asia/Pacific Group on Money Laundering (APG) is an inter-governmental body, where the members are committed to implement international standards against money laundering (AML), the financing of terrorism (CTF) and financing the proliferation of weapons of mass destruction.
2. Jurisdictions that join the APG, either as members or as observers, commit to the Recommendations of the Financial Action Task Force (FATF).
3. The APG conducts evaluations of its members to determine whether they comply with their obligations to implement the global anti-money laundering and anti-terrorist financing standards.

Which of the above statements is/are correct?

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

Solution: d)

The Asia/Pacific Group on Money Laundering (APG) is a FATF style regional inter-governmental (international) body, the members of which are committed to implement international standards against money laundering (AML), the financing of terrorism (CTF) and financing the proliferation of weapons of mass destruction. APG was founded in 1997 in Bangkok, Thailand, and currently consists of 41 member jurisdictions in the Asia-Pacific region and a number of observer jurisdictions and international/regional observer organisations. Jurisdictions that join the APG, either as members or as observers, commit to the Recommendations of the Financial Action Task Force (FATF).

The APG conducts mutual evaluations of its members to determine whether they comply, or to what extent they comply, with their obligations to implement the global anti-money laundering and anti-terrorist financing standards.

[Source](#)

20) FATF-style regional bodies (FSRBs) have been established covering which of the following regions?

1. Caribbean Basin
2. West Africa
3. Latin America
4. Middle East

Select the correct answer code:

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

Solution: c)

FATF-style regional bodies:

- Asia/Pacific Group on combating money laundering (APG)
- Caribbean Financial Action Task Force (CFATF)
- Committee of Experts on the Evaluation of Anti-Money Laundering Measures and the Financing of Terrorism of the Council of Europe (MONEYVAL)
- Eurasian Group (EAG)
- Eastern and South African Anti Money Laundering Group (ESAAMLG)
- Financial Action Task Force on Latin America (GAFILAT)
- Inter-Governmental Action Group against Money Laundering in West Africa (GIABA)
- Middle East & North Africa Financial Action Task Force (MENAFATF)
- Task Force on Money Laundering in Central Africa (GABAC)

[Source](#)

21) India Energy Modeling Forum, recently seen in news is the joint initiative of

- a) India and Japan
- b) Indian and USA
- c) India and Russia
- d) India and Uzbekistan

Solution: b)

About the India Energy Modeling Forum:

- Jointly launched by NITI Aayog and United States Agency for International Development (USAID) under the US–India Strategic Energy Partnership.
- Composition: The forum would include knowledge partners, data agencies and concerned government ministries.

Energy modeling or energy system modeling is the process of building computer models of energy systems in order to analyze them.

The Energy Modelling Forum (EMF) in USA was established in 1976 at Stanford University to connect leading modelling experts and decision makers from government, industry, universities, and other research organizations.

[Source](#)

22) Consider the following statements.

1. According to WHO, No country in the southeast Asia region have successfully controlled Hepatitis B.
2. Hepatitis B is said to be controlled when the disease prevalence is reduced to less than 1% among children less than five years of age.
3. In India, a nation-wide Hepatitis B vaccine was introduced in the Universal Immunisation Programme.

Which of the above statements is/are correct?

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

Solution: b)

On September 3, 2019 Bangladesh, Bhutan, Nepal and Thailand became the first four countries in the World Health Organization's southeast Asia region to have successfully controlled hepatitis B.

The virus is said to be controlled when the disease prevalence is reduced to less than 1% among children less than five years of age.

Despite the **introduction of hepatitis B vaccine in the Universal Immunisation Programme in 2002 and scaling-up nationwide in 2011**, about one million people in India become chronically infected with the virus every year.

23) Consider the following statements regarding 'Group – 4' (G4) nations.

1. G4 nations are group of four countries which support each other's bids for permanent seats on the United Nations Security Council.
2. G4 nations includes Brazil, India, Australia and Japan.

Which of the above statements is/are correct?

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

Solution: a)

The G4 nations comprising **Brazil, Germany, India, and Japan** are four countries which **support each other's bids for permanent seats on the United Nations Security Council**. Unlike the G7, where the common denominator is the economy and long-term political motives, the G4's primary aim is the permanent member seats on the Security Council.

24) Consider the following statements regarding Malabar naval exercise.

1. Malabar naval exercise began as a bilateral exercise between India and Japan, and later United States became a permanent partner.
2. This is an annual exercise held in Indian Ocean.

Which of the above statements is/are correct?

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

Solution: d)

Australia would join the Malabar 2020 naval exercise, consisting of India, Japan and the U.S. This will formally bring together the militaries of the four countries in the Quad group.

Originally begun in 1992 as a bilateral exercise between India and the United States, Japan became a permanent partner in 2015. Past non-permanent participants was Singapore.

In 2018, the exercise was conducted off the coast of Guam in the Philippine Sea, off the coast the Japan in 2019.

India had signed maritime information sharing agreements for **Maritime Domain Awareness (MDA)** with Australia and Japan and a similar agreement is under discussion with the U.S.

Source

25) Green Room Meetings, sometime seen in the news, is related to the affairs of

- a) World Economic Affairs
- b) G-20
- c) WTO
- d) UNSC

Solution: c)

Green Room: The informal name of the director-general's conference room. It is used to refer to meetings of 20-40 delegations, usually at the level of heads of delegations. These meetings can take place elsewhere, such as at Ministerial Conferences, and can be called by the minister chairing the conference as well as the director-general.

[Source](#)



A hand holding a black pen is drawing various business and financial diagrams around a glowing lightbulb. The diagrams include bar charts, line graphs, pie charts, and flowcharts with labels like 'Team', 'Plan', 'Success', 'Idea', 'Target', 'Production', and 'Plan'. The lightbulb is placed on an open book. A red dart is stuck into the book near the lightbulb. Below the image is a red banner with white text.

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6. Polity

1) Consider the following statements regarding Curative petition.

1. The concept of Curative petition was evolved by the Supreme Court of India.
2. A curative petition can be entertained if the petitioner establishes there was a violation of the principles of natural justice.
3. The Review petition is filed after the Curative petition to ensure there is no miscarriage of justice.

Which of the above statements is/are correct?

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

Solution: a)

A curative petition may be filed after a review plea against the final conviction is dismissed. It is meant to ensure there is no miscarriage of justice, and to prevent abuse of process. A curative petition is usually decided by judges in chamber, unless a specific request for an open-court hearing is allowed.

Every curative petition is decided on the basis of principles laid down by the Supreme Court in Rupa Ashok Hurra Vs Ashok Hurra & another, 2002.

The court ruled that a curative petition can be entertained if the petitioner establishes there was a violation of the principles of natural justice, and that he was not heard by the court before passing an order. It will also be admitted where a judge failed to disclose facts that raise the apprehension of bias.

The SC has held that curative petitions must be rare rather than regular, and be entertained with circumspection.

2) Recently the Law Ministry increased the ceiling on poll expenditure for Assembly and Lok Sabha elections by 10%. Consider the following statements in this regard.

1. The Election Commission of India imposes limits on campaign expenditure incurred by a candidate and a political party.
2. Candidates must mandatorily file a true account of election expenses with the Election Commission.
3. An incorrect account, or expenditure by a candidate beyond the ceiling can attract disqualification for up to six years under the provisions of The Representation of the People Act, 1951.

Which of the above statements is/are correct?

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

Solution: b)

The Law Ministry has increased the ceiling on poll expenditure for Assembly and Lok Sabha elections by 10%. An amendment to the Conduct of Elections Rules, 1961 in this regard has also been notified.

The Election Commission of India **imposes limits on campaign expenditure incurred by a candidate, but not by a political party.**

Candidates must mandatorily file a true account of election expenses with the EC.

An incorrect account, or expenditure beyond the ceiling can attract **disqualification for up to three years** under Section 10A of The Representation of the People Act, 1951.

[Source](#)

[Source](#)

7. States

1) Consider the following statements regarding production of maize in India.

1. India is one of the major Maize producing countries in the world and has been self-sufficient in its produce.

2. In India, Maize is grown throughout the year, but is predominantly a kharif crop.

3. Major Maize growing states in India are Karnataka, Telangana, Maharashtra and Andhra Pradesh.

Which of the above statements is/are correct?

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

Solution: d)

In India, Maize is grown throughout the year. It is **predominantly a kharif crop** with 85 per cent of the area under cultivation in the season. **Maize is the third most important cereal crop in India** after rice and wheat. It accounts for around 10 per cent of total food grain production in the country. In addition to staple food for human being and quality feed for animals, maize serves as a basic raw material as an ingredient to thousands of industrial products that includes starch, oil, protein, alcoholic beverages, food sweeteners, pharmaceutical, cosmetic, film, textile, gum, package and paper industries etc.

Major maize growing states in India are Karnataka, Madhya Pradesh, Bihar, Tamil Nadu, Telangana, Maharashtra and Andhra Pradesh.

India has allowed imports of 1 lakh tonne of maize during 2019-20 under tariff rate quota (TRQ) system.

[Source](#)

2) Consider the following pairs

Nuclear Power Plant

- 1. Kaiga
- 2. Narora
- 3. Tarapur

State

- Karnataka
- Gujarat
- Maharashtra

Which of the above pairs are not correctly matched?

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

Solution: b)

Narora Atomic Power Plant is located in Uttar Pradesh.

Manesar, Pimpri-Chinchwad and Sriperumbudur are considered as the hubs in India for

- a) Mobile Manufacturing
- b) International Finance
- c) Animal Husbandry
- d) Automobiles

Solution: d)

[Source](#)

8. Reports and Indices

1) Consider the following statements regarding Ease of Doing Business (EODB) Rankings.

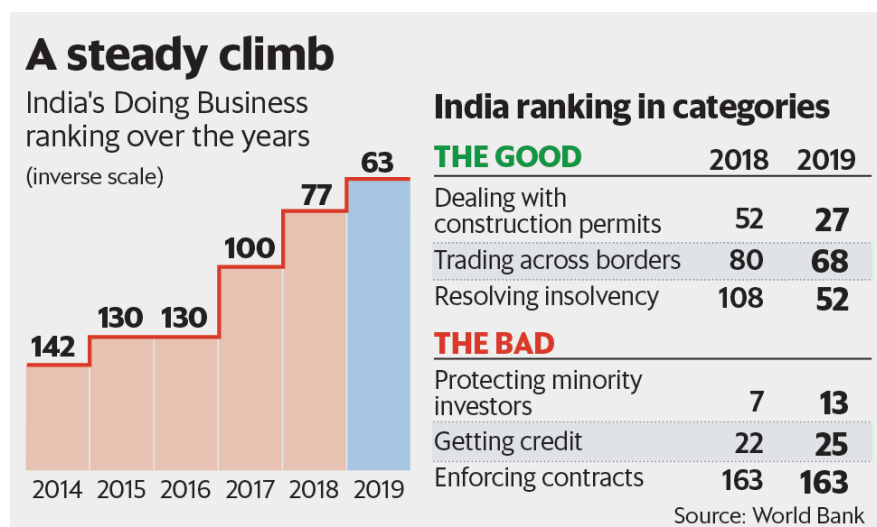
1. The World Bank publishes a Doing Business Report, which carries the Ease of Doing Business (EODB) Rankings.

2. From 2014 to 2019, India has improved its ranking by 100 positions.

Which of the above statements is/are correct?

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

Solution: a)



2) Which of the following indicators or categories are considered while granting Ease of Doing Business (EODB) Rankings?

- 1. Dealing with construction permits
- 2. Protecting minority investors
- 3. Trading across borders
- 4. Enforcing contracts

Select the correct answer code:

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

Solution: d)

Indicator/ Sub-Indicator
Starting a Business
Dealing with Construction Permits
Getting Electricity
Registering Property
Getting Credit
Protecting Minority Investors
Paying Taxes
Trading across Borders
Enforcing Contracts
Resolving Insolvency

3) Consider the following statements regarding Global Hunger Index 2020.

1. Out of the total countries ranked in Global Hunger Index 2020, more than 3/4th of the countries fare better than India.
2. Global Hunger Index comprehensively measure and track hunger at the global, regional, and country levels.
3. Global Hunger Index is published by Food and Agriculture Organization.

Which of the above statements is/are correct?

- a) 1, 2
 - b) 1, 3
 - c) 2 only
 - d) 2, 3
- Solution: a)

India ranked 94 among 107 countries in the Global Hunger Index 2020 and is in the 'serious' hunger category with a score of 27.2. India's rank was 102 out of 117 countries last year.

India features behind Nepal (73), Pakistan (88), Bangladesh (75), Indonesia (70) among others. Out of the total 107 countries, only 13 countries fare worse than India including countries like Rwanda (97), Nigeria (98), Afghanistan (99), Liberia (102), Mozambique (103), Chad (107) among others.

The Global Hunger Index is a peer-reviewed annual report, jointly published by Concern Worldwide and Welthungerhilfe, designed to comprehensively measure and track hunger at the global, regional, and country levels.

[Source](#)

9. Maps / Places

1) Israel has borders with which of the following countries.

1. Saudi Arabia
2. Egypt
3. Turkey
4. Jordan
5. Lebanon

Select the correct answer code:

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

Solution: c)



2) Baltic Sea shares border with which of the following countries?

1. Russia
2. Norway
3. Finland
4. Sweden

Select the correct answer code:

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

Solution: c)

The **Baltic Sea** is an arm of the Atlantic Ocean, enclosed by Denmark, Estonia, Finland, Latvia, Lithuania, Sweden, northeast Germany, Poland, Russia and the North and Central European Plain.

3) Which of the following African countries share border with Indian Ocean?

1. Tanzania
2. Zimbabwe
3. Botswana
4. Mozambique

Select the correct answer code:

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

Solution: c)



4) Consider the following statements.

1. Myanmar, Malaysia and Vietnam share land boundary with Thailand.
2. Kra Canal is a proposed canal that would connect the Gulf of Thailand with the Andaman Sea.

Which of the above statements is/are incorrect?

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

d) Neither 1 nor 2

Solution: a)

Thailand is bordered to the north by **Myanmar and Laos**, to the east by Laos and **Cambodia**, to the south by **Malaysia**. Its **maritime boundaries include Vietnam in the Gulf of Thailand** to the southeast, and Indonesia and India on the Andaman Sea to the southwest.



Kra Canal or Kra Isthmus Canal, refers to proposals for a canal that would connect the Gulf of Thailand with the Andaman Sea across the Kra Isthmus in southern Thailand.



5) Schengen Area, sometimes seen in news, is in

- a) East Asia
- b) Southeast Europe
- c) Western Europe
- d) Latin America

Solution: c)

The Schengen Area is an area comprising 26 European states that have officially abolished all passport and all other types of border control at their mutual borders.

Schengen Area covers most of the EU countries, except Ireland and the countries that are soon to be part of: Romania, Bulgaria, Croatia and Cyprus. Although not members of the EU, countries like: Norway, Iceland, Switzerland and Lichtenstein are also part of the Schengen zone.

[Source](#)

6) Arrange the following Islands from West to East.

1. Sumatra Island
2. Sulawesi Island
3. Java Island

Select the correct answer code:

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

Solution: c)

Quite often Islands of Indonesia are into the news.

Indonesia is an archipelagic country located in Southeast Asia, lying between the Indian Ocean and the Pacific Ocean. It comprises five main islands: Sumatra, Java, Borneo (known as Kalimantan in Indonesia), Sulawesi, and New Guinea;



7) Spacecraft cemetery, sometimes seen in news is located in

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

Solution: c)

The spacecraft cemetery, known more formally as the South Pacific Ocean Uninhabited Area, is a **region in the southern Pacific Ocean, where spacecraft that have reached the end of their usefulness are routinely de-orbited and destroyed.**

When things didn't fall in line even in my third Mains, I emailed InsightsonIndia to seek guidance for the next attempt. InsightsIAS Offline program suited all my requirements. Thus, I moved in and stayed nearby Insights institute.

I followed offline prelims test series of Insights and also, prelims cum mains integrated study plan that was given to core batch students. I scheduled my day in accordance with the test series timetable (please make your own timetable which suits you the best). In my timetable I ensured 8 hours of sleep, one hour of sports and 5 minutes break in between. Make a realistic timetable which is practically possible to implement, set achievable targets and be honest to yourself in following it.

I improved immensely by getting the personal feedback by Vinay Sir, and was able to top the UPSC CSE-2016.

NANDINI K R
AIR 01, CSE 2016

