



INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

INSTA CURRENT AFFAIRS QUIZ

FEBRUARY 2021

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INSIGHTSIAS
SIMPLIFYING IAS EXAM
PREPARATION

Hearty Congratulations to AIR 2 & 4 of our Online Test Series and all our proud 160+ Rank Holders in UPSC CSE 2019!

1. Economy

- 1) Recently Reserve Bank of India's Monetary Policy Committee decided to continue with its accommodative stance this fiscal. Accommodative monetary policy means
- Central bank will alter rates in any direction to control the money supply in the system.
 - Central bank will increase rates to reduce money in the financial system
 - Central bank will cut rates to inject money into the financial system whenever needed
 - Central bank will keep the policy rates unchanged

Solution: c)

An accommodative stance means a central bank will cut rates to inject money into the financial system whenever needed.

- 2) Which of the following constitute failure to achieve the inflation target in India?
- The average inflation is more than the upper tolerance level of the inflation target for any three consecutive quarters
 - The average inflation is less than the lower tolerance level for any three consecutive quarters

Select the correct answer code:

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

Solution: c)

The Central Government notified the following as factors that constitute failure to achieve the inflation target: (a) the average inflation is more than the upper tolerance level of the inflation target for any three consecutive quarters; or (b) the average inflation is less than the lower tolerance level for any three consecutive quarters.

[Source](#)

- 3) Consider the following statements regarding Primary deficit.
- The primary deficit is the sum of Fiscal deficit and interest payments.
 - It includes the burden of the past debt.

Which of the above statements is/are correct?

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

Solution: d)

Primary Deficit = Fiscal Deficit – Interest Payments

The total borrowing requirement of the government includes the interest commitments on accumulated debts. Primary deficit reflects the extent to which such interest commitments have compelled the government to borrow in the current period.

It **excludes the burden of the past debt and shows the net increase in the government's indebtedness due to the current year's fiscal operations**. A reduction in primary deficit is reflective of government's efforts at bridging the fiscal gap during a financial year.

- 4) Tax buoyancy refers to the responsiveness of tax revenue growth to changes in GDP. If there is an output growth and the tax buoyancy is not commensurate, then it can imply

- a) There is tax evasion
- b) Growth in the non-taxed part of GDP
- c) Both a and b
- d) Neither a nor b

Solution: c)

Tax buoyancy explains this relationship between the changes in government's tax revenue growth and the changes in GDP. It refers to the responsiveness of tax revenue growth to changes in GDP. When a tax is buoyant, its revenue increases without increasing the tax rate.

If the output grows and the tax buoyancy is not commensurate it means one of the following or both: There is tax evasion or growth in the non-taxed part of GDP (Eg: agriculture)

- 5) With reference to Union Budget, which of the following is/are covered under Capital receipts?
- 1. Disinvestment
 - 2. Interest and dividend on government investment
 - 3. Funds from Public Provident Fund
 - 4. Revenue from Income tax

Select the correct answer using the code given below.

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

Solution: a)

Government receipts which either (i) create liabilities (e.g. borrowing) or (ii) reduce assets (e.g. disinvestment) are called capital receipts. Thus when govt. raises funds either by incurring a liability or by disposing off its assets, it is called a capital receipt.

Two examples of Capital Receipts which create liability are **Borrowing and raising of funds from Public Provident Fund and Small savings deposits.**

Two examples of Capital Receipts which reduce assets are **Disinvestment and Recovery of Loans.** Disinvestment by government means selling a part or whole of its shares of public sector undertakings. Funds raised from disinvestment reduce government assets

- 6) Consider the following statements regarding Government securities, or G-secs.
- 1. Government securities are debt instruments issued by the government to borrow money.
 - 2. Treasury bills are long-term instruments, which mature anywhere between 5 years and 40 years.
 - 3. Dated securities are short-term instruments which mature in less than 365 days.
 - 4. Like bank fixed deposits, g-secs are not tax-free.

Which of the above statements is/are correct?

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

Solution: b)

The Reserve Bank of India (RBI) recently said that it will give small investors direct access to its government securities trading platform.

What are government securities, or g-secs?

These are debt instruments issued by the government to borrow money. The two key categories are **treasury bills – short-term instruments which mature in 91 days, 182 days, or 364 days**, and **dated securities – long-term instruments, which mature anywhere between 5 years and 40 years.**

But can't retail investors already invest in g-secs?

Small investors can invest indirectly in g-secs by buying mutual funds or through certain policies issued by life insurance firms.

So what is the need for the current proposal, then?

The g-sec market is dominated by institutional investors such as banks, mutual funds, and insurance companies. These entities trade in lot sizes of Rs 5 crore or more.

So, there is no liquidity in the secondary market for small investors who would want to trade in smaller lot sizes.

Like bank fixed deposits, g-secs are not tax-free.

They are generally considered the safest form of investment because they are backed by the government. So, the risk of default is almost nil.

However, they are not completely risk free, since they are subject to fluctuations in interest rates.

[Source](#)

7) Consider the following statements regarding Capital Adequacy Ratio (CAR).

1. Capital Adequacy Ratio (CAR) is the ratio of a bank's capital in relation to its risk weighted assets and current liabilities.
2. As per RBI norms, Indian scheduled commercial banks are required to maintain the CAR percentage as stated in the Basel III Banking report.

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 capital-to-risk weighted assets ratio, also known as the Capital Adequacy Ratio (CAR) is the ratio of a **bank's capital in relation to its risk weighted assets and current liabilities**. It is decided by central banks and bank regulators to prevent commercial banks from taking excess leverage and becoming insolvent in the process.

The risk weighted assets take into account credit risk, market risk and operational risk.

The Basel III norms stipulated a capital to risk weighted assets of 8%. As per RBI guidelines, banks are required to maintain a minimum Capital to Risk-weighted Assets (CRAR) of 9%.

8) Consider the following statements regarding Development Finance Institutions (DFIs).

1. Development Finance Institutions provide risk capital for economic development projects mainly on commercial basis.
2. During the pre-liberalised era, India had DFIs that were primarily engaged in development of industry in the country.
3. In India, the first DFI was operationalised before Independence, with the setting up of the Industrial Finance Corporation (IFCI).

Which of the above statements is/are correct?

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

Solution: a)

The government's latest Budget proposes to set up a Development Finance Institution soon to fund the ambitious national infrastructure pipeline.

A development finance institution (DFI) also known as a development bank is a financial institution that provides risk capital for economic development projects on non-commercial basis.

During the pre-liberalised era, India had DFIs which were primarily engaged in development of industry in the country.

In India, the first DFI was operationalised in 1948 with the setting up of the Industrial Finance Corporation (IFCI). Subsequently, the Industrial Credit and Investment Corporation of India (ICICI) was set up with the backing of the World Bank in 1955.

The Industrial Development Bank of India (IDBI) came into existence in 1964 to promote long-term financing for infrastructure projects and industry.

[Source](#)

[Source](#)

9) Consider the following statements.

1. External Financing brings in foreign currency that is useful to bridge the Balance of payments (BoP) apart from its utility in developmental expenditures.
2. External Financing cannot be used to bridge the fiscal deficit.

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)

If external aid / external financing is a grant or coming without interest, no better way to finance the deficit, if we ignore their inflationary effects.

When the domestic market has limited amount of funds, and if the government desires to borrow a large share of it to finance the fiscal deficit, it tends to raise the demand for funds in the market. This shoots the market interest rate for the funds and causes problems to the domestic investors who now have to pay a higher interest rate to avail the same loan.

If the same money is borrowed from abroad, the crowding out effect doesn't occur.

10) The Recent Budget proposes to privatise two PSU banks this financial year. Which of the following committees had proposed privatisation of PSU banks?

1. Narasimham Committee
2. Naresh Chandra Committee
3. P J Nayak Committee

Select the correct answer code:

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

Solution: d)

Many committees had proposed bringing down the government stake in public banks below 51% — the Narasimham Committee proposed 33% and the P J Nayak Committee suggested below 50%. An RBI Working Group recently suggested the entry of business houses into the banking sector.

11) Consider the following statements.

1. In 2020-21, Corporate tax was the biggest tax revenue source in India.
2. The top receipts under the non-tax revenue for the Union Government are interest and dividends and profits received from public sector companies.

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)

Government's primary source of earning money is from taxes and non-tax revenues. Taxes are collected in the form of direct and indirect ways. Direct taxes include income tax, real property tax, personal property tax, or taxes on assets; while some of the indirect tax modes include GST, customs duty and tax deducted at source (TDS).

On the other hand, **non-tax revenue** is the recurring income earned by the government from sources other than taxes. **The top receipts under this are interest and dividends and profits received from public sector companies.**

After the new indirect tax regime was introduced in 2017, the Centre's major source of indirect tax collection changed to GST.

In 2020-21, **28.5% of the revenue came from GST followed by corporate tax** and personal income tax, 28.1% and 28.3% respectively.

[Source](#)

12) Consider the following statements.

1. Between the 14th and 15th (Finance Commissions), the incidence of cess and surcharge has gone up.
2. A constitutional amendment is required to include Cess and surcharge in the divisible pool of revenue

which is distributed between the Centre and the States.

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)

Cess and surcharge is not part of the divisible pool. However, it's not in the hands of the Finance Commission to cap it. This requires a constitutional amendment. It was in 2000 during the period of (then PM) Atal Bihari Vajpayee when there was a constitutional amendment that kept cess and surcharge outside the divisible pool. **If cess and surcharge are to be part of the divisible pool, there has to be a constitutional amendment.**

Between the 14th and 15th (Finance Commissions), the incidence of cess and surcharge has gone up.

[Source](#)

13) The government in the Budget unveiled the Disinvestment Policy and identified some sectors as strategic sectors which include

1. Atomic energy
2. Transport and Telecommunications
3. Petroleum and Coal

4. Insurance and financial services

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 government in the Budget unveiled the Disinvestment/Strategic Disinvestment Policy and identified four sectors -- **Atomic energy, Space and Defence; Transport and Telecommunications; Power, Petroleum, Coal and other minerals; and Banking, Insurance and financial services** -- as strategic sectors, where bare minimum CPSEs would be retained.

The strategic sectors have been classified in four broad baskets -- national security, critical infrastructure, energy and minerals and financial services.

Bare minimum to be retained means rest can be privatised, or can be closed, or merged, or made subsidiary of another CPSEs.

[Source](#)

14) Consider the following statements regarding Finance Commission.

1. Finance Commissions submit their reports for a five-year duration and this duration can be extended based on the macro-economic situations in the country.
2. The recommendations of the Finance Commission are implemented as an order of the President.
3. Only the Finance Commission of the State can increase the financial outlays for their Municipalities.

Which of the above statements is/are correct?

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

Solution: a)

Finance Commissions generally submit their reports for a five-year duration. The 15th FC, however, was given an extension of a year due to uncertainties in key macro areas (new monetary policy framework, GST, bankruptcy code, demonetisation, etc.).

Building on the track record of previous finance commissions, the **15th FC Commission has significantly raised the bar on financial governance of India's municipalities in the interim report**. The 15th FC in its interim report has tried to significantly increase the overall outlay for municipalities.

The recommendations of the Finance Commission are implemented as under: -

- **Those to be implemented by an order of the President:**
The recommendations relating to distribution of Union Taxes and Duties and Grants-in-aid fall in this category.
- **Those to be implemented by executive orders:**
Other recommendations to be made by the Finance Commission, as per its Terms of Reference

[Source](#)

[Source](#)

15) Consider the following statements regarding Transfer payments.

1. Transfer payments are receipts which the residents of a country receive 'for free'.
2. They consist of remittances, gifts and grants.

3. They could be given by the government or by private citizens living abroad

Which of the above statements is/are correct?

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

Solution: d)

Transfer payments are the receipts which the residents of a country get for 'free', without having to provide any goods or services in return.

They consist of gifts, remittances and grants.

They could be given by the government or by private citizens living abroad.

16) Consider the following statements:

- 1. Stagflation is a situation in which the inflation rate is high and at the same time economic growth rate remains steadily high.
- 2. Deflation refers to the decrease in the general price level of goods and services but inflation rate remains above zero.

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)

- Stagflation is a condition of **slow economic growth** and **relatively high unemployment**, or economic stagnation, accompanied by **rising prices, or inflation**.
- Deflation is the general decline in prices for goods and services occurring when the **inflation rate falls below 0%**.

17) Which of the following developments may likely reduce the fiscal deficit?

- 1. Increasing Foreign Direct Investment (FDI)
- 2. Providing budgetary support to public sector enterprises
- 3. Waiving off farm loans.
- 4. Austerity measures should be adopted.

Select the correct answer code:

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

Solution: a)

Fiscal deficit (FD) is the difference between revenue receipts plus non-debt capital receipts on the one side and total expenditure including loans, net of repayments, on the other. It measures the gap between the government consumption expenditure including loan repayments and the anticipated income from tax and non-tax revenues.

It also indicates the borrowing requirements of the government from all sources. The bigger the gap the more the government will have to borrow or resort to printing money to make both ends meet. Indiscriminate borrowings will push the economy into debt trap, while too much deficit financing may be inflationary.

Increasing Foreign Direct Investment (FDI) tend to bring more revenue to the government there by reducing FD.

Austerity measures are reductions in government spending, increases in tax revenues, or both which can reduce FD.

Providing budgetary support to public sector enterprises and Waiving off farm loans increase government expenditure thus increasing FD.

18) A SWIFT Code, sometime seen in the news, is related to

- a) International Banking Transaction
- b) Payment Gateway System
- c) Quick Toll Plaza Electronic Payment
- d) None of the above

Solution: a)

The **SWIFT - Society for Worldwide Interbank Financial Telecommunication** - is a secure financial message carrier — it transports messages from one bank to its intended bank recipient. Its core role is to provide a secure transmission channel between banks.

19) Consider the following statements regarding National Small Savings Fund (NSSF).

- 1. All deposits under small savings schemes are credited to the 'National Small Savings Fund' (NSSF).
- 2. Some part of deposits in the fund is invested in special Government securities as per the norms decided by RBI.
- 3. The transactions through NSSF impact the fiscal deficit of the Centre directly.

Which of the above statements is/are correct?

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

Solution: a)

A "National Small Savings Fund" (NSSF) in the Public Account of India has been established with effect from 1.4.1999.

All small savings collections are credited to this Fund. Similarly, all withdrawals under small savings schemes by the depositors are made out of the accumulations in this Fund. The balance in the Fund is invested in Central and State Government Securities. The investment pattern is as per norms decided from time to time by the Government of India.

The Fund is administered by the Government of India, Ministry of Finance (Department of Economic Affairs) under National Small Savings Fund (Custody and Investment) Rules, 2001, framed by the President under Article 283(1) of the Constitution. The objective of NSSF is to de-link small savings transactions from the Consolidated Fund of India and ensure their operation in a transparent and self-sustaining manner. Since NSSF operates in the public account, **its transactions do not impact the fiscal deficit of the Centre directly**. As an instrument in the public account, the balances under NSSF are direct liabilities and constitute a part of the outstanding liabilities of the Centre. The NSSF flows affect the cash position of the Central Government.

[Source](#)

2. Ecology and Environment

1) Consider the following statements regarding Sambhar Lake.

1. Sambhar Lake is India's largest inland Salt Lake located in Gujarat.
2. The lake is surrounded by the Aravali hills on all sides.
3. It has been designated as a Ramsar site because it is a key wintering area for tens of thousands of pink flamingos and other birds.

Which of the above statements is/are correct?

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

Solution: c)

The Sambhar Salt Lake, India's largest inland Salt Lake, is located in Rajasthan.

The lake receives water from five rivers: Medtha, Samaod, Mantha, Rupangarh, Khari, and Khandela.

It is surrounded by the Aravali hills on all sides.

Sambhar has been designated as a Ramsar site (recognized wetland of international importance) because the wetland is a key wintering area for tens of thousands of pink flamingos and other birds that migrate from northern Asia and Siberia. The specialized algae and bacteria growing in the lake provide striking water colours and support the lake ecology that, in turn, sustains the migrating waterfowl.

2) Consider the following statements regarding Environment Impact Assessment (EIA).

1. Environment Impact Assessment in India is statutory backed process by the Environment Impact Assessment Act, 1986.
2. It identifies the environmental, social and economic impacts of a project prior to taking a decision on its implementation.

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)

Environment Impact Assessment (EIA) is a formal process used to predict the environmental consequences of any development project. **Environment Impact Assessment in India is statutory backed by the Environment Protection Act in 1986**, which contains various provisions on EIA methodology and process.

Rationale behind EIA: EIA looks into various problems, conflicts and natural resource constraints which may not only affect the viability of a project but also predict if a project might harm to the people, their land, livelihoods and environment. Once these potential harmful impacts are predicted, the EIA process identifies the measures to minimize those impacts.

The objective of the EIA is to: Identify the environmental, social and economic impacts of a project prior to taking a decision on its implementation. Mitigation of harmful impacts and maximizes the beneficial effects. Once the assessment is complete, the EIA findings are communicated to all stakeholders viz. developers, investors, regulators, planners, politicians, affected communities etc. On the basis of the conclusion of EIA process, the government can decide if a project should be given environment clearance or not. The developers and investors can also shape the project in such a way that its harms can be mitigated and benefits can be maximized.

3) Consider the following statements regarding Biofuels.

1. The most common kinds of biofuels in use today are ethanol and biodiesel that represent the first generation of biofuel technology.
2. Ethanol is renewable and made from different kinds of plant materials.
3. Biodiesel is produced by combining alcohol with new and used vegetable oils and animal fats.
3. Biofuels cannot be used as rocket fuels since they have high viscosity.

Which of the above statements is/are correct?

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

Solution: b)

On January 31, Stardust 1.0 was launched from Loring Commerce Centre in Maine, US, becoming the **first commercial space launch powered by biofuel**, which is non-toxic for the environment as opposed to traditionally used rocket fuels.

Biofuels are obtained from biomass, which can be converted directly into liquid fuels that can be used as transportation fuels. The two most common kinds of biofuels in use today are **ethanol and biodiesel** and they both represent the **first generation of biofuel technology**.

Ethanol, for instance, is renewable and made from different kinds of plant materials. Biodiesel on the other hand is produced by combining alcohol with new and used vegetable oils, animal fats or recycled cooking grease.

[Source](#)

4) Consider the following statements.

1. Indian Wild Ass Sanctuary located in the Little Rann of Kutch in the Gujarat is one of the last places on earth where the Indian Wild Ass can be spotted.
2. Gujarat is the only abode of both Asiatic lions and Indian wild asses.
3. The Indian wild ass population has seen a marginal decline in the last five years.

Which of the above statements is/are correct?

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

Solution: c)

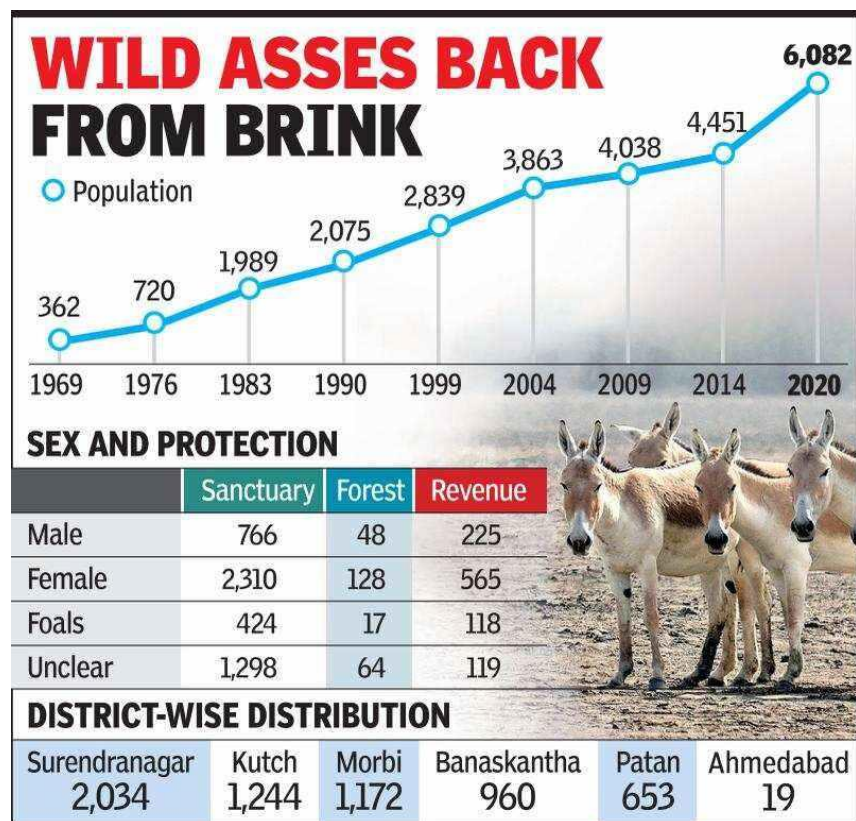
The Indian wild ass population has risen by 37%, reveals data released by the Gujarat forest department. The population has reached 6,082, according to the census conducted in March 2020.

Gujarat, the world's only abode of Asiatic lions, is also the sole home of Indian wild asses.

The Wild Ass Sanctuary in the Little Rann of Kutch was added to the tentative list of Unesco's Natural World Heritage Sites in 2006.

Indian wild asses have been pulled back from the brink of extinction with years of effort.

Indian Wild Ass Sanctuary is one of the last places on earth where the Indian Wild Ass can be spotted.



[Source](#)

5) Which of the following are the functions of National Tiger Conservation Authority?

1. Preparation of reserve specific tiger conservation plan.
2. Laying down audit report regarding Tiger Conservation before Parliament.
3. According approval for declaring new Tiger Reserves.

Select the correct answer code:

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

Solution: d)

The National Tiger Conservation Authority is a statutory body under the Ministry of Environment, Forests and Climate Change.

It was constituted under enabling provisions of the Wildlife (Protection) Act, 1972, as amended in 2006, for strengthening tiger conservation.

Set up under the Chairmanship of the Minister for Environment and Forests. The Authority will have eight experts or professionals having qualifications and experience in wildlife conservation and welfare of people including tribals, apart from three Members of Parliament of whom two will be elected by the House of the People and one by the Council of States.

Functions of NTCA are as follows:

- Ensuring normative standards in tiger reserve management.
- **Preparation of reserve specific tiger conservation plan.**
- **Laying down annual/ audit report before Parliament.**
- Instituting State level Steering Committees under the Chairmanship of Chief Minister and establishment of Tiger Conservation Foundation.
- **According approval for declaring new Tiger Reserves.**

6) Consider the following statements.

1. None of India's territory directly falls in the Arctic region.
2. Changes in the Arctic will have an effect on India's weather conditions and monsoon patterns.
3. Himadri is India's first permanent Arctic research station located at Svalbard, Norway.

Which of the above statements is/are correct?

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

Solution: d)

Significance of arctic study for India:

- Though **none of India's territory directly falls in the Arctic region**, it is a crucial area as the Arctic influences atmospheric, oceanographic and biogeochemical cycles of the earth's ecosystem.
- Due to climate change, the region faces the loss of sea ice, ice caps, and warming of the ocean which in turn impacts the global climate.
- The frigid Arctic, which keeps losing ice due to global warming, is one of the batteries feeding the variations in **Indian monsoons**.

Himadri is India's first permanent Arctic research station located at Spitsbergen, Svalbard, Norway.

7) Third generation biofuels are biofuel derived from

1. Algae
2. Food crops
3. Methane

Select the correct answer code:

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

Solution: a)

3rd generation biofuels are biofuel derived from algae.

8) *Gastrodia agnicellus*, recently seen in news is

- a) World's largest freshwater species
- b) New snake eel species
- c) Ugliest orchid species
- d) Newly discovered frog species from Western Ghats

Solution: c)

Orchids are not often called ugly, but that is how the Royal Botanic Gardens in Kew, London, described a new species of the normally vibrant and delicate flower discovered in the forests of Madagascar.

Gastrodia agnicellus, one of 156 plants and fungal species named by Kew scientists and their partners around the world in 2020, has been crowned "**the ugliest orchid in the world**".

[Source](#)

9) Consider the following statements.

1. Nilgiri biosphere reserve is the largest protected forest area in India.
2. Nilgiri biosphere reserve is spread across Tamil Nadu, Karnataka and Kerala.
3. Sigur plateau which sustains elephant populations, connects the Western Ghats and the Eastern Ghats.

Which of the above statements is/are correct?

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

Solution: d)

On October 14, 2020 the top court upheld the Tamil Nadu government's authority to notify an 'elephant corridor' and protect the migratory path of the animals through the **Nilgiri biosphere reserve. The reserve is the largest protected forest area in India, spanning across Tamil Nadu, Karnataka and Kerala.**

A three-judge Bench led by CJI Bobde had said it was the State's duty to protect a "keystone species" such as elephants, immensely important to the environment.

The corridor is situated in the ecologically fragile **Sigur plateau, which connects the Western and the Eastern Ghats and sustains elephant populations and their genetic diversity.** It has the Nilgiri Hills on its southwestern side and the Moyar River Valley on its north-eastern side. The elephants cross the plateau in search of food and water.

[Source](#)

10) Consider the following statements regarding Asiatic cheetah.

- 1. Asiatic cheetah is believed to survive today only in China.
- 2. It is classified as a "critically endangered" species by the IUCN Red List.
- 3. Asiatic cheetah which once roamed India's vast forests and grasslands, was declared extinct in India in 1950's

Which of the above statements is/are correct?

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

Solution: c)

The Asiatic cheetah, which once roamed India's vast forests and grasslands, was declared extinct here in 1952, after decades of human intervention, hunting and habitat degradation. **The IUCN Red List classifies the species as critically endangered globally.**

The Asiatic cheetah is now found only in Iran.

The Asiatic cheetah is arguably the most distinct of the cheetah subspecies. It is lighter in weight, has a smaller head and shorter legs. It faces many threats, including persecution killing, habitat loss (prey depletion), targeted poaching for skins, body parts and live trade, and even road-kill.

Cheetahs are fairly adaptable and present across varied climate and habitats in their extant range. However, they require specialized prey and do not tolerate landscapes that have medium to high human populations.

Cheetahs have wide climatic tolerances but the impacts of climate change and increasing human populations are placing pressure on cheetah habitats.

11) Moyar River Valley, is located in

- a) Meghalaya
- b) Maharashtra
- c) Tamil Nadu
- d) Kerala

Solution: c)

The Moyar river is one of the tributaries of the Bhavani in Tamil Nadu. The Moyar river originates from a small town called Moyar off the Masinagudi–Ooty road. This is a natural line of separation between the state of Karnataka and Tamil Nadu and a separation between the forest of Bandipur National Park and the Mudumalai sanctuary to the south.

12) Consider the following statements regarding National Green Tribunal.

1. National Green Tribunal is a statutory body equipped with expertise solely for the purpose of adjudicating environmental cases in the country.
2. The decision of the NGT is binding on the parties, unless they approach the Supreme Court in appeal.
3. NGT cannot grant relief in the form of compensation and damages to affected persons.

Which of the above statements is/are correct?

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

Solution: a)

The National Green Tribunal, established in 2010, as per the **National Green Tribunal Act** is a specialised judicial body equipped with expertise solely for the purpose of **adjudicating environmental cases** in the country. The Tribunal is tasked with providing effective and expeditious remedy in cases relating to environmental protection, conservation of forests and other natural resources and enforcement of any legal right relating to environment. **The Tribunal's orders are binding and it has power to grant relief in the form of compensation and damages to affected persons.**

The Tribunal has a presence in five zones- North, Central, East, South and West. The Principal Bench is situated in the North Zone, headquartered in Delhi.

The Tribunal's orders are enforceable as the powers vested are the same as in a civil court under the Code of Civil Procedure, 1908.

The Tribunal has powers to review its own decisions. If this fails, **the decision can be challenged before the Supreme Court within ninety days.**

The Tribunal is an open court and its proceedings can be attended in person.

13) The Global Tiger Initiative (GTI) is a program of the

- a) World Bank
- b) International Union for the Conservation of Nature (IUCN)
- c) Conservation International
- d) United Nations Environmental Program

Solution: a)

The Global Tiger Initiative (GTI) was launched in 2008 as a global alliance of governments, international organizations, civil society, the conservation and scientific communities and the private sector, with the aim of working together to save wild tigers from extinction. In 2013, the scope was broadened to include Snow Leopards.

The GTI's founding partners included the World Bank, the Global Environment Facility (GEF), the Smithsonian Institution, Save the Tiger Fund, and International Tiger Coalition (representing more than 40 non-government organizations). The initiative is led by the 13 tiger range countries (TRCs).

14) Consider the following statements regarding Eravikulam National Park.

1. Eravikulam National Park is located along the Western Ghats in Tamil Nadu.
2. The terrain consists of high-altitude grasslands interspersed with sholas.
3. Anamudi, the highest peak in south India is located here.

Which of the above statements is/are correct?

- a) 2 only

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

Solution: d)

Eravikulam National Park is located along the Western Ghats in the Idukki district of Kerala.

The terrain consists of high-altitude grasslands interspersed with sholas. Anamudi, 2,695 meters, the highest peak in south India is inside this park.

The Grasshopper Specialist Group of the **International Union for the Conservation of Nature (IUCN)** is initiating the **Red List Assessment of grasshoppers in India for the first time.**

The assessment will include a new species of grasshopper discovered recently in the Eravikulam National Park in Kerala's Idukki district.

So far, none of the Indian grasshopper species have been listed in the Red Data Book. The Red List of Threatened Species, founded in 1964, is the world's most comprehensive inventory of the global conservation status of biological species.

[Source](#)

15) Consider the following statements regarding Dhauliganga River.

1. Dhauliganga River meets the Alaknanda River at Rudraprayag.
2. Dhauliganga River passes through the Nanda Devi National Park.

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)

Originating from Vasudhara Tal, perhaps the largest glacial lake in Uttarakhand, the **Dhuli Ganga flows in a meandering course, which takes it through the Nanda Devi National Park.**

Dhuli Ganga is joined by Rishi Ganga river at Raini.

Dhuli Ganga, which merges with Alaknanda at Vishnuprayag, is one of the several tributaries of the Ganga.

[Source](#)

16) Consider the following statements.

1. Glacial Lake Outburst Floods (GLOFs) refers to the flooding that occurs when the water dammed by a glacier or a moraine is released suddenly.
2. The Topography of Hindu Kush Himalayas does not favour the formation of glacial lakes.
3. Synthetic-Aperture Radar imagery can detect changes in water bodies, including new lake formations.

Which of the above statements is/are correct?

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

Solution: c)

National Disaster Management Authority (NDMA), which is headed by PM Narendra Modi, had issued detailed guidelines on how to reduce and deal with disasters caused by what is scientifically called **Glacial Lake Outburst Floods** (GLOFs).

What are GLOFs and how vulnerable are the Himalayas?

When glaciers melt, the water in glacial lakes accumulates behind loose, natural “glacial/moraine dams” made of ice, sand, pebbles and ice residue. **A GLOF refers to the flooding that occurs when the water dammed by a glacier or a moraine is released suddenly.**

Unlike earthen dams, the weak structure of the moraine dam leads to the abrupt failure of the dam on top of the glacial lake, which holds large volume of water.

According to NDMA, glacial retreat due to climate change occurring in most parts of the Hindu Kush Himalaya has given rise to the formation of numerous new glacial lakes, which are the major cause of GLOFs.

NDMA has recommended use of **Synthetic-Aperture Radar imagery to automatically detect changes in water bodies, including new lake formations, during the monsoon months.**

[Source](#)

17) Which of the following National parks are part of Nilgiri Biosphere Reserve?

1. Nagarhole National Park
2. Mudumalai National Park
3. Bandipur National Park
4. Eravikulam National Park

Select the correct answer code:

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

Solution: a)

The Nilgiri Biosphere Reserve is an International Biosphere Reserve in the Western Ghats and Nilgiri Hills ranges of South India. The Nilgiri Sub-Cluster is a part of the Western Ghats, which was declared a World Heritage Site by UNESCO in 2012. It includes the Aralam, **Mudumalai**, Mukurthi, **Nagarhole**, **Bandipur** and Silent Valley national parks, as well as the Wayanad and Sathyamangalam wildlife sanctuaries.

18) Consider the following statements regarding Pangong Tso Lake.

1. Pangong Tso Lake is an endorheic lake in the Himalayas.
2. It is part of the Indus river basin area.
3. It is under the Ramsar Convention as a wetland of international importance.

Which of the above statements is/are correct?

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

Solution: d)

Pangong Tso Lake is an endorheic lake in the Himalayas situated at a height of about 4,250 m. It is 134 km (83 mi) long and extends from India to the Tibetan Autonomous Region, China. Approximately 50% of the length of the lake lies within the Tibetan Autonomous Region.

During winter the lake freezes completely, despite being saline water. It has a **land-locked basin separated from the Indus River basin** by a small elevated ridge, but is believed to have been part of the latter in prehistoric times.

The lake is in the **process of being identified under the Ramsar Convention** as a wetland of international importance. This will be the first trans-boundary wetland in South Asia under the convention.

19) Consider the following statements.

1. Polymetallic nodules, cobalt-rich manganese crust, hydrothermal deposits and gas hydrates are some of the major resources ocean floors offer.
2. Among the major resources only polymetallic nodules are found in India's exclusive economic zone (EEZ).
3. Indian National Center for Ocean Information Services (INCOIS) is an autonomous organization under the Ministry of Earth Sciences that provides and manages oceanic data.

Which of the above statements is/are correct?

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

Solution: b)

Some of the major resources ocean floors offer are polymetallic nodules, cobalt-rich manganese crust, hydrothermal deposits and gas hydrates. Of these, only gas hydrates are found in India's exclusive economic zone (EEZ) in mineable quantities in the order of ~950 trillion cubic m.

At present, oceanic data is managed by the Indian National Centre for Ocean Information Services (INCOIS) through its Digital Ocean and allied frameworks.

[Source](#)

20) Consider the following statements.

1. Glaciers are the only source of freshwater in the Himalayan ecosystem.
2. There is considerable shrinking of glacial lakes across the Himalayas, in recent decades.

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)

Glaciers are the largest source of freshwater outside of the polar regions. Glaciers and snow melt in the Himalayan ecosystem are the source of water for several rivers across the subcontinent, and are responsible for maintaining the perennial supply of water in the river systems like the Indus, Ganges, and Brahmaputra to over a billion people.

Some models predict that an increase in global temperatures by 2°C from 1850 by 2070 would result in 45% of the medium and large glaciers (10 sq km or more) disappearing completely. Nearly 70% smaller glaciers are likely to melt away. **Shrinking glaciers have led to the formation of a large number of glacial lakes all across the Himalayas.** Many of these high-altitude lakes are potentially dangerous, because of their potential to cause flash floods in the event of a breach.

There has been an increase in the number of such lakes in the last few decades because of an acceleration in the glacial melt. A 2005 study had listed 127 such lakes in Uttarakhand. More recent studies put the number of such lakes in the state at around 400.

[Source](#)

21) Consider the following statements.

1. When Geomagnetic reversal occur, that animals that use Earth's magnetic field for navigation like sea turtles could get lost during their routine journeys.
2. An increase in the temperature due to climate change can have an impact on the Gender of the sea turtles.

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)

A geomagnetic reversal is a change in a planet's magnetic field such that the positions of magnetic north and magnetic south are interchanged (not to be confused with geographic north and geographic south). Another interesting consequence will be that animals that use Earth's magnetic field for navigation—including birds, salmon, and sea turtles—could get lost during their routine journeys.

Because sea turtles use both marine and terrestrial habitats during their life cycles, the affects of climate change are likely to have a devastating impact on these species.

Because sea turtles are reptiles, they rely on the temperature of the sand in which the eggs incubate to determine the gender of the hatchling in a nest. Typically, the eggs in the lower, cooler, part of the nest will become males, while the eggs in the upper, warmer, part of the nest will become females. With increasing nest temperatures, scientists predict that there will be more female than male hatchlings, creating a significant threat to genetic diversity.

[Source](#)

22) Which of the following Tiger Reserves have no Tigers?

1. Dampa Tiger reserve
2. Palamau Tiger reserve
3. Kamlang Tiger Reserve

Select the correct answer code:

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

Solution: a)

Mizoram's Dampa reserve, West Bengal's Buxa reserve and Jharkhand's Palamau reserve are the three reserves with no tigers.

23) Forest landscape restoration (FLR) is the ongoing process that involves

1. Managing natural regeneration of forests
2. Enhancing human well-being across deforested or degraded forest landscapes
3. Planting of more trees

Select the correct answer code:

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

d) 1, 2, 3

Solution: d)

Forest landscape restoration (FLR) is the ongoing process of regaining ecological functionality and enhancing human well-being across deforested or degraded forest landscapes. FLR is **more than just planting trees – it is restoring a whole landscape to meet present and future needs and to offer multiple benefits and land uses over time.**

FLR manifests through different processes such as: new tree plantings, managed natural regeneration, agroforestry, or improved land management to accommodate a mosaic of land uses, including agriculture, protected wildlife reserves, managed plantations, riverside plantings and more.

[Source](#)

24) Consider the following statements regarding Leatherback turtle.

1. Leatherback turtle are the largest species of sea turtles, found in all oceans on earth.
2. In India, they are found in the coastal states of Odisha and Maharashtra.
3. They are listed in Schedule I of India's Wildlife Protection Act, 1972, thereby according it the highest

legal protection.

Which of the above statements is/are correct?

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

Solution: c)

Proposals for tourism and port development in the Andaman and Nicobar (A&N) Islands have conservationists worried over the fate of some of the most important nesting populations of the Giant Leatherback turtle in this part of the Indian Ocean.

The largest of the seven species of sea turtles on the planet and also the most long-ranging, Leatherbacks are found in all oceans except the Arctic and the Antarctic. Within the Indian Ocean, they nest only in Indonesia, Sri Lanka and the Andaman and Nicobar Islands and are also listed in Schedule I of India's Wildlife Protection Act, 1972, according it the highest legal protection.

[Source](#)

25) Consider the following statements regarding Bottom trawling.

1. Bottom trawling is a method of fishing that involves dragging heavy weighted nets across the sea floor, in an effort to catch fish.
2. Bottom trawling is considered environment friendly and does not affect the marine biodiversity.
3. Majority of the commercial fishing in India is done through the method of Bottom trawling.

Which of the above statements is/are correct?

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

Solution: a)

Bottom trawling is an industrial fishing method where a large net with heavy weights is dragged across the seafloor.

When the weighted nets and trawl doors are dragged along the seafloor, everything in their path is disturbed or destroyed, including seagrasses, coral reefs or rock gardens where fish hide from predators. Bottom trawls are used in catching marine life that live on the seafloor, such as shrimp, cod, sole and flounder. The damage from bottom trawling is not limited to habitat destruction. As the net drags along the seafloor, all creatures in its path—fish, animals, marine mammals, plants, and turtles—are scooped up along the way. India has taken measures to stop bottom trawling by its fishermen in the waters near the Sri Lankan coastline.

Recent initiatives taken by the Government of India to end bottom trawling in the Palk Bay area include the launch of a programme on diversification of bottom trawlers into deep-sea fishing vessels for tuna long lining under the Blue Revolution Scheme, construction of Mookaiyur and Poompuhar fishing harbours, and capacity-building programmes for fishermen of the Palk Bay area in deep sea tuna long lining.

26) Consider the following statements regarding Flash droughts.

1. Flash droughts are those that occur very quickly, with soil moisture depleting rapidly.
2. In India, more than 70% of the Flash droughts happen during the summer season.
3. Factors like atmospheric anomalies and anthropogenic greenhouse gas emissions play an important

role in Flash droughts.

Which of the above statements is/are correct?

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

Solution: a)

Flash droughts are those that occur very quickly, with soil moisture depleting rapidly.

Normally, developing drought conditions take months, but these happen within a week or in two weeks' time.

Several factors including atmospheric anomalies, anthropogenic greenhouse gas emissions play an important role.

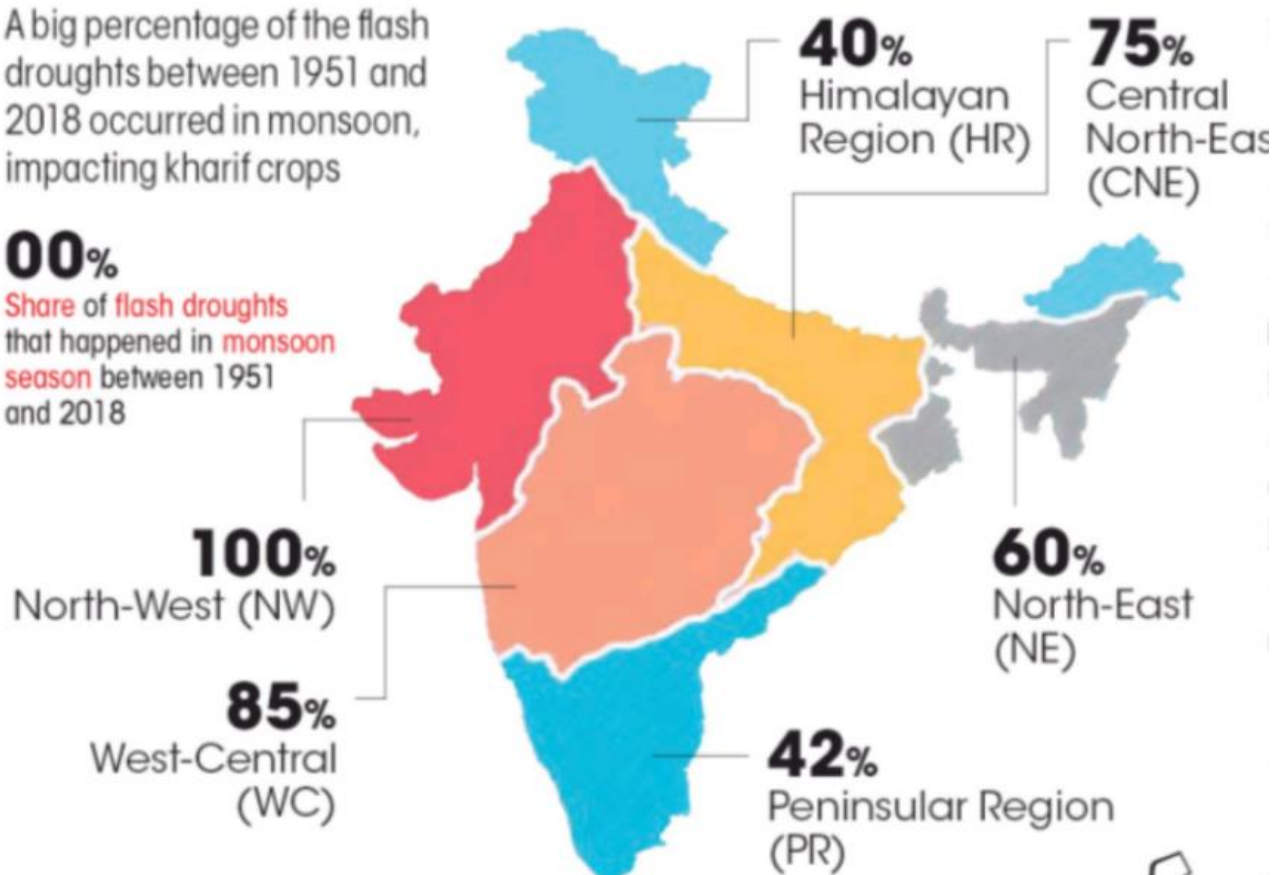
It is widely believed that flash droughts will occur during the summer months as was reported in the Western countries, mostly driven by heat waves and very high temperature. **But in India, 82 per cent of such extreme weather events happen during the monsoon period.**

AN UNRECOGNISED CRISIS

A big percentage of the flash droughts between 1951 and 2018 occurred in monsoon, impacting kharif crops

00%

Share of flash droughts that happened in monsoon season between 1951 and 2018



THE WORST FOUR FLASH DROUGHTS

All occurred in monsoon, devastating crop production



1958

affected CNE and NW

1979

affected CNE, NW and WC

1986

spread across WC, CNE, NW and PR

2001

affected WC, CNE and NW

27) Consider the following statements.

1. Recently North India witnessed a rise in temperature due to the dominance of the prevailing easterly winds and presence of multiple weather systems over Central India that prevented the cold waves from reaching the northern parts of India.

2. Western Disturbances along the extreme north India will further increase the temperature over Delhi, Punjab, Haryana, Chandigarh areas.

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)

After continuous cold conditions experienced all through January and the beginning of February 2021, the plains over North India reported a sharp shift in temperatures.

Unlike the winter of 2020, not many cold day conditions were recorded during this season. In January, there were fewer and feeble western disturbances across lower latitudes. The effects of western disturbances were mostly limited to hilly regions in January 2021.

Why has there been a sudden rise in temperatures?

In the absence of cold wave and cold day conditions over the plains of north India, temperatures began to soar. Delhi, Dehradun and many locations in both the plains and the hills recorded significantly above normal day temperatures for this time of the year.

On February 11, New Delhi recorded 30.4 degrees Celsius, which was 7.7 degrees above normal

“The dominance of the prevailing easterly winds and presence of multiple weather systems over Central India is preventing the cold waves from reaching the northern parts of India. That is why, temperatures have seen a sharp rise, with departures ranging between 5 to 7 degrees from normal,”

A fresh western disturbance is expected to cross extreme north India. This system will bring rainfall or snowfall over Jammu and Kashmir. Once it passes, there is a marginal drop of around 2 to 3 degrees likely over Delhi, Punjab, Haryana, Chandigarh areas.

[Source](#)

28) Consider the following statements.

1. Kailash Range separates the Karakoram Range and Pangong Tso Lake
2. The Kailash Range was the theatre of conflict during the 1962 Chinese offensive, with key battles at Rezang La and Gurung Hill.
3. Ladakh Range is located south of Zaskar Range.

Which of the above statements is/are correct?

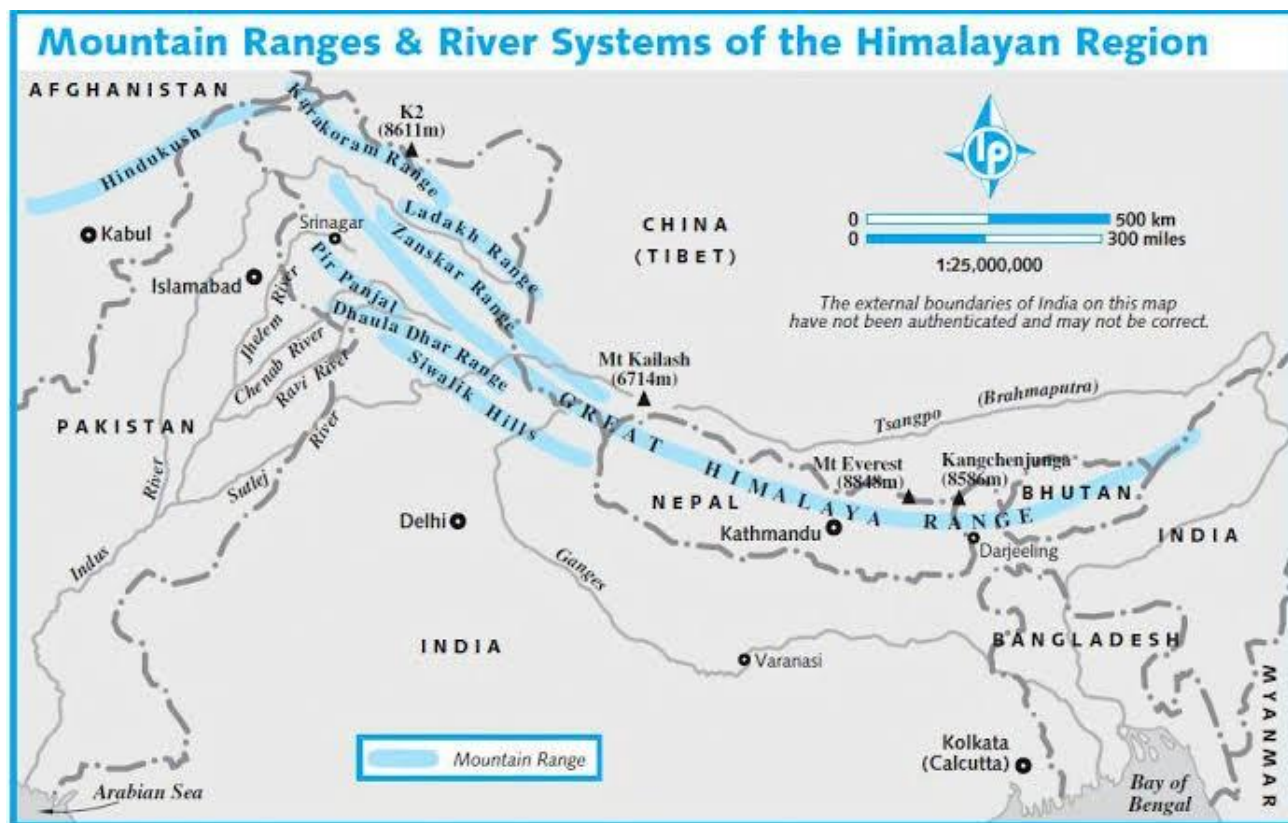
- a) 1, 2
- b) 1, 3
- c) 2 only
- d) 1, 2, 3

Solution: c)

The Kailash Range was the theatre of conflict during the 1962 Chinese offensive, with key battles at **Rezang La and Gurung Hill**.

The Kailash Range:

- **The Karakoram Range ends on the northern side of the Pangong Tso.**
- The Kailash Range originates from the southern bank and runs northwest to southeast for over 60 km.
- The Kailash Ridge is characterised by rugged, broken terrain with heights varying between 4,000-5,500m.
- Its key features include Helmet Top, Gurung Hill, Spanggur Gap, Muggar Hill, Mukhpari, Rezang La and Rechin La. The Ridge dominates Chushul Bowl; an important communications centre.



29) Consider the following statements regarding carbon footprint.

1. Carbon footprint is the amount of greenhouse gases-especially carbon dioxide-released into the atmosphere by a particular human activity.
2. Adopting a plant-based diet will lead to an increase in carbon footprint.

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)

Chandigarh became the first state or Union Territory in India to launch Carbon Watch, a mobile application to assess the carbon footprint of an individual.

Carbon footprint is the amount of greenhouse gases-especially carbon dioxide-released into the atmosphere by a particular human activity.

A July 2017 study published in Environmental Research Letters found that the **most significant way individuals could mitigate their own carbon footprint** is to have one less child ("an average for developed countries of 58.6 tonnes CO₂-equivalent (tCO₂e) emission reductions per year"), followed by living car-free (2.4 tonnes CO₂-equivalent per year), forgoing air travel (1.6 tonnes CO₂-equivalent per trans-Atlantic trip) and **adopting a plant-based diet** (0.8 tonnes CO₂-equivalent per year).

Source

30) Consider the following statements.

1. Fog is a phenomenon of small droplets remaining suspended in the air.
2. Western disturbances along the extreme northern India inhibits the development of fog over Delhi-Haryana-Punjab belt.

3. Clear sky conditions accompanied by calm winds during the day allows the fog to persist for longer than normal duration.

Which of the above statements is/are correct?

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

Solution: c)

Fog is a phenomenon of small droplets remaining suspended in the air. Fog develops normally during late evening, night or early morning hours of the day, severely affecting visibility. Foggy conditions prevail over the plains of north India during the winter season and can prolong for days and sometimes even for weeks.

Fog developed over Delhi-Haryana-Punjab belt during February 2-6, due to the passing of an active western disturbance, which caused light rain and brought along fresh moisture over these regions.

In the absence of an active western disturbance, an anticyclone formed and stayed put over the extreme north of the plains. This coincided with the dominant easterly waves pumping in moisture into the region, favouring the fog formation.

Clear sky conditions accompanied by calm winds during the day allowed the fog to persist for longer than normal duration.

With the persistent prevalence of an easterly trough across Central India after February 8, the easterly winds continued to remain active for 9 to 10 consecutive days. This resulted in continuous moisture being fed and the water droplets contributed towards the fog development and its persistence all these days.

[Source](#)

31) Consider the following statements regarding Droughts.

1. Drought is the consequence of a natural reduction in the amount of precipitation over an extended period of time, usually a season or more in length.
2. Drought is often associated with high winds, high temperatures and high relative humidity.
3. Agricultural Drought occurs when available soil moisture is inadequate for healthy crop growth and cause extreme stress and wilting.

Which of the above statements is/are correct?

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

Solution: b)

As defined by the IMD, drought is a consequence of the natural reduction in the amount of precipitation for a long period of time.

Drought is often associated with other climatic factors like high winds and temperatures and **low relative humidity**. These factors can aggravate the severity of the drought event.

As per the Manual for Drought Management 2016, drought is declared considering following two indicative factors:

- The extent of rainfall deviation (depreciation)
- The consequent dry spell

IMD declares a year to be a drought year, in case the area is affected by moderate and severe drought, either individually or together and for 20-40% of the total area of the country.

What are the different types of drought?

- Meteorological Drought
- Hydrological Drought
- Agricultural Drought
- Socio-Economic Drought

Agricultural Drought occurs when available soil moisture is inadequate for healthy crop growth and cause extreme stress and wilting.

[Source](#)

32) Consider the following statements regarding Alaknanda River.

1. The Alaknanda rises in the Satopanth glacier.
2. Alaknanda is met at Devprayag by the Dhauli Ganga.
3. Nandakini, Pindar, Mandakini and Bhagirathi are the tributaries of Alaknanda River.

Which of the above statements is/are correct?

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

Solution: c)

The **Alaknanda rises in the Satopanth glacier** and is **met at Vishnuprayag by the Dhauli Ganga**. The Alaknanda is then met by the **Nandakini** at Nandaprayag, **Pindar** at Karnaprayag, **Mandakini** at Rudraprayag, and **Bhagirathi** at Devprayag. Thereafter, it is known as Ganga, which flows to Rishikesh and Haridwar.

[Source](#)

33) Central Ground Water Authority (CGWA) has been constituted under

- a) Environment (Protection) Act, 1986
- b) Water (Prevention and Control of Pollution) Act, 1974
- c) Public Liability Insurance Act, 1991
- d) Hazardous waste Handling and management act, 1989

Solution: a)

Central Ground Water Authority (CGWA) has been constituted under Section 3(3) of the 'Environment (Protection) Act, 1986' for the purpose of regulation and control of ground water development and management in the Country. CGWA grants 'No Objection Certificates' (NOC) for ground water abstraction in 23 States/UTs through guidelines which are modified from time to time.

34) Consider the following statements.

1. Climate Change Performance Index (CCPI) tracks countries' efforts to combat climate change and is published annually by UNEP.
2. UNFCCC can impose penalty if a country fails to meet Nationally Determined Contributions (NDCs) under the Paris Climate Pact.

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)

Published annually since 2005, the Climate Change Performance Index (CCPI) tracks countries' efforts to combat climate change. As an independent monitoring tool it aims to enhance transparency in international climate politics and enables comparison of climate protection efforts and progress made by individual countries. Germanwatch, the NewClimate Institute and the Climate Action Network publish the index annually.

If a country fails to meet its NDCs, there is no penalty.

3. Government Schemes and Programmes

- 1) Which of the following are the objective of the Khadi & Village Industries Commission (KVIC)?
1. Providing employment in rural areas.
 2. Providing salable articles.
 3. Creating self-reliance amongst people and building up a strong rural community spirit
 4. Establishing a major khadi industry in every village

Select the correct answer code:

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

Solution: c)

The Khadi and Village Industries Commission (KVIC) is a statutory body established by an Act of Parliament (Khadi and Village Industries Commission Act of 1956). In April 1957, it took over the work of former All India Khadi and Village Industries Board.

Functions: It is an apex organization under the Ministry of Micro, Small and Medium Enterprises, with regard to khadi and village industries within India, which seeks to – “plan, promote, facilitate, organise and assist in the establishment and development of khadi and village industries in the rural areas in coordination with other agencies engaged in rural development wherever necessary.”

The Commission has three main objectives which guide its functioning. These are:

- The **Social Objective** – Providing employment in rural areas.
- The **Economic Objective** – Providing salable articles.
- The **Wider Objective** – Creating self-reliance amongst people and building up a strong rural community spirit.

Establishing a major khadi industry in every village is not a listed objective and may not be economically feasible as well.

- 2) National Landslide Susceptibility Mapping is under taken by
- a) Ministry of Earth Sciences (MoES)
 - b) Geological Survey of India
 - c) Council of Scientific and Industrial Research (CSIR)
 - d) Both a and b

Solution: b)

Since FS 2014 - 15, **GSI has launched and undertook a national programme on landslide susceptibility mapping - National Landslide Susceptibility Mapping (NLSM).**

Aims and Objectives

- To create a dynamic National Landslide Susceptibility Geodatabase for India
- To prepare GIS - based seamless Landslide Susceptibility Maps of India on 1:50,000 scale

- To prepare a nation-wide repository on GIS-based Landslide Inventory

[Source](#)

3) Consider the following statements regarding 'Drought Management in India'

1. Drought will fall within the definition of "disaster" as defined in Disaster Management Act, 2005.
2. Central Government is the final authority when it comes to declaring a region as drought affected.

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)

Drought is generally considered as a deficiency in rainfall /precipitation over an extended period, usually a season or more, resulting in a water shortage causing adverse impacts on vegetation, animals, and/or people.

There is no single, legally accepted definition of drought in India. Some states resort to their own definitions of drought. **State Government is the final authority when it comes to declaring a region as drought affected.**

The Supreme Court of India in its verdict in the matter of Swaraj Abhiyan Vs Union of India stated that **drought would certainly fall within the definition of "disaster" as defined under Section 2(d) of the Disaster Management (DM) Act, 2005.**

4) India's Deep Ocean Mission, intends for

1. Development of technologies for underwater vehicles and robotics to assist deep-sea mining.
2. Research on deep-sea biodiversity.
3. Developing ocean climate advisories to determine the ocean-atmosphere

Select the correct answer code:

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

Solution: d)

A Rs 4,000 crore was allocated for over a five year period in the FY22 Budget for India's Deep Ocean Mission.

Deep Ocean Mission framework entails the inclusion of following broad components.

- The first outlines the **development of technologies for underwater vehicles and robotics to assist deep-sea mining.**
- The second involves **ocean climate advisories** that envisage to **determine the extent ocean-atmosphere coupling influence the climate of the sub-continent.**
- The third component includes **research on deep-sea biodiversity**, an area of work that has made little headway till now.

5) The Information Technology Act, 2000 deals with

1. Hate content on the Internet
2. Cyber Crime against women and children
3. Electronic Commerce
4. Electronic Records and Digital Signatures

Select the correct answer code:

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

d) 1, 2, 3, 4

Solution: d)

The Information Technology Act, 2000 is an Act of the Indian Parliament notified on 17 October 2000. It is the **primary law in India dealing with cybercrime and electronic commerce.**

Information Technology Act **deals with hate content on the Internet.**

The Union home ministry, in its report submitted to the Parliamentary panel on Home Affairs, has said that even as there is no “legislative definition for cybercrime”, any offence committed “against a computer resource or with the aid of a computer resource is called a cybercrime”. “Such offences are dealt as per the legal provisions of the Information Technology Act, Indian Penal Code, POSCO etc,”

[Source](#)

[Source](#)

[Source](#)

6) Consider the following statements regarding landlord port model.

1. In the landlord port model, the publicly governed port authority acts as a regulatory body that carry out port operations—mainly cargo-handling activities.
2. Here, the port authority maintains ownership of the port.
3. India has acceded to Hong Kong International Convention for Ship Recycling that is aimed at ensuring that ships recycled after reaching the end of their operational lives do not pose any risks to human health, safety and the environment.

Which of the above statements is/are correct?

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

Solution: b)

What is landlord model?

- In the landlord port model, the **publicly governed port authority acts as a regulatory body** and as landlord while **private companies carry out port operations—mainly cargo-handling activities.**
- Here, the **port authority maintains ownership of the port** while the infrastructure is leased to private firms that provide and maintain their own superstructure and install own equipment to handle cargo.
- In return, the landlord port gets a share of the revenue from the private entity.
- The role of the landlord port authority would be to carry out all public sector services and operations such as the award of bids for cargo terminals and dredging.

India's has acceded to the Hong Kong Convention on Hong Kong International Convention for Ship Recycling, which will help in providing boost to the ship- recycling industry in India.

The International Maritime Organization (IMO) adopted the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships in 2009. This is aimed at ensuring that ships being recycled after reaching the end of their operational lives do not pose any unnecessary risks to human health, safety and the environment.

7) Consider the following statements regarding Census and Socio-Economic Caste Census (SECC).

1. The Census is a statutory exercise and all data collected will be published in the local areas for public scrutiny.
2. All the personal information given in the Socio-Economic Caste Census (SECC) is open for use by Government departments to grant and/or restrict benefits to households.

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 Census is a statutory exercise conducted under the provisions of the Census Act 1948 and Rules made there under.

All information collected under the Census is confidential and will not be shared with any agency - Government or private. Certain information collected under the NPR will be published in the local areas for public scrutiny and invitation of objections.

According to the SECC website, "all the personal information given in the Socio-Economic Caste Census (SECC) is open for use by Government departments to grant and/or restrict benefits to households".

Source

- 8) Consider the following statements regarding Enforcement Directorate (ED).
1. ED is appointed on the approval of the Appointments Committee of the Cabinet (ACC) headed by Prime Minister.
 2. It functions under the aegis of the Central Bureau of Investigation (CBI).
 3. It is responsible for tracking black money and hawala trade cases.

Which of the above statements is/are correct?

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

Solution: b)

The Directorate of Enforcement (ED) is a law enforcement agency and economic intelligence agency responsible for enforcing economic laws and fighting economic crime in India. It functions **under the aegis of the Department of Revenue, Union Ministry of Finance.**

ED is appointed on the approval of the Appointments Committee of the Cabinet (ACC) headed by Prime Minister.

The Enforcement Directorate enforces two central laws — the Prevention of Money Laundering Act (PMLA) and the Foreign Exchange Management Act (FEMA). These laws were enacted to curb money laundering, terror financing, black money and hawala or illegal financial transactions that have cross-border ramifications.

- 9) Among the following Acts, an Enforcement Directorate (ED) in India will be most concerned with
- a) Narcotic Drugs and Psychotropic Substances Act
 - b) Negotiable Instrument Act
 - c) Public Debt Act
 - d) Prevention of Money Laundering Act

Solution: d)

Enforcement Directorate (ED) is a law enforcement agency and economic intelligence agency responsible for enforcing economic laws and fighting economic crime in India. It is part of the Department of Revenue, Ministry of Finance.

The prime objective of the Enforcement Directorate is the enforcement of two key Acts- the Foreign Exchange Management Act 1999 (FEMA) and the **Prevention of Money Laundering Act 2002 (PMLA).**

- 10) Consider the following statements regarding Juvenile Justice (Care and Protection of Children Act) 2015.
1. The Act allowed the trial of all juveniles in the age group of 16-18 years as adults.

2. The Act streamlined adoption procedures for orphans, abandoned and surrendered children.

3. Central Adoption Resource Authority (CARA) was given the status of a statutory body to enable it to perform its function more effectively.

Which of the above statements is/are correct?

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

Solution: b)

The Juvenile Justice (Care and Protection of Children) Act was introduced and passed in Parliament in 2015 to replace the Juvenile Delinquency Law and the Juvenile Justice (Care and Protection of Children Act) 2000.

One of the main provisions of the new Act was **allowing the trial of juveniles in conflict with law in the age group of 16-18 years as adults, in cases where the crimes were to be determined**. The nature of the crime, and whether the juvenile should be tried as a minor or a child, was to be determined by a Juvenile Justice Board. This provision received an impetus after the 2012 Delhi gangrape in which one of the accused was just short of 18 years, and was therefore tried as a juvenile.

The second major provision was with regards to adoption, bringing a more universally acceptable adoption law instead of the Hindu Adoptions and Maintenance Act (1956) and Guardians of the ward Act (1890) which was for Muslims, although the Act did not replace these laws. The Act **streamlined adoption procedures for orphans, abandoned and surrendered children** and the existing **Central Adoption Resource Authority (CARA) has been given the status of a statutory body** to enable it to perform its function more effectively.

[Source](#)

11) Consider the following statements regarding Production Linked Incentive (PLI) Scheme.

- 1. The scheme is expected to promote the production of high-value products in India and increase the value addition in exports.
- 2. Under the scheme an incentive will be given on net incremental sales of goods manufactured in India.
- 3. Pharmaceuticals and IT hardware sectors are included under the PLI scheme.

Which of the above statements is/are correct?

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

Solution: d)

The Union Cabinet approved the Production Linked Incentive (PLI) Scheme for the pharmaceuticals and IT hardware sectors.

The PLI scheme for pharmaceuticals, whose duration will be for nine years from 2020-21 till 2028-29, will benefit domestic manufacturers, help create employment and is expected to contribute to the availability of a wider range of affordable medicines for consumers.

The scheme is expected to promote the production of high-value products in the country and increase the value addition in exports.

The scheme also aims to create global champions from India that have the potential to grow in size and scale using cutting edge technology and thereby penetrate global value chains.

This is an important segment to promote manufacturing under AtmaNirbhar Bharat as there is huge import reliance for these items at present.

Source

4. Science and Technology

1) Which of the following are the main types of noncommunicable diseases?

1. Cardiovascular diseases
2. Cancer
3. Chronic respiratory diseases
4. Diabetes

Select the correct answer code:

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

Solution: d)

Noncommunicable - or chronic - diseases are diseases of long duration and generally slow progression. The four main types of noncommunicable diseases are **cardiovascular diseases** (like heart attacks and stroke), **cancer**, **chronic respiratory diseases** (such as chronic obstructed pulmonary disease and asthma) and **diabetes**.

[Source](#)

2) The term 'Neural network' sometimes seen news means

- a) Networking between cells based on their mRNA
- b) A point to point network for urgent assistance in cybercrime matters
- c) A network of disengaged computer clouds
- d) A process that mimics the way the human brain operates.

Solution: d)

A neural network is a series of algorithms that endeavours to recognize underlying relationships in a set of data through a **process that mimics the way the human brain operates**. In this sense, neural networks refer to systems of neurons, either organic or artificial in nature. Neural networks can adapt to changing input; so the network generates the best possible result without needing to redesign the output criteria. The concept of neural networks, which has its roots in artificial intelligence, is swiftly gaining popularity in the development of trading systems.

[Source](#)

3) Which of the following are the Bacterial diseases in cattle and buffaloes?

1. Anthrax
2. Influenza
3. Tetanus
4. Tuberculosis

Select the correct answer code:

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

d) 1, 2, 3, 4

Solution: c)

Table 4.1: Major bacterial, viral and parasitic diseases in cattle and buffaloes

Bacterial diseases	Viral diseases	Parasitic diseases
Anthrax	Foot and Mouth Disease (FMD)	Tapeworm infestation
Black quarter	Rabies	Hydatid cyst
Tetanus	Plague	Ascariasis
Tuberculosis	Pox	Babesiosis
Colibacillosis	Influenza	Theileriosis

4) Which of the following is used for control and prevention of spread of animal diseases?

- a) Vaccination
- b) Bio-security
- c) Blood and Urine Examination of animals
- d) All of the above

Solution: d)

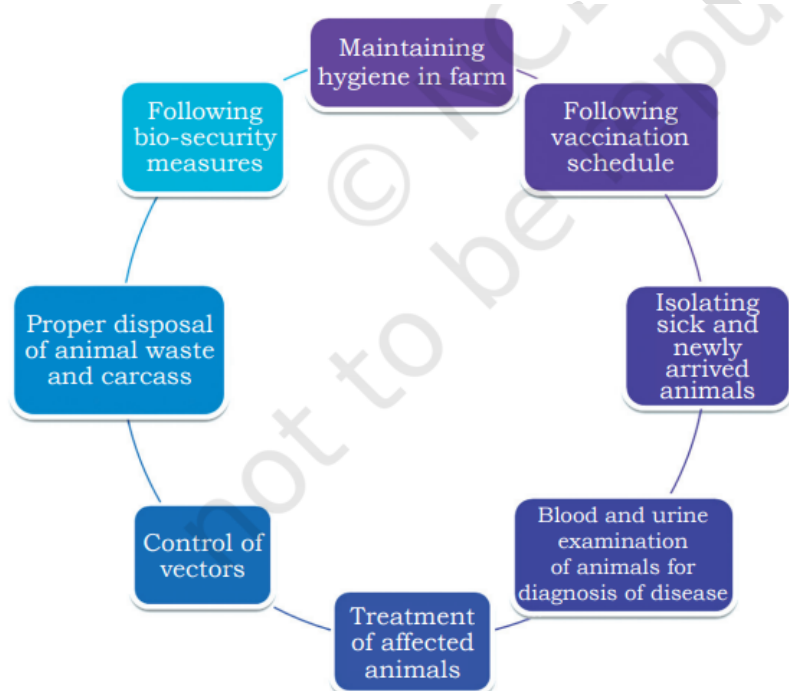


Fig. 4.3: Preventive measures for controlling outbreak of animal diseases

5) Consider the following statements regarding Square Kilometre Array Observatory (SKAO) project.

1. Square Kilometre Array Observatory (SKAO) project will be the world's largest radio telescope, once completed.
2. It aims to study the origin and evolution of cosmic magnetism, and dark energy and evolution of galaxies.
3. India is participating in SKAO through the Department of Atomic Energy (DAE) and the Department of Science and Technology (DST).

Which of the above statements is/are correct?

- a) 1, 2

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

Solution: d)

A global collaboration for the **world's largest radio telescope** took formal shape with the constitution of an Intergovernmental Council. The Square Kilometre Array Observatory (SKAO) project, spanning two continents and involving the participation of 20 countries, is expected to be ready for carrying out observations towards the end of this decade.

Headquartered and controlled from the UK, the SKA is not a single telescope but will be an **array of antennas** strategically designed and set up in South Africa and Australia.

SKA will allow astronomers to **look deeper into the universe and unravel secrets about its evolution**. Among its goals are: **studying the universe and its evolution**, the **origin and evolution of cosmic magnetism**, and **dark energy and evolution of galaxies**. Scientists are also optimistic that the SKA will be able to detect very weak extra-terrestrial signals and search for molecules that support life.

Unlike optical telescopes, **radio telescopes can detect invisible gas** and, therefore, they can reveal areas of space that may be obscured by cosmic dust.

India is participating in SKAO. through the Department of Atomic Energy (DAE) and the Department of Science and Technology (DST).

The Indian team was among the first to submit and get the design approval of a highly sophisticated Telescope Manager (TM), nicknamed "nervous system", of the SKA observatory. The Indian team has now been chosen to lead the construction of the TM system, which will be responsible for end-to-end operations of SKAO.

[Source](#)

[Source](#)

6) DNA Profiling is used in which of the following areas?

1. Criminal investigations
2. Parentage testing
3. Genealogical research
4. Study of animal and plant populations

Select the correct answer code:

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

Solution: d)

DNA profiling (also called DNA fingerprinting) is the process of determining an individual's DNA characteristics.

DNA profiling is a forensic technique in **criminal investigations**, comparing criminal suspects' profiles to DNA evidence so as to assess the likelihood of their involvement in the crime. It is also used in **parentage testing**, to establish immigration eligibility, and in genealogical and medical research. DNA profiling has also been used in the **study of animal and plant populations** in the fields of zoology, botany, and agriculture.

7) Consider the following statements.

1. Augmented reality (AR) is a combination of real and virtual worlds.
2. Virtual reality completely replaces the user's real-world environment with a simulated one.
3. A Distributed Denial-of-Service (DDoS) attack cannot disrupt the user's Virtual reality experiences.

Which of the above statements is/are incorrect?

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

Solution: a)

Augmented reality (AR) is an interactive experience of a real-world environment where the objects that reside in the real world are enhanced by computer-generated perceptual information.

AR can be defined as a system that fulfills three basic features: a **combination of real and virtual worlds**, real-time interaction, and accurate 3D registration of virtual and real objects.

In this way, augmented reality alters one's ongoing perception of a real-world environment, whereas **virtual reality completely replaces the user's real-world environment with a simulated one**. Augmented reality is related to two largely synonymous terms: mixed reality and computer-mediated reality.

A Distributed Denial-of-Service (DDoS) attack has the potential to overwhelm the network with irrelevant data, thereby disrupting the user's VR experiences.

Distributed denial-of-service attacks target websites and online services. The aim is to overwhelm them with more traffic than the server or network can accommodate. The goal is to render the website or service inoperable.

[Source](#)

[Source](#)

8) Consider the following statements about Poliomyelitis.

1. It is a highly infectious viral disease, which mainly affects young children.
2. The virus is transmitted by person-to-person and spread through contaminated water or food.
3. With latest developments in medicine, Polio disease can be cured.
4. India became the first country globally to introduce fractional doses of IPV in childhood immunisation programme.

Which of the above statements is/are correct?

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

Solution: d)

Poliomyelitis (polio) is a highly infectious viral disease, which mainly affects young children. The virus is **transmitted by person-to-person spread mainly through the faecal-oral route** or, less frequently, by a common vehicle (e.g. contaminated water or food) and multiplies in the intestine, from where it can invade the nervous system and can cause paralysis.

Initial symptoms of polio include fever, fatigue, headache, vomiting, stiffness in the neck, and pain in the limbs. In a small proportion of cases, the disease causes paralysis, which is often permanent. **There is no cure for polio, it can only be prevented by immunization.**

[Source](#)

9) Which of the following space missions are related to the planet Mars?

1. China's Tianwen-1
2. UAE's Hope mission
3. Chang'e-4 mission
4. NASA's Perseverance rover mission

Select the correct answer code:

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

Solution: c)

China's Tianwen-1 mission successfully entered the orbit of Mars, making it the first time for a Chinese mission to be able to successfully make a journey to another planet.

China launched Tianwen-1 along with the UAE's Hope mission and NASA's Perseverance rover mission in July. **All three missions to Mars** were launched during the brief launch window available in July.

Chang'e-4 is China's first probe ever to achieve soft-landing on the far side of the Moon.

[Source](#)

10) Which of the following are the vaccine-preventable diseases?

- 1. Dengue
- 2. Diphtheria
- 3. Haemophilia
- 4. Poliomyelitis
- 5. Common cold

Select the correct answer code:

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

Solution: b)

A vaccine-preventable disease is an infectious disease for which an effective preventive vaccine exists. If a person acquires a vaccine-preventable disease and dies from it, the death is considered a vaccine-preventable death.

The WHO lists 27 diseases for which vaccines are available. They are:

- Cholera
- Dengue fever
- Diphtheria
- Haemophilus influenzae type b
- Hepatitis A
- Hepatitis B
- Hepatitis E
- Human papilloma-virus
- Influenza
- Japanese encephalitis
- Malaria
- Measles
- Meningococcal disease
- Mumps
- Pneumococcal disease
- Pertussis
- Poliomyelitis
- Rabies

- Rotavirus gastroenteritis
- Rubella
- Tetanus
- Tick-borne encephalitis
- Tuberculosis
- Typhoid fever
- Varicella
- Yellow fever
- Shingles (Herpes Zoster)

Vaccination is not there for genetic disorders like haemophilia, colour blindness; these are not caused by bacteria or viruses.

Common cold can be caused by more than 100 different viruses. Hence, vaccine for common cold will not work because a specific antibody is effective only against a specific kind of virus or bacterium.

- 11) Blue sky research, sometimes seen in news is related to
- a) Research on solar geoengineering for reducing heat-trapping clouds
 - b) Deep oceanic study on Polymetallic nodules
 - c) Scientific research without a clear goal
 - d) None of the above

Solution: c)

Blue skies research (also called blue sky science) is scientific research in domains where "real-world" applications are not immediately apparent. It has been defined as "**research without a clear goal**" and "curiosity-driven science".

Proponents of this mode of science argue that unanticipated scientific breakthroughs are sometimes more valuable than the outcomes of agenda-driven research, heralding advances in genetics and stem cell biology as examples of unforeseen benefits of research that was originally seen as purely theoretical in scope.

- 12) Assisted reproductive technology (ART) includes which of the following medical procedures
1. In-vitro fertilization
 2. Cryopreservation
 3. Surrogacy

Select the correct answer code:

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

Solution: d)

Assisted Reproductive Technology (ART) comprises procedures such as in-vitro fertilisation (IVF), intra-uterine insemination (IUI), oocyte and sperm donation, cryopreservation and includes surrogacy as well. Although not all surrogacy arrangements involve ART.

The technology works to remove an egg from a woman's body and fertilize it with a man's sperm to make an embryo.

- 13) One Health Concept, recently seen in news means
- a) Strategies to prevent Non-communicable diseases
 - b) Providing health insurance to all the individuals
 - c) Inter-connectivity among human health, animal health, and the environment
 - d) Prioritising human health over animal health

Solution: c)

The **Union Budget proposed to strengthen One Health surveillance**, linking microbial migration pathways from wildlife to veterinary and human populations.

The World Organization of Animal Health, commonly known as OIE (an abbreviation of its French title), summarises the One Health concept as “human health and animal health are interdependent and bound to the health of the ecosystems in which they exist”.

The philosophy of One Health recognises **inter-connectivity among human health, the health of animals, and the environment**.

14) Consider the following statements regarding Hydrogen technology.

1. Hydrogen is the most abundant element in the universe, and is lighter, energy dense and more efficient than burning petrol.
2. Hydrogen fuel has near zero carbon footprint.
3. Green hydrogen is hydrogen produced by splitting water by electrolysis.
4. Hydrogen fuel is very safe because of very low explosion risk.

Which of the above statements is/are correct?

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

Solution: b)

WHY HYDROGEN?

- India's electricity is heavily coal-dependent. Hydrogen will replace fossil fuels, address pollution and oil-price rise

- It's the most abundant element in the universe, is lighter, energy dense, and

two-three times more efficient than burning petrol

- It will benefit transportation (contributes 1/3rd of India's greenhouse-gas emissions), iron and steel and chemicals sectors

GREY HYDROGEN:

Constitutes India's bulk production. Extracted from hydrocarbons (fossil fuels, natural gas). By-product: CO₂

BLUE HYDROGEN:

Sourced from fossil fuels. Emissions/by-products (CO, CO₂) are captured and stored, so, better than grey hydrogen



GREEN HYDROGEN: Generated from renewable energy (like solar, wind). Electricity splits water into hydrogen and oxygen. By-products: water, water vapour

TYPES OF EVs

HYDROGEN-POWERED VEHICLES SCORE OVER TRADITIONAL ELECTRIC VEHICLES (EVs):

HEVs (HYBRID ELECTRIC VEHICLES): High fuel economy (less fuel use than petrol cars), low tailpipe emission

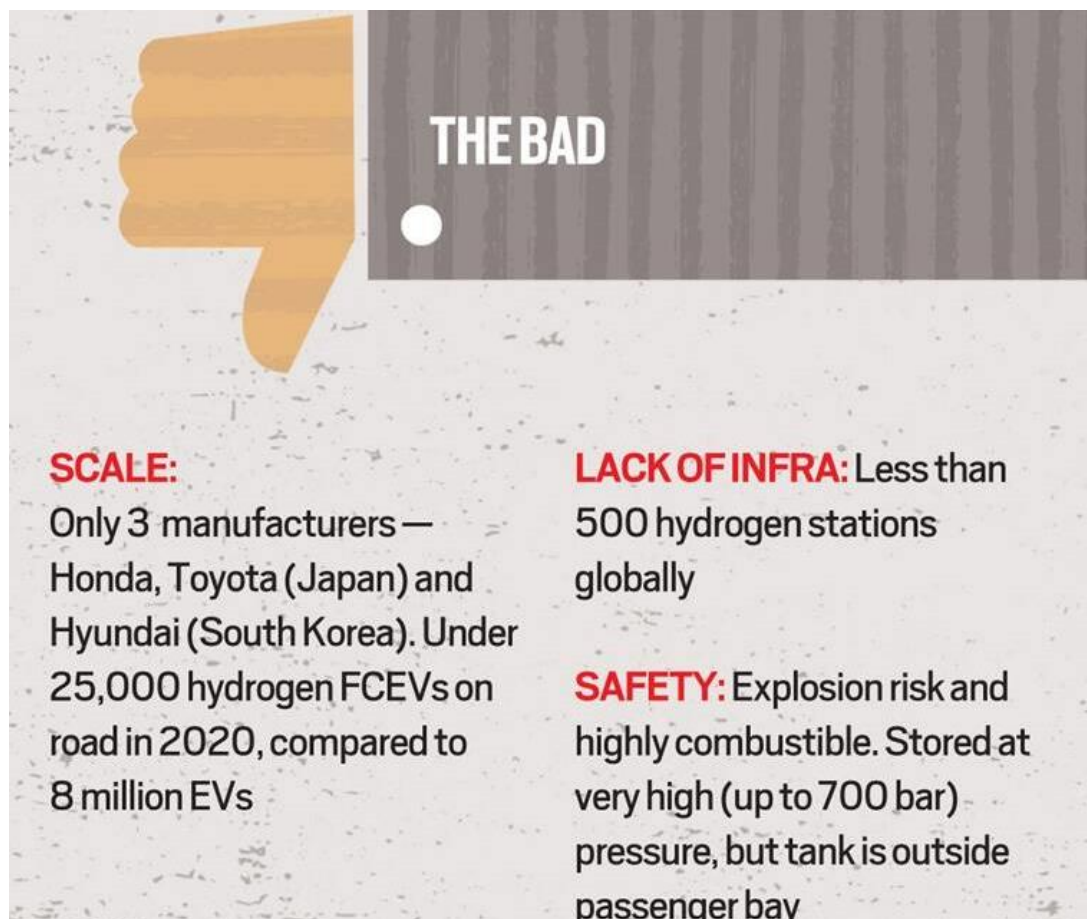
PHEVs (PLUG-IN HYBRID VEHICLES): Batteries + petrol

BEVs (BATTERY-POWERED ELECTRIC VEHICLES): Fully electric, rechargeable batteries, no petrol

FCEVs (FUEL-CELL ELECTRIC VEHICLES): Hydrogen + oxygen (fully electric, but refuel, not recharge like BEVs)

THE GOOD

- Near zero carbon footprint (electricity to extract hydrogen comes from fossil fuels)
- Provides range like a Tesla Model S, about 400 miles or 550 km per charge
- Stored in tanks (like CNG) and integrated into cars' bellies (unlike CNG)
- Lighter than heavy lithium-ion batteries. Better for long-haul trucks, commercial vehicles
- Refuels in 5 minutes



[Source](#)

15) Consider the following pairs:

1. Grey hydrogen: Hydrogen generated from fossil fuels with carbon capture and storage options.
2. Blue hydrogen: Hydrogen not produced from fossil fuels
3. Green hydrogen: Hydrogen generated entirely from renewable power sources

Which of the above pairs are correctly matched?

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

Solution: c)

The sources and processes by which hydrogen is derived, are categorised by colour tabs.

Hydrogen produced from fossil fuels is called grey hydrogen; this constitutes the bulk of the hydrogen produced today.

Hydrogen generated from fossil fuels with carbon capture and storage options is called blue hydrogen;

Hydrogen generated entirely from renewable power sources is called green hydrogen. In the last process, electricity generated from renewable energy is used to split water into hydrogen and oxygen.

[Source](#)

16) Consider the following statements.

1. Hydrogen exists only combined with other elements, and has to be extracted from naturally occurring compounds like water.
2. Hydrogen fuel must be transformed into electricity by a fuel cell before it can be used to power a car or truck.

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 most common element in nature is not found freely. **Hydrogen exists only combined with other elements, and has to be extracted from naturally occurring compounds like water** (which is a combination of two hydrogen atoms and one oxygen atom). Although hydrogen is a clean molecule, the process of extracting it is energy-intensive.

Hydrogen is an energy carrier, not a source of energy. **Hydrogen fuel must be transformed into electricity by a device called a fuel cell stack before it can be used to power a car or truck.** A fuel cell converts chemical energy into electrical energy using oxidising agents through an oxidation-reduction reaction. Fuel cell-based vehicles most commonly combine hydrogen and oxygen to produce electricity to power the electric motor on board. Since fuel cell vehicles use electricity to run, they are considered electric vehicles.

[Source](#)

5. International Relations and Organisations

1) Consider the following statements regarding Arctic Council.

1. Arctic Council is an intergovernmental forum that addresses issues faced by the Arctic governments and the indigenous people of the Arctic.
2. Russia, Canada, United Kingdom and Norway are the members of the Arctic Council.
3. India has the Observer status in Arctic Council.

Which of the above statements is/are correct?

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

Solution: b)

The Arctic Council is a high-level intergovernmental forum that addresses issues faced by the Arctic governments and the indigenous people of the Arctic.

The eight countries with sovereignty over the lands within the Arctic Circle constitute the members of the council: Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and the United States.

Observer status is open to non-Arctic states approved by the Council at the Ministerial Meetings that occur once every two years. Observers have no voting rights in the Council. As of May 2019, thirteen non-Arctic states have Observer status. **India has the Observer status in Arctic Council.**

[Source](#)

- 2) Which of the following country is not a member of Gulf Co-operation Council?
- Saudi Arabia
 - Oman
 - United Arab Emirates
 - Iran

Solution: d)

Gulf Cooperation Council is a regional intergovernmental political and economic union consisting of all Arab states of the Persian Gulf: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates - except Iraq.

- 3) Which of the following countries are the members of South Asian Association for Regional Cooperation (SAARC)?
1. Afghanistan
 2. Bhutan
 3. Myanmar
 4. Bangladesh
 5. Sri Lanka

Select the correct answer code:

- 1, 2, 3, 4
- 1, 2, 4
- 1, 2, 4, 5
- 1, 2, 3, 4, 5

Solution: c)

SAARC comprises of eight Member States: **Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.**

- 4) Consider the following statements regarding Singapore International Arbitration Centre (SIAC).
1. Singapore International Arbitration Centre (SIAC) is a not-for-profit international arbitration organisation which administers arbitrations under United Nations Commission on International Trade Law (UNCITRAL) Arbitration Rules.
 2. Under the rules of SIAC, parties can move SIAC to appoint an emergency arbitrator to get urgent interim relief.
 3. India has the track record of referring minimum number of cases to SIAC in the South-Asian region.

Which of the above statements is/are correct?

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

Solution: a)

Singapore International Arbitration Centre (SIAC) is a not-for-profit international arbitration organisation based in Singapore, which administers arbitrations under its own rules of arbitration and the United Nations Commission on International Trade Law (UNCITRAL) Arbitration Rules.

According to the 2019 annual report of SIAC, **India was the top user of its arbitration seat with 485 cases being referred to SIAC.**

Under the rules of SIAC, **parties can move SIAC to appoint an emergency arbitrator** to get urgent interim relief, even as the process of appointment of the main arbitral tribunal is underway.

Currently under Indian law, **there is no express mechanism for enforcement of the orders of the Emergency Arbitrator.**

But, **the parties voluntarily comply with the Emergency Award.**

However, if the parties don't comply with the order voluntarily, then the party which has won the emergency award, can move the High Court in India under Section 9 of the Arbitration & Conciliation Act, 1996, to get similar reliefs as granted by the Emergency Arbitrator.

[Source](#)

- 5) International Covenant on Civil and Political Rights (ICCPR) does not cover which of these rights?
- Freedom of assembly
 - Right to fair trial
 - Electoral rights
 - Right to livelihood and employment

Solution: d)

The **International Covenant on Civil and Political Rights (ICCPR)** is a multilateral treaty adopted by United Nations General Assembly Resolution 2200A (XXI) on 16 December 1966, and in force from 23 March 1976 in accordance with Article 49 of the covenant.

The covenant commits its parties to respect the **civil and political rights of individuals, including the right to life, freedom of religion, freedom of speech, freedom of assembly, electoral rights and rights to due process and a fair trial.**

The ICCPR is part of the International Bill of Human Rights, along with the International Covenant on Economic, Social and Cultural Rights (ICESCR) and the Universal Declaration of Human Rights (UDHR).

The ICCPR is monitored by the United Nations Human Rights Committee (a separate body to the United Nations Human Rights Council), which reviews regular reports of States parties on how the rights are being implemented.

India is a party to the convention.

- 6) World Sustainable Development Summit (WSDS) is the annual flagship event of
- International Energy Agency (IEA)
 - World Bank
 - The Energy and Resources Institute (TERI)
 - World Economic Forum

Solution: c)

World Sustainable Development Summit:

- It is the annual flagship event of **The Energy and Resources Institute (TERI).**
- It is the sole Summit on global issues taking place in the developing world.
- It provides a platform for global leaders and practitioners to discuss and deliberate over climatic issues of universal importance.
- It strives to provide long-term solutions for the benefit of the global community by assembling the world's most enlightened leaders and thinkers on a single platform.

- 7) Consider the following statements regarding United Nations specialized agencies.
- Specialized Agencies are legally independent international organizations with their own rules, membership, organs and financial resources.
 - None of these agencies existed before the First World War, but some were associated with the League of Nations.

Which of the above statements is/are correct?

- 1 only
- 2 only

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

Solution: a)

Specialized Agencies are legally independent international organizations with their own rules, membership, organs and financial resources, were brought into relationship with the United Nations through negotiated agreements. **Some of the agencies existed before the First World War**, some were associated with the League of Nations, others were created almost simultaneously with the United Nations and yet others were created by the United Nations itself to meet emerging needs.

- 8) Tibet Policy and Support Act, recently seen in news is the policy of
- a) China
 - b) United States of America
 - c) India
 - d) Japan

Solution: b)

The Tibet Policy and Support Act is a federal law that outlines United States policy on Tibet.

The Tibetan Policy and Support Act would make it official United States policy that the succession of Tibetan Buddhist leaders, including the succession of the Dalai Lama, be left solely to Tibetan Buddhists to decide, without interference from the Chinese government.

- 9) Consider the following statements.

1. United Nations Conference on Trade and Development (UNCTAD) is a permanent intergovernmental body that aims to maximize the trade, investment and development opportunities of developing countries and assist them in their efforts to integrate into the world economy on an equitable basis.
2. An 'investment trends monitor' issued by UNCTAD provides the details of the global Foreign Direct Investment (FDI) growth.
3. Only India and China recorded positive FDI growth in 2020.

Which of the above statements is/are correct?

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

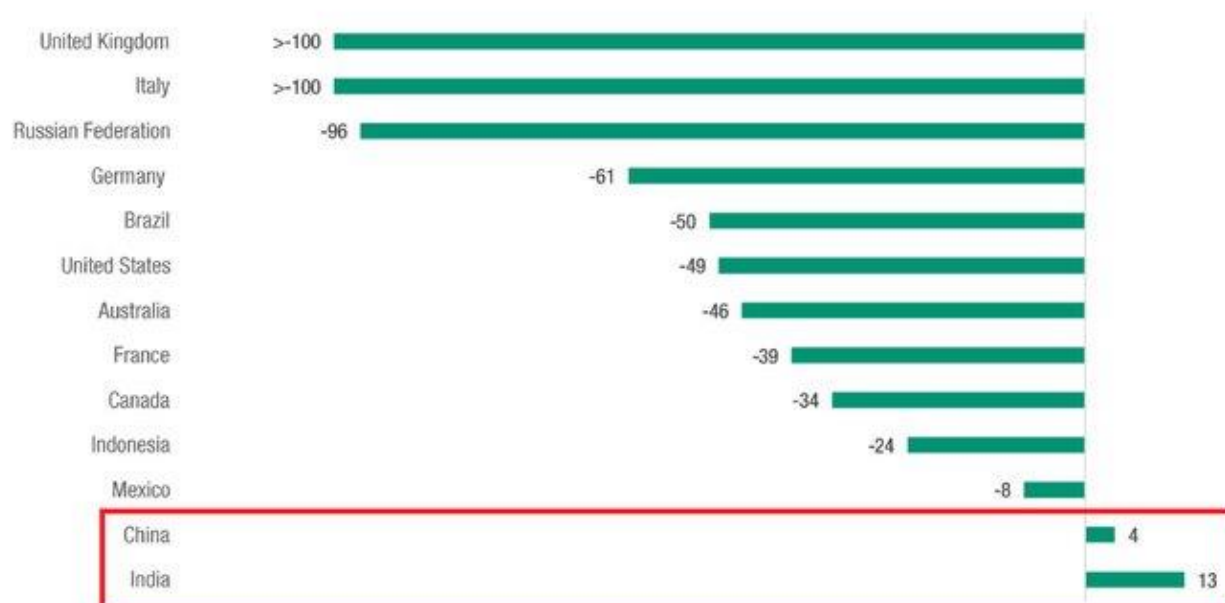
Solution: d)

The United Nations Conference on Trade and Development (UNCTAD) was established in 1964 as a permanent intergovernmental body.

UNCTAD is the part of the United Nations Secretariat dealing with trade, investment, and development issues. The organization's goals are to: "maximize the trade, investment and development opportunities of developing countries and assist them in their efforts to integrate into the world economy on an equitable basis".

Marking a major achievement globally, **India recorded a 13% growth in Foreign Direct Investment (FDI) in 2020** at a time when fund flows declined most strongly in major economies such as the UK, the US and Russia. Amidst global collapse, **China is the only other country that has shown remarkably high FDI growth.**

Figure 3. Changes in 2020 FDI inflows for selected top 2019 recipient economies
(Per cent)



Source: UNCTAD.

[Source](#)

10) Sinjar Mountains, sometimes seen in news lies in

- a) Iraq and Iran
- b) Iraq and Jordan
- c) Iraq and Syria
- d) Syria and Turkey

Solution: c)

Sinjar Mountains are a 100-kilometre-long mountain range that runs east to west, rising above the surrounding alluvial steppe plains in **north-western Iraq**. The western and lower segment of these mountains lies in **Syria**. These mountains are regarded as sacred by the Yazidis.

11) Brent Crude is often used as a benchmark for the prices of crude oils. It is found in parts of the North Sea off the coast of

- a) Finland and Sweden
- b) U.K. and Norway
- c) British Isles island in Ireland
- d) Biscay near France

Solution: b)

Brent blend is the name of one of two internationally-recognized types of crude oil that are used as benchmarks for prices of crude oil. Brent Blend comes from the North Sea and is considered a light, sweet crude oil. Brent blend is more than half of the crude oil traded internationally.

Brent blend is a blend of crude oil extracted from oilfields in the North Sea between the United Kingdom and Norway.

6. Polity

1) Consider the following statements.

1. The Constitution gives the President of India the power to address either House or a joint sitting of the two Houses of Parliament.

2. When the Constitution came into force, the President was required to address each session of Parliament.

3. The 42nd Amendment of the Constitution made that the President shall address both Houses of Parliament only once a year.

Which of the above statements is/are correct?

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

Solution: a)

The Constitution gives the President the power to address either House or a joint sitting of the two Houses of Parliament.

Article 87 provides two special occasions on which the President addresses a joint sitting.

- The first is to address the opening session of a new legislature after a general election.
- The second is to address the first sitting of Parliament each year.

When the Constitution came into force, the President was required to address each session of Parliament. So, during the provisional Parliament in 1950, President Prasad gave an address before every session. **The First Amendment to the Constitution in 1951 changed this position and made the President's address once a year.**

[Source](#)

2) Consider the following statements regarding Public Account of India.

1. Public Account of India accounts for flows for those transactions where the Union government acts as a banker.

2. It includes state provident funds and small savings deposits.

3. Expenditures from Public Account of India require the approval of the parliament.

Which of the above statements is/are correct?

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

Solution: b)

Public Account of India accounts for flows for those transactions where the government is merely acting as a banker. This fund was constituted under Article 266 (2) of the Constitution.

Examples of those are **provident funds, small savings** and so on. These funds do not belong to the government. They have to be paid back at some time to their rightful owners. Because of this nature of the fund, **expenditures from it are not required to be approved by the Parliament.**

3) Consider the following statements regarding National Commission for Backward Classes (NCBC).

1. National Commission for Backward Classes is a non-constitutional body under the Ministry of Social Justice and Empowerment.

2. The commission was the outcome of Indra Sawhney & Ors. Vs. Union of India.

3. The commission considers inclusions in and exclusions from the lists of communities notified as backward for the purpose of job reservations.
4. The commission have the same powers as a Civil Court.

Which of the above statements is/are correct?

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

Solution: b)

National Commission for Backward Classes is a constitutional body (123rd constitutional amendment bill 2017 and 102nd amendment 2018 in constitution to make it constitutional body) (Article 338B of the Indian Constitution) **under Ministry of Social Justice and Empowerment** established on 14 August 1993. It was constituted pursuant to the provisions of the National Commission for Backward Classes Act, 1993.

The commission was the outcome of Indra Sawhney & Ors. Vs. Union of India.

The commission considers inclusions in and exclusions from the lists of communities notified as backward for the purpose of job reservations and tenders the needful advice to the Central Government as per Section 9(1) of the NCBC Act, 1993. Similarly, the states have also constituted commissions for BC's.

The National Commission for Backward Classes, National Commission for Scheduled Castes as well as National Commission for Scheduled Tribes have the same **powers as a Civil Court.**

[Source](#)

[Source](#)

- 4) Puttaswamy judgement is a landmark judgment of the Supreme Court of India that mainly deals with
- a) Right to life
 - b) Uniform Civil Code
 - c) Right to privacy
 - d) Constitutionality of reservations

Solution: c)

Justice K. S. Puttaswamy (Retd.) and Anr. vs Union Of India And Ors is a landmark judgment of the Supreme Court of India, which holds that the **right to privacy** is protected as a fundamental constitutional right under Articles 14, 19 and 21 of the Constitution of India.

- 5) Consider the following statements.

1. According to the Indian Constitution, all lands, minerals and other things of value underlying the ocean within the territorial waters or the continental shelf of India vest in the Indian Union.
2. India has sovereign rights over the resources in its exclusive economic zone.

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)

Under article 297 of the Constitution, all lands, minerals and other things of value underlying the ocean within the territorial waters or the continental shelf of India vest in the Union to be held for the purposes of the Union. India has sovereign rights over the resources of the exclusive economic zone and is entitled to exercise jurisdiction in respect of certain other matters.

- 6) Article 239A of the Constitution deals with
- Special provisions with respect to Delhi
 - High Courts for Union territories
 - Power of the Parliament to create a legislature for Union Territories.
 - Power of President to make regulations for Union territories

Solution: c)

In 1962, after the signing of a treaty with France, the territories of Pondicherry, Karaikal, Mahe, and Yanam became part of the Indian Union. In the same year, then Home Minister Lal Bahadur Shastri introduced a Constitution Amendment Bill in Parliament, which grouped these territories into the Union Territory of Pondicherry, and also inserted a new Article 239A into the Constitution. The new article gave **Parliament power to create a legislature for Union Territories**.

[Source](#)

- 7) Consider the following statements regarding Puducherry Legislative Assembly.
- The Puducherry Legislative Assembly is the unicameral legislature.
 - The members of the legislative assembly are both elected directly by the people on the basis of universal adult franchise and nominated by the Government of India.
- Which of the above statements is/are correct?

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

Solution: c)

Exercising the power given by the Constitution, the central government made The Government of Union Territories Act, 1963. This law specifies that the Puducherry legislature will have 30 elected MLAs, and a maximum of three MLAs nominated by the central government. The law also specifies that the nominated persons should not be government employees.

[Source](#)

- 8) Consider the following statements.
- During the election period, the Election Commission of India (ECI) can order the government to observe election related guidelines.
 - ECI can send Border Security Force (BSF) and Indo-Tibetan Border Police (ITBP) to states ahead of the Assembly elections to maintain law and order during the election campaign.
 - When on election duty, government officers work under the control of the ECI and not the government.

Which of the above statements is/are correct?

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

Solution: d)

Very few election commissions in the world have such wide-ranging powers as the Election Commission of India.

- EC takes decisions on every aspect of conduct and control of elections from the announcement of elections to the declaration of results.

- It implements the Code of Conduct and punishes any candidate or party that violates it.
- **During the election period, the EC can order the government to follow some guidelines**, to prevent use and misuse of governmental power to enhance its chances to win elections, or to transfer some government officials.

Companies of central security forces will begin arriving in West Bengal this week, ahead of the Assembly elections, dates of which are yet to be announced. By February 25, at least 125 companies will arrive in the state to maintain law and order during the election campaign.

According to Election Commission (EC) officials, there will be 60 companies of the Central Reserve Police Force (CRPF), 30 companies of the Sashastra Seema Bal (SSB), 25 companies of the Border Security Force (BSF) and five companies each of the Central Industrial Security Force (CISF) and the Indo-Tibetan Border Police (ITBP).

[Source](#)

7. History, Art and Culture

- 1) Jaapi is a traditional folk culture of
- a) Jharkhand
 - b) Assam
 - c) Kerala
 - d) Tamil Nadu

Solution: b)

Japi is a traditional symbol of Assamese folk culture. In the earlier days when umbrellas were unheard of, farmers used Japi as a headgear to protect them for the sun and rain. This made Japi an essential gear for the farmers while working in the fields.



- 2) The Pagri Sambhal Jatta Movement, during the British period is related to
- a) Socio-religious reform movement
 - b) Farmers' agitation against British laws.
 - c) Restrictions on sell of forest produce by the British.
 - d) None of the above

Solution: b)

Pagri Sambhaal Jatta was a successful farm agitation that forced the British government to repeal three laws related to agriculture back in 1907. Bhagat Singh's uncle Ajit Singh was the force behind this agitation, and he wanted to channel people's anger over the farm laws to topple the colonial government.

8. States

1) The states which is/are the major producer(s) of pulses in India include

1. Kerala
2. Uttarakhand
3. Madhya Pradesh
4. Manipur

Select the correct answer code

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

Solution: b)

Hardly any pulses are grown in Uttarakhand, Manipur and other NE states (except Assam), Kerala, HP and J&K. MP is leading producer of pulses along with Maharashtra, UP, Rajasthan and Karnataka. In all other states pulse production is comparatively lower.

2) Consider the following statements.

1. India successfully achieved the Millennium Development Goals on good health and well-being.
2. Government of India cannot hold State Governments responsible and accountable for their poor performance in achieving Sustainable Development Goals (SDGs).
3. In terms of fertility rate Kerala and Tamil Nadu have achieved the Replacement level fertility.

Which of the above statements is/are correct?

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

Solution: c)

With the numbers given in the below chart, it is doubtful whether India will be able to achieve Goal 3 (good health and well-being) of the Sustainable Development Goals (SDGs) set by the United Nations General Assembly in 2015. **India failed to achieve the earlier Millennium Development Goals because of the poor performance of the northern States.** It is surprising that the **Government of India does not hold them responsible and accountable for poor performance** but is satisfied with the average.

Since health is a State subject, the primary onus lies with the State governments. Each State government must focus on public health and aim to improve the health indicators mentioned above.

The northern States are performing very poorly in these vital health parameters.

Total Fertility Rate, is very high in Bihar (3.2) against the stabilisation rate of 2.1. **Tamil Nadu and Kerala have done so well** that their population will decline over the years.

Some key health parameters in select States

State	Infant Mortality Rate	Under Five Mortality	Maternal Mortality Ratio	Total Fertility Rate	% deliveries by untrained personnel
Bihar	32	37	149	3.2	19.0
M.P.	48	56	173	2.7	7.2
Rajasthan	37	40	164	2.5	1.6
U.P.	43	47	197	2.9	14.0
T.N.	15	17	63	1.6	0.2
Kerala	7	10	42	1.7	0.1
India	32	36	113	2.2	7.8

SOURCE: SRS DATA FOR 2018

[Source](#)

9. Reports and Indices

- 1) Global Hunger Index (GHI) scores are calculated each year to assess progress and setbacks in combating hunger. The GHI scores are based on a formula that captures which of these dimensions of hunger
1. Undernourishment
 2. Child wasting
 3. Child stunting
 4. Child mortality

Select the correct answer code:

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

Solution: b)

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.

The GHI scores are calculated each year to assess progress and setbacks in combating hunger. It is calculated on the basis of four indicators — **undernourishment**, **child wasting**, the share of children under the age of five who are wasted (that is, who have low weight for their height, reflecting acute undernutrition); **child stunting**, children under the age of five who have low height for their age, reflecting chronic undernutrition; and **child mortality**, the mortality rate of children under the age of five.

- 2) The Global Gender Gap Index, as part of World Economic Forum's (WEF) Global Gender Gap Report, measures progress towards parity between men and women in which of these indicators?
1. Educational attainment
 2. Health and survival

3. Inter-generational distribution

4. Political empowerment

Select the correct answer code:

a) 1, 2

b) 1, 2, 4

c) 3, 4

d) 1, 2, 3, 4

Solution: b)

Since 2006 the Global Gender Gap Index has been measuring the extent of gender-based gaps among four key dimensions (**Economic Participation and Opportunity, Educational Attainment, Health and Survival, and Political Empowerment**) and tracking progress towards closing these gaps over time.

10. Maps / Places

1) The countries bordering Myanmar are

1. Thailand

2. Malaysia

3. Laos

4. Bangladesh

5. Vietnam

Select the correct answer code:

a) 1, 3, 4

b) 1, 2, 3, 4

c) 1, 3, 4, 5

d) 2, 3, 4, 5

Solution: a)

Myanmar is bordered by **Bangladesh** and India to its northwest, China to its northeast, **Laos** and **Thailand** to its east and southeast, and the Andaman Sea and the Bay of Bengal to its south and southwest.



2) The correct order of these capitals from West Asia from West to East would be:

1. Damascus (Syria)

2. Ankara (Turkey)

3. Baghdad (Iraq)

4. Baku (Azerbaijan)

Select the correct answer using the codes below.

- a) 2134
- b) 1243
- c) 2143
- d) 1234

Solution: a)



3) Nations sharing a coastline with the Red Sea include

- 1. Jordan
- 2. Sudan
- 3. Yemen
- 4. Oman

Which of the above is/are correct?

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

Solution: b)

Oman is towards the side of Persian Gulf and Jordan is landlocked.



4) Arrange the following locations from south to north.

1. Palk Bay
2. Palk Strait
3. Gulf of Mannar
4. Adam's Bridge

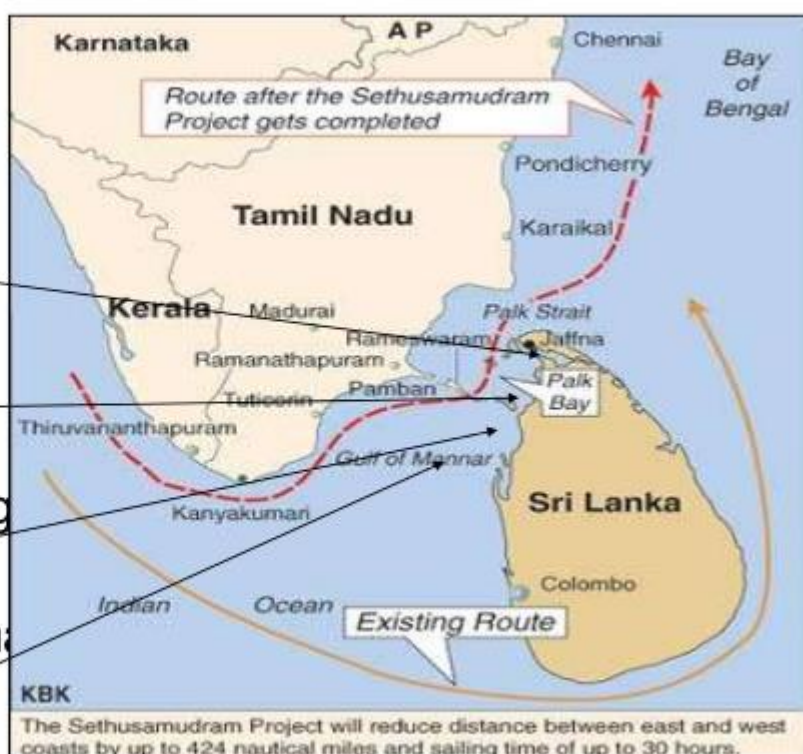
Select the correct answer code:

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

Solution: b)

GEOGRAPHICAL LOCATION

- Palk Strait
- Palk Bay
- Adam's Bridge
- Gulf of Mannar



5) The region that is closest to the shores of both the Mediterranean Sea and Black Sea is

- a) Rostov
- b) Athens
- c) Istanbul
- d) Beirut

Solution: c)



- 6) Hagia Sophia and Chora, sometimes seen in news is located in
- a) Afghanistan
 - b) Saudi Arabia
 - c) Turkey
 - d) Iran

Solution: c)

After Hagia Sophia, Turkey's historic Chora Church also switched to mosque

[Source](#)

- 7) Consider the following statements:

1. Nepal shares boundary with five Indian states.
2. The Sharda River demarcates Nepal's eastern border with India.

Which of the above statements is/are correct?

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

Solution: a)

The five Indian states that share a land border with Nepal are Uttarakhand, Uttar Pradesh, Bihar, West Bengal, and Sikkim.

The Sharda River demarcates Nepal's western border with India.

8) Arrange the following ports from North to South.

1. Kyaukpyu Port
2. Gwadar Port
3. Sabang Port

Select the correct answer code:

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

Solution: c)

Gwadar Port is the deepest sea port of the world, situated on the Arabian Sea at Gwadar in Balochistan province of Pakistan.

Kyaukpyu is a major town in Rakhine State, in western Myanmar.

India is developing its maiden deep-sea port in Indonesia's Sabang close to Andaman and Nicobar Islands.

9) Which of the following regions are associated with Line of Actual Control (LAC) dispute between India and China?

1. Galwan Valley
2. Gogra heights
3. Hot Springs
4. Depsang Plains
5. Pangong Tso lake

Select the correct answer code:

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

Solution: d)

[Source](#)

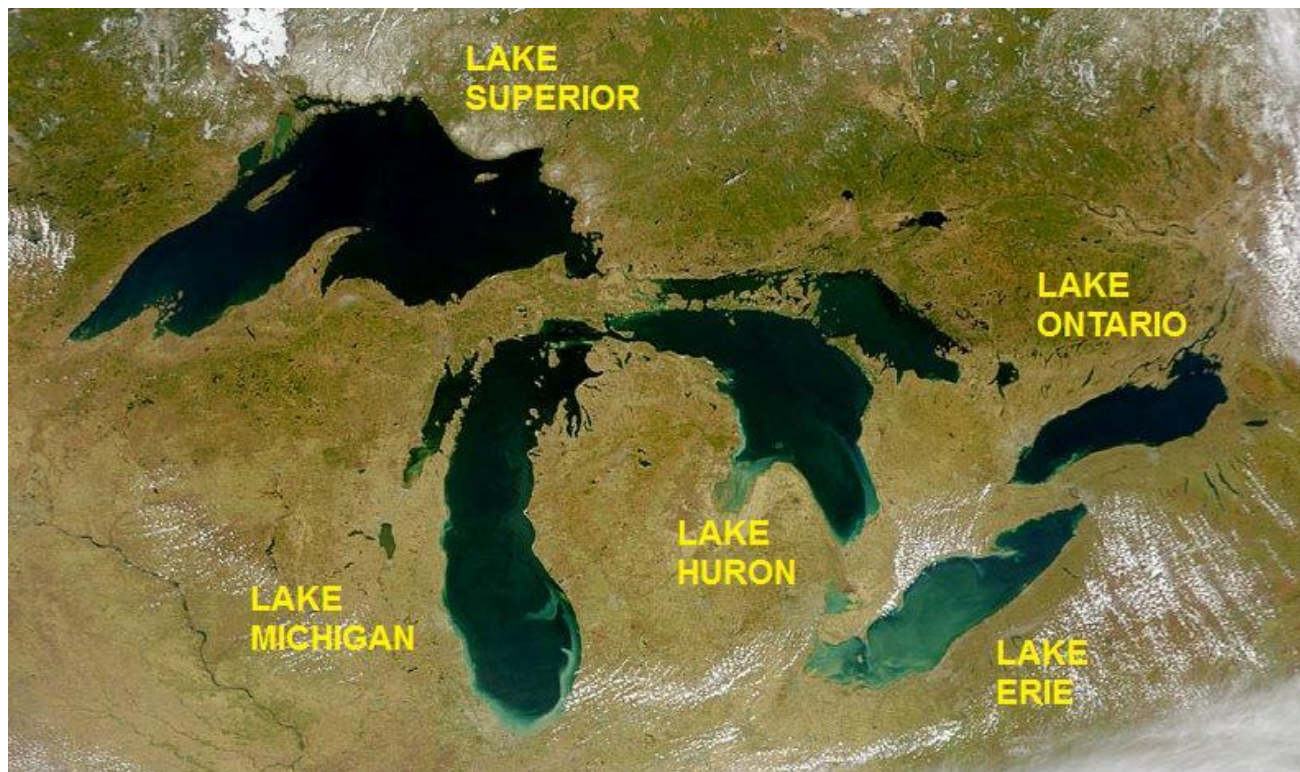
10) Arrange the following Great Lakes of North America from West to East

1. Erie
2. Michigan
3. Superior
4. Huron
5. Ontario

Select the correct answer code:

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

Solution: b)



11) Borneo Island is politically divided among

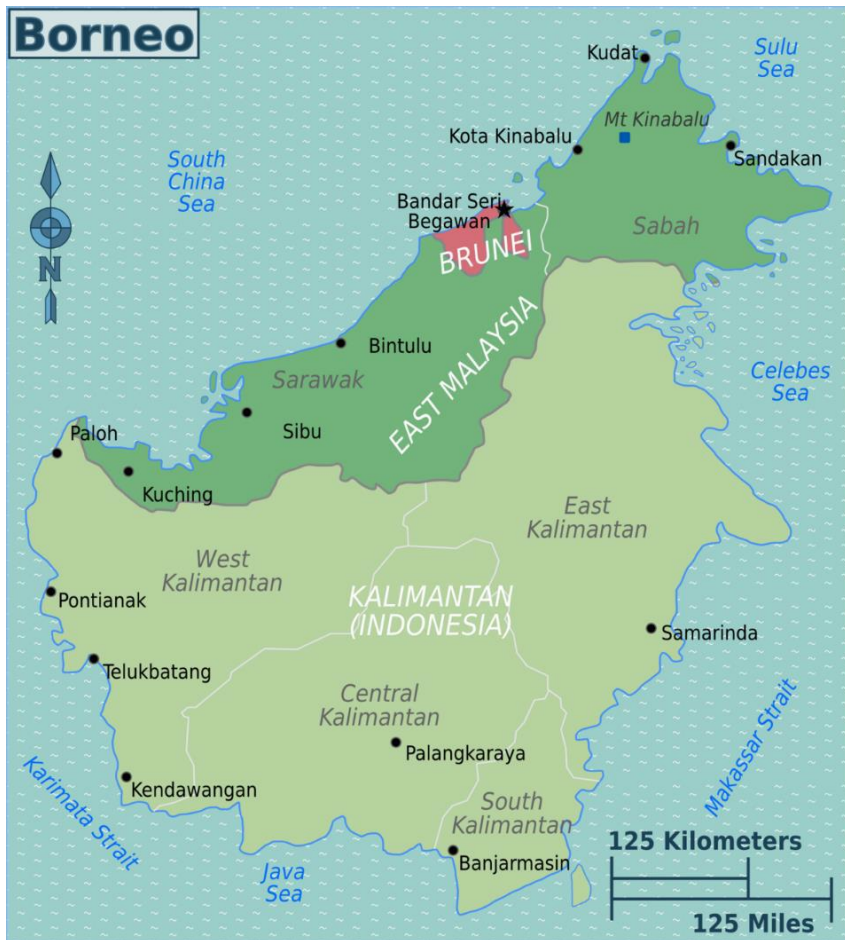
1. Malaysia
2. Brunei
3. Indonesia

Select the correct answer code:

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

Solution: d)

Borneo Island is the third-largest island in the world and the largest in Asia. The island is politically divided among three countries: **Malaysia and Brunei in the north, and Indonesia to the south.**



12) Katchatheevu was a disputed territory between

- a) India and Nepal
- b) India and Sri Lanka
- c) India and Maldives
- d) India and Bangladesh

Solution: b)

Katchatheevu is a 285-acre uninhabited island administered by Sri Lanka and was a disputed territory claimed by India until 1976.

In 1974, then Prime Minister of India, Indira Gandhi ceded Katchatheevu to Sri Lanka under the "Indo-Sri Lankan Maritime agreement" aimed at resolving the maritime boundaries in the Palk Strait. Another agreement signed in 1976 restricted both the countries' fishermen from fishing in the other's exclusive economic zones.

[Source](#)

13) Consider the following statements regarding Sinai Peninsula.

- 1. It is located in Africa.
- 2. It is situated between the Mediterranean Sea to the north and the Red Sea to the south.
- 3. It acts as a land bridge between Asia and Africa.

Which of the above statements is/are correct?

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

Solution: c)

The Sinai Peninsula is a peninsula in Egypt, and the only part of the country located in Asia. It is situated between the Mediterranean Sea to the north and the Red Sea to the south, and is a land bridge between Asia and Africa.



14) Consider the following statements.

1. Adam's Bridge separates Palk Bay from the Gulf of Mannar.
2. The island of Rameswaram is linked to the Indian mainland by the Pamban Bridge.
3. No Indian river flows into Palk strait.

Select the correct answer code:

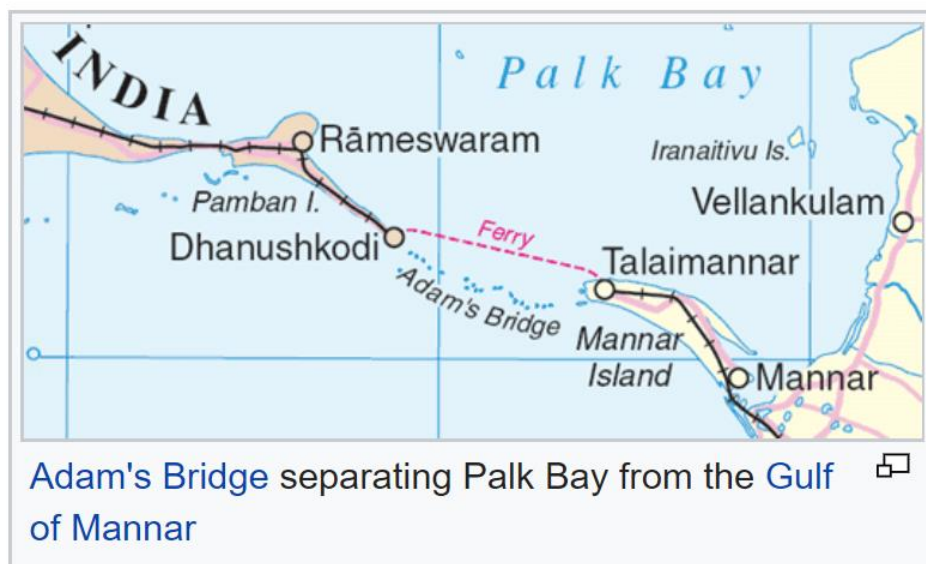
- a) 1 only
- b) 2, 3
- c) 1, 2
- d) 1, 2, 3

Solution: c)

Palk strait connects the Bay of Bengal in the northeast with Palk Bay in the southwest. The strait is 53 to 82 kilometres wide. **Several rivers flow into it, including the Vaigai River of Tamil Nadu.**

Palk Bay is studded at its southern end with a chain of low islands and reef shoals that are collectively called Adam's Bridge, it has historically been known in Hindu Mythology as "Ram Setu" i.e.

This chain extends between Dhanushkodi on Pamban Island (also known as Rameswaram Island) in Tamil Nadu and Mannar Island in Sri Lanka. The island of Rameswaram is linked to the Indian mainland by the Pamban Bridge.



11. Miscellaneous

1) Consider the following statements.

1. Among the 75 listed PVTG's the highest number are found in Andaman and Nicobar Islands.
2. Jarawas are the tribal people dominant in all the parts of Andaman and Nicobar Islands.

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)

Among the 75 listed PVTG's the **highest number are found in Odisha.**

The **Jarawas** are an indigenous people of the Andaman Islands in India. They live in **parts of South Andaman and Middle Andaman Islands.**