



INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

# INSTA CURRENT AFFAIRS QUIZ

## MARCH 2021



**INSIGHTSIAS**  
SIMPLIFYING IAS EXAM PREPARATION

We Don't Just Guide, We 'EQUIP' You to Succeed

# 160+ RANKS IN UPSC CSE 2019

5 RANKS IN TOP 10 | 26 RANKS IN TOP 100 | 25 RANKS FROM KARNATAKA



Jatin Kishore

2<sup>nd</sup> Rank



Himanshu J.

4<sup>th</sup> Rank



Jeydev C. S.

5<sup>th</sup> Rank



Abhishek S.

8<sup>th</sup> Rank



Sanjita M.

10<sup>th</sup> Rank

## YOU CAN BE NEXT ON THE LIST!

*introducing*

**INSTACLASSES - 2022 FOR UPSC IAS**  
(Prelims + Mains + Interview)

**[OGP] ONLINE & OFFLINE**  
GUIDANCE PROGRAM FOR FRESHERS

**CLASSES START FROM**  
**12<sup>TH</sup> APRIL 2021**

SUBSCRIBE



*Early bird offer :*  
*15% discount till*  
*27 MAR 2021*

### FEATURES OF THE OGP PROGRAM

- EQUIP Strategy for your success: Explanation + Quest + Understand + Interact + Perform
- Integrated Course for Prelims + Mains + Interview
- Comprehensive coverage of syllabus including Current Affairs & CSAT
- Ethics & Essay Integrated in the timetable
- Prelims & Mains Test Series with detailed analytics, evaluation and feedback
- Mentorship – Personal guidance to keep track of your progress
- Live & Recorded Classes
- Success & Mindset Coaching
- Special classes by Guest faculties

**ADMISSIONS OPEN**



**+91 74831 63074**  
**+91 93808 63034**



**support@insightsias.com**  
**www.insightsonindia.com**

## Table of Contents

1. ECONOMY .....	3
2. ECOLOGY AND ENVIRONMENT .....	23
3. GOVERNMENT SCHEMES AND PROGRAMMES .....	37
4. SCIENCE AND TECHNOLOGY.....	42
5. INTERNATIONAL RELATIONS AND ORGANISATIONS.....	47
6. POLITY .....	51
7. HISTORY, ART AND CULTURE.....	56
8. DEFENCE AND SECURITY .....	57
9. REPORTS AND INDICES.....	58
10. MAPS / PLACES.....	59

## 1. Economy

- 1) Consider the following statements regarding Gross value added (GVA) and Gross domestic product (GDP).
1. Gross value added is a measure of total output and income in the economy.
  2. GVA is sector specific while GDP is calculated by summation of GVA of all sectors of economy with taxes added and subsidies are deducted.
  3. While GVA gives a picture of the state of economic activity from the consumers' side or demand perspective, the GDP gives the picture from the producers' side or supply side.

Which of the above statements is/are correct?

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

Solution: a)

### What is gross value added?

Put simply, it is a **measure of total output and income in the economy**. It provides the rupee value for the amount of goods and services produced in an economy after deducting the cost of inputs and raw materials that have gone into the production of those goods and services. It also gives sector-specific picture like what is the growth in an area, industry or sector of an economy.

**GVA is sector specific while GDP is calculated by summation of GVA of all sectors of economy with taxes added and subsidies are deducted.**

While GVA gives a picture of the state of economic activity from the producers' side or supply side, the GDP gives the picture from the consumers' side or demand perspective. **Both measures need not match because of the difference in treatment of net taxes.**

A sector-wise breakdown provided by the GVA measure can better help the policymakers to decide which sectors need incentives/stimulus or vice versa.

### Source

- 2) Which of the following statements best describes 'fiscal consolidation'?
- a) Scheduled banks action plan to recover the loans from non-performing assets.
  - b) Government agenda to reform loan disbursal mechanism of scheduled banks.
  - c) Policies undertaken by Governments to reduce their deficits and accumulation of debt stock.
  - d) Strategy of the government to disinvest public sector enterprises to meet deficit.

Solution: c)

**Fiscal Consolidation refers to the policies undertaken by Governments (national and sub-national levels) to reduce their deficits and accumulation of debt stock.**

FISCAL CONSOLIDATION is a process where government's FISCAL health is getting improved and is indicated by reduced FISCAL deficit. Improved tax revenue realization and better aligned expenditure are the components of FISCAL CONSOLIDATION as the FISCAL deficit reaches at a manageable level.

- 3) Consider the following statements.
1. Between 2015 and 2019, India's trade with USA has increased continuously.
  2. Between 2015 and 2019, India's trade with China has reduced continuously.
  3. In the year 2020, India's trade with China was higher than India's trade with USA.

Which of the above statements is/are correct?

- a) 1 only

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

Solution: c)

Trade between India and China from January to December 2020 stood at \$77.67 billion. Though lower than the \$85.47 billion traded between the countries in the 2019 calendar year, this figure was still higher than the \$75.95 billion traded between India and the US last year.

INDIA'S TRADE WITH US AND CHINA IN THE LAST FIVE YEARS				
	USA		CHINA	
	CALENDAR YEAR	FINANCIAL YEAR	CALENDAR YEAR	FINANCIAL YEAR
2015	\$ 61.60	\$ 62.12	\$ 70.80	\$ 70.72
2016	\$ 64.12	\$ 64.52	\$ 69.61	\$ 71.45
2017	\$ 70.76	\$ 76.38	\$ 84.70	\$ 89.71
2018	\$ 85.59	\$ 87.96	\$ 90.35	\$ 87.07
2019	\$ 90.10	\$ 88.91	\$ 85.47	\$ 81.87
2020	\$ 75.95	\$ 55.01*	\$ 77.67	\$ 60.63*

Source: Ministry of Commerce and Industry (All figures in billion dollars) \*(Apr-Dec)

[Source](#)

- 4) Bond yield is the return an investor gets on that bond or on a particular government security. Which of the following factors affect the bond yield in India?
1. Monetary policy of the Reserve Bank of India
  2. Fiscal position of the government
  3. Global markets
  4. Inflation in the economy

Select the correct answer code:

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

Solution: d)

Bond yield is the return an investor gets on that bond or on a particular government security. The major factors affecting the yield is the monetary policy of the Reserve Bank of India, especially the course of interest rates, the fiscal position of the government and its borrowing programme, global markets, economy, and inflation.

[Source](#)

- 5) Consider the following statements fuel prices in India.
1. Taxes imposed by the Centre and states are a significant contributor to the price of petrol and diesel that consumers pay in India.
  2. The base price of the fuel is added with excise and cess levied by the Centre, VAT imposed by the states, and commission to the dealer.



3. The base price of the fuel includes only the cost of refinery processing and margins.

4. VAT on the fuel is imposed uniformly across all the states.

Which of the above statements is/are correct?

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

Solution: c)

Taxes imposed by the Centre and states are a significant contributor to the price of petrol and diesel that consumers pay. To the **base price of the fuel (which includes the cost of refinery processing and margins, and oil marketing company margins and cost of freight etc)** is added excise and cess levied by the Centre, VAT imposed by the states, and commission to the dealer.

**VAT varies from state to state**, which accounts for the fact that fuel is more expensive in some states than in others. Rajasthan, Madhya Pradesh, and Andhra Pradesh impose the heaviest VAT burdens among all states in the country.

[Source](#)

6) Consider the following statements regarding India's tax system.

1. In the last 10 years, India's Indirect tax-to-GDP ratio is lower than direct tax-to-GDP.

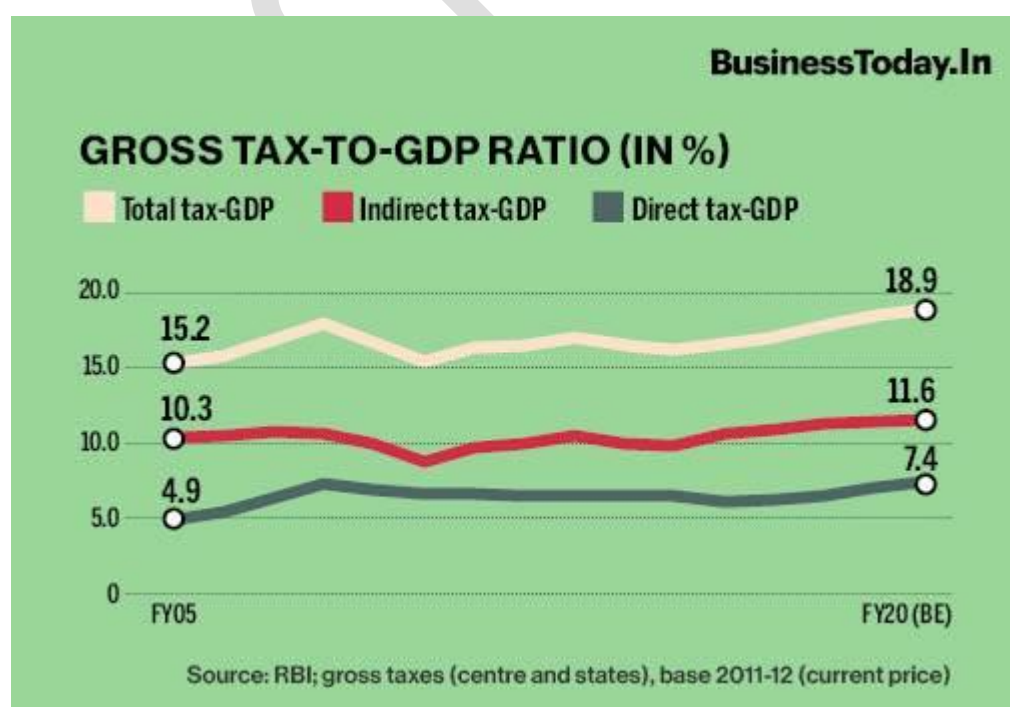
2. The average share of direct tax in OECD countries is greater than that in India.

Which of the above statements is/are correct?

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

Solution: b)

**India's tax system is regressive with heavy dependence on indirect tax.** This would be clear by mapping the **gross tax revenue** (of both centre and states)-as reproduced below. **Indirect-tax-to-GDP ratio remains consistently higher than that of direct tax-to-GDP** (2011-12 series, current prices).



In the OECD countries, the average share of direct tax is about two-third of the total tax, while it is a little over one-third in India.

7) Consider the following statements.

1. Interest rate growth rate differential (IRGD) is a key indicator of an economy's long-run debt sustainability.
2. When the cost of raising debt is higher than the gross domestic product (GDP) growth rate, then public debt comes with low fiscal costs.

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)

A key indicator of an economy's long-run debt sustainability is the differential between interest paid on government debt and the economy's nominal growth rate. When the cost of raising debt is lower than the gross domestic product (GDP) growth rate, public debt comes with low fiscal costs. In such a situation, the debt-to-GDP ratio of the economy declines as debts are rolled over.

[Source](#)

8) Consider the following statements.

1. Printing more money will always lead to Inflation.
2. Evidence shows that, in India, higher GDP growth causes the ratio of debt-to-GDP to decline.

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)

**Printing more money does not necessarily lead to inflation** and a debasement of the currency. In fact, if the increased money supply creates a disproportionate increase in output because the money is invested to finance investment projects with positive net present value (where such value incorporates all the societal value generated by the investment), the increased money supply is beneficial to the citizens.

Evidence over the last two-and-a-half decades demonstrates clearly that **in India, higher GDP growth causes the ratio of debt-to-GDP to decline but not vice-versa.**

Source: Economic Survey 2020-21 Vol-1

9) Stressed Assets is a powerful indicator of the health of the banking system. It includes

1. Non-performing Assets
2. Restructured Loans
3. Written off Assets

Select the correct answer code:

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

Solution: d)

The most important scale of asset quality is Non-Performing Assets (NPA). But NPA alone doesn't tell the whole story of bad asset quality of loans given by banks. Hence a new classification is made in the form of stressed assets that comprises restructured loans and written off assets besides NPAs.

Restructured asset or loan are that assets which got an extended repayment period, reduced interest rate, converting a part of the loan into equity, providing additional financing, or some combination of these measures.

Written off assets are those the bank or lender doesn't count the money borrower owes to it. The financial statement of the bank will indicate that the written off loans are compensated through some other way.

- 10) Washington Consensus, sometimes seen in news refers to
- Regulations over Foreign direct investment (FDI)
  - Trade balancing Requirements of developing countries
  - Free-market economic ideas
  - None of the above

Solution: c)

**The Washington Consensus refers to a set of free-market economic policies** supported by prominent financial institutions such as the International Monetary Fund, the World Bank, and the U.S. Treasury. A British economist named John Williamson coined the term Washington Consensus in 1989.

The ideas were intended to help developing countries that faced economic crises. In summary, The Washington Consensus recommended structural reforms that increased the role of market forces in exchange for immediate financial help. Some examples include free-floating exchange rates and free trade.

- 11) Consider the following statements.
- Counter-cyclical fiscal policy becomes critical during an economic crisis.
  - Counter-cyclical fiscal policy is the one wherein fiscal policy reinforces the business cycle by being expansionary (increase spending/reduce taxes) during good times and contractionary (reduce spending/increase taxes) during recessions.
  - Pro-cyclical fiscal policy stabilizes the business cycle by being contractionary in good times and expansionary during recessions.
- Which of the above statements is/are correct?
- 1 only
  - 1, 3
  - 1, 2
  - 1, 2, 3

Solution: a)

While counter-cyclical fiscal policy is necessary to smooth out economic cycles, it becomes critical during an economic crisis.

#### **Relevance of Counter-cyclical Fiscal Policy:**

Indian Kings used to build palaces during famines and droughts to provide employment and improve the economic fortunes of the private sector. Economic theory, in effect, makes the same recommendation: in a recessionary year, Government must spend more than during expansionary times. Such **counter-cyclical fiscal policy stabilizes the business cycle by being contractionary (reduce spending/increase taxes) in good times and expansionary (increase spending/reduce taxes) in bad times. On the other hand, a pro-cyclical fiscal policy is the one wherein fiscal policy reinforces the business cycle by being expansionary during good times and contractionary during recessions.**



Source: Economic Survey 2020-21 Vol-1

12) In budget documents, the term 'fiscal prudence' is often mentioned. What does it imply?

1. Not taking any new government initiative to lower government costs
2. Harmonization of monetary and fiscal targets
3. Reducing debt to GDP ratio of the country

Select the correct answer code:

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

Solution: d)

**In simple words, fiscal prudence is Spending within budget.**

For any economy to mature, fiscal prudence is critical. If the government continues to spend way more than its revenues, it will either have to print more currency or borrow from the market to meet the shortfall. Printing currency will fuel inflation and, at times, hyper-inflation.

In a bid to avoid these scenarios and mandate fiscal prudence, the Government of India passed the Fiscal Responsibility and Budget Management (FRBM) Act in 2003. Its objective was to institutionalise fiscal prudence and reduce the country's fiscal deficit in such a manner that it gradually moves towards balancing the Budget.

13) In India, deficit financing is usually resorted in order to

1. Finance the revenue deficit component
2. Undertake developmental expenditure
3. Bridge the short-term Current Account Deficit (CAD)

Select the correct answer code:

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

Solution: a)

In India, revenue deficit is one of the major reasons for a large fiscal deficit. This means that the government cannot finance its revenue operations by the resources it generates.

**Undertake developmental expenditure:** This is done because the internal resources of the government are not adequate to undertake development expenditure. It must borrow money from the market.

**CAD is financed by external flows.** If government borrows from outside it would increase our external capital deficit, but not affect the short-term CAD.

14) The FRBM Act contain an 'escape clause' under which Centre can exceed the annual fiscal deficit target on which of the following grounds?

1. National security
2. National calamity
3. Collapse of agriculture
4. Decline in real output growth of a quarter by at least three percentage points below the average of the previous four quarters.

Select the correct answer code:

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

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

Solution: c)

How does a relaxation of the FRBM work?

The law does contain what is commonly referred to as an 'escape clause'. Under Section 4(2) of the Act, the Centre can exceed the annual fiscal deficit target citing grounds that include **national security, war, national calamity, collapse of agriculture, structural reforms and decline in real output growth of a quarter by at least three percentage points below the average of the previous four quarters.**

15) Consider the following statements regarding India's public debt-to-GDP.

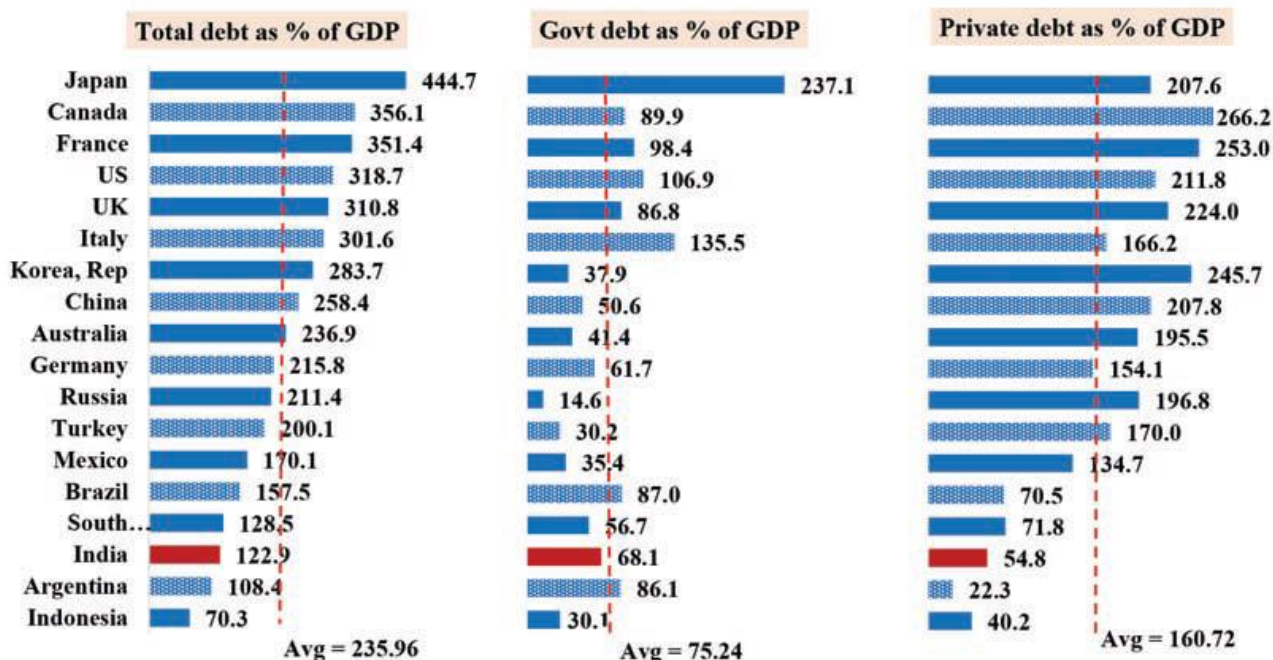
1. India's overall debt levels as a per cent of GDP is the lowest amongst the BRICS nations.
2. India's public debt and overall debt level has declined since 2003.

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)

India's public debt-to- GDP has been significantly low compared to high global debt levels. A cross-country comparison of debt levels points out that for India, the government debt level as a proportion of GDP is equal to the median in the group of G-20 OECD countries and in the group of BRICS nations. India's overall debt levels as a per cent of GDP are the lowest amongst the group of G-20 OECD countries and also among the group of BRICS nations. Moreover, **public debt and overall debt level for India has declined since 2003** and has been stable since 2011.



Source: Economic Survey 2020-21 Vol-1

16) Consider the following statements.

1. In India, of the total public debt, more than 50 percent is held by the Centre.
2. At present, the Government's debt portfolio is characterized by very high foreign exchange risk.
3. Floating rate debt of Central Government is less than 5 per cent of public debt

Which of the above statements is/are correct?

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

Solution: c)

The Government's debt portfolio is characterized by very low foreign exchange risk as the external debt is only 2.7 per cent of GDP (5.9 per cent of total Central Government liabilities). Of the total public debt, 70 per cent is held by the Centre.

As the central government is entrusted with the responsibility of macro-economic management, this distribution of debt between the centre and states is desirable because of the incentive compatibility that it generates. The long maturity profile of India's public debt (issuance of longer tenure bonds) along with a small share of floating rate debt (floating rate debt of Central Government is less than 5 per cent of public debt) tends to limit rollover risks, and insulates the debt portfolio from interest rate volatility.

Figure 19: Composition of General Government public debt

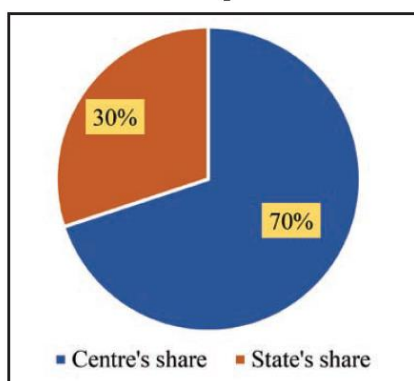
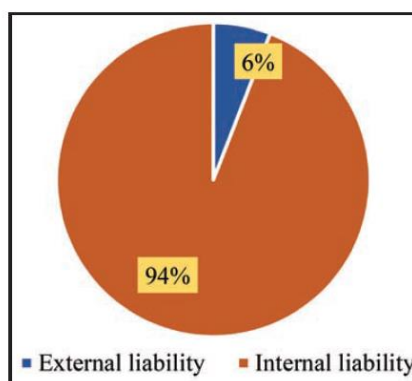


Figure 20: Composition of Central Govt. debt



Source: Economic Survey 2020-21 Vol-1

17) Gross Domestic Capital Formation (GDCF), often seen in the Budget and Economic Surveys, essentially refers to

- a) Creation of Infrastructure or durable economic assets
- b) Money circulation in public hands
- c) Capitalization of the Banking sector
- d) Direct Retail Investment in consumer goods sector

Solution: a)

- Capital is the produced means of production or it is called produced wealth by which more wealth is possible in the economy directly and indirectly.
- **Capital formation means creation of physical assets and non-physical capital consisting of public health efficiency, visible and no visible capital.**
- **Gross domestic capital formation is the addition to the capital stock within the domestic territory of a country during a year.**
- Gross domestic capital formation includes all expenses made by household, business people and Govt, adding new durable goods to the fixed capital stock of a country.
- These assets are in the form of infrastructure such as buildings, roads canals, bridges, means of transport, machinery and other equipments.

18) India's external debt stock can increase because of an increase in

1. Foreign Direct Investment
2. External Commercial Borrowings
3. Non-resident Indian Deposits

Select the correct answer code:

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

Solution: b)

External debt can be mainly classified into Long term and Short-term debts. Long-Term debt is further classified into (a) Multilateral Debt (b) Bilateral Debt (c) 'IMF' signifying SDR allocations to India by the IMF (c) Export Credit (d) (External) Commercial Borrowings (e) NRI Deposits and (d) Rupee Debt. Short Term Debt is classified into (a) Trade Credits (of up to 6 months and above 6 months and up to 1 year) (b) Foreign Institutional Investors' (FII) Investment in Government Treasury-Bills and Corporate Securities (c) Investment in Treasury-bills by foreign Central Banks and International Institutions etc. and (iv) External Debt liabilities of the Central Bank and Commercial Banks.

**FDI does not lead to any debt on the country.**

19) Consider the following statements regarding Monetisation of assets.

1. It involves creation of new sources of revenue by unlocking the value of underutilized public assets.
2. The Government has launched Infrastructure Investment Trusts (InvITs) as part of the brown field asset monetization strategy for augmenting infrastructure investment.

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)

Asset Monetization involves creation of new sources of revenue by unlocking of value of hitherto unutilized or underutilized public assets. Internationally, it is recognized that public assets are a significant resource for all economies.

The objective of the asset monetization programme of the Government of India (GOI), for which this note lays down procedures and mechanism, is to unlock the value of investment made in public assets which have not yielded appropriate or potential returns so far, create hitherto unexplored sources of income for the company and its shareholders, and contribute to a more accurate estimation of public assets which would help in better financial management of government/public resources over time.

The Cabinet Committee on Economic Affairs, had approved monetisation of assets of POWERGRID, a Public Sector Undertaking (PSU) under Ministry of Power, through Infrastructure Investment Trust (InvIT) model. The proceeds from the asset monetization would be deployed by POWERGRID in their new and under-construction projects. The Budget 2019-20 emphasized investment led growth and indicated that new and innovative financial instruments including Infrastructure Investment Trusts (InvITs), have been launched as part of the brown field asset monetization strategy for augmenting infrastructure investment. The InvIT would provide an opportunity to the general public and institutional investors such as Pension Funds, Mutual Funds, to benefit from this investment opportunity and participate in the growth of Indian Infrastructure Sector.

[Source](#)

[Source](#)

20) Which of these factors is usually accounted for by International Credit Rating agencies to evaluate India's credit rating?

1. GDP growth rate
2. Current account balance
3. Political stability
4. Rule of law
5. Control of corruption
6. Investor protection

Select the correct answer code:

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

Solution: d)

Within its sovereign credit ratings cohort – countries rated between A+/A1 and BBB-/Baa3 for S&P/ Moody's – India is a clear outlier on several parameters, i.e. a sovereign whose rating is significantly lower than mandated by the effect on the sovereign rating of the parameter. These include

- GDP growth rate,
- inflation,
- general government debt (as per cent of GDP),
- cyclically adjusted primary balance (as per cent of potential GDP),
- current account balance (as per cent of GDP),
- political stability,
- rule of law,
- control of corruption,
- investor protection,
- ease of doing business,
- short-term external debt (as per cent of reserves),
- reserve adequacy ratio and
- sovereign default history.

Source: Economic Survey 2020-21 Vol-1

21) Consider the following statements.

1. Net forex reserve with the RBI is part of the Reserve Money (RM) for the economy or the government
2. India's forex reserves was never greater than India's total external debt (including that of the private sector).

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 gross amount of the following six segments of money at any point of time is known as the Reserve Money (RM) for the economy or the government:

- RBI's net credit to the Government;
- RBI's net credit to the Banks;
- RBI's net credit to the commercial banks;
- Net forex reserve with the RBI;
- Government's currency liabilities to the Public;
- Net non-monetary liabilities of the RBI.

India's forex reserves stood at US\$ 584.24 as of January 15, 2021, greater than India's total external debt (including that of the private sector) of US\$ 556.2 bn as of September 2020.

Source: Economic Survey 2020-21 Vol-1

- 22) Annual Financial Statement (AFS) includes
1. Estimates of revenue and capital receipts
  2. Ways and means to raise the revenue
  3. Estimates of expenditure
  4. Introduction of new schemes/projects

Select the correct answer code:

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

Solution: c)

Annual Financial Statement (AFS) is a statement of the estimated receipts and expenditure of the Government in a financial year. In addition to it, the Budget contains:

- Estimates of revenue and capital receipts,
- Ways and means to raise the revenue,
- Estimates of expenditure,

The economic and financial policy of the coming year, i.e., taxation proposals, prospects of revenue, spending programme and introduction of new schemes/projects.

- 23) Government Bond yields in India depend on account of various factors. These include:

1. Inflation and interest rates in the economy
2. Sovereign rating
3. Government borrowing
4. Global liquidity
5. Geopolitical developments

Select the correct answer code:

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

Solution: c)

Bond yields move on account of various factors, and investors will have to keep an eye on both domestic and global developments while investing in them. If inflation and interest rates in the economy are key factors that determine yields, they are in turn affected by various other factors such as economic growth, sovereign rating, money supply, government borrowing, global liquidity and geopolitical developments.

[Source](#)

- 24) India has partial capital account convertibility. This implies that

1. Private foreign denominated debt needs to be met by either private export earnings or India's forex reserves.
2. India will have a negative sovereign credit rating.

Select the correct answer code:

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



d) Neither 1 nor 2

Solution: a)

Since India has partial capital account convertibility, this implies that private foreign denominated debt also needs to be met by either private export earnings or India's forex reserves.

There is no correlation between capital account convertibility and sovereign credit rating.

Source: Economic Survey 2020-21 Vol-1

25) Consider the following statements regarding Government Bond Yields.

1. A rise in bond yields means interest rates in the monetary system have fallen, and the returns for investors who invested in bonds and govt securities have declined.

2. Bond yields are directly proportional to equity returns.

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)

A fall in interest rates makes bond prices rise, and bond yields fall — and rising interest rates cause bond prices to fall, and bond yields to rise. In short, a rise in bond yields means interest rates in the monetary system have fallen, and the returns for investors (those who invested in bonds and govt securities) have declined.

“Bond yields are inversely proportional to equity returns; when bond yields decline, equity markets tend to outperform, and when yields rise, equity market returns tend to falter.

[Source](#)

26) Sovereign credit ratings can significantly affect which of the following in the Indian Economy?

- 1. Bond Yields
- 2. Stock market returns
- 2. Foreign direct investment (FDI)
- 4. Own-country exchange rates

Select the correct answer code:

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

Solution: d)

Changes in sovereign credit ratings significantly affect **bond and stock markets**.

Donors' as well as recipients' credit ratings impact **FDI flows**. Countries in high rated regions may receive more FDI.

Ratings affect **own-country exchange rates** as well as have strong regional spill over effect on exchange rates.

Source: Economic Survey 2020-21 Vol-1

27) Consider the following statements.

[www.insightsonindia.com](http://www.insightsonindia.com)

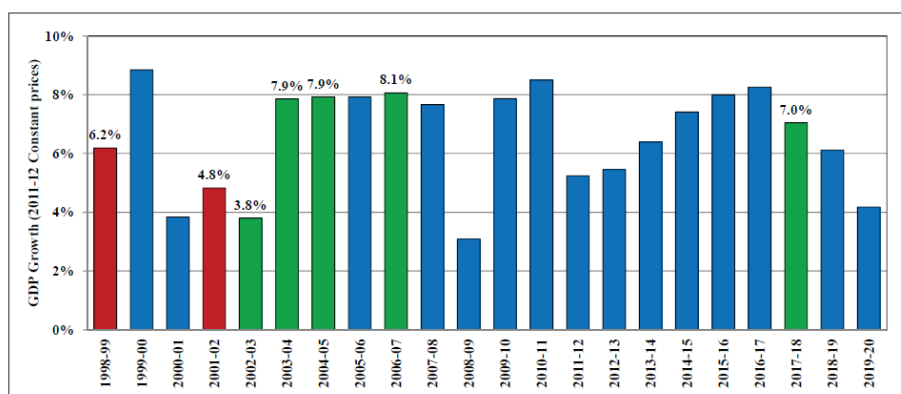
1. In India during 1998-2020, all sovereign credit ratings upgrades occurred in years that witnessed lower fiscal deficit as compared to the previous year.
  2. In India during 1998-2020, there is no clear pattern between changes in GDP growth (at constant 2011-12 prices) and sovereign credit rating changes.
- Which of the above statements is/are correct?

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

Solution: c)

There is no clear pattern between changes in GDP growth and sovereign credit rating changes.

**Figure 36: India's GDP Growth (2011-12 Constant Prices) and Sovereign Credit Rating Changes**

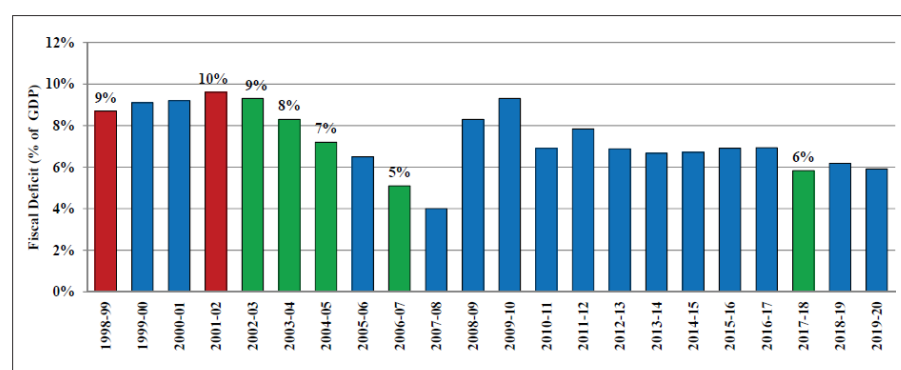


Note: Red signifies year of rating downgrade. Green signifies year of rating upgrade.

Source: MoSPI and RBI

India's Fiscal Deficit (as per cent of GDP) for Central and State Governments in relation to sovereign credit ratings changes during 1998-2020. All sovereign credit ratings upgrades occurred in years that witnessed lower fiscal deficit as compared to the previous year.

**Figure 37: India's Fiscal Deficit (as per cent of GDP) and Sovereign Credit Rating Changes**



Note: Red signifies year of rating downgrade. Green signifies year of rating upgrade.

Source: RBI

28) Zombie firms, sometimes seen in news implies

- a) Firms which earn sufficient profit to finance their debts
- b) Firms which create more employment opportunities
- c) Firms which are not able to cover their debt-servicing costs with current earnings.
- d) Firms supported by the government without taxing on its profits

Solution: c)

Zombies are typically identified using the interest coverage ratio, the ratio of a firm's profit after tax to its total interest expense. Firms with an interest coverage ratio lower than one are unable to meet their interest obligations from their income and are categorized as zombies.

Source: Economic Survey 2020-21 Vol-1

29) Consider the following statements regarding Ever-greening of Loans.

1. Ever-greening loans is lending a new loan to a borrower on the verge of default, near the repayment date of an existing loan, to facilitate its repayment.
2. Banks are required to disclose them like they disclose the restructurings of loans.

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)

Ever-greening loans is lending a new loan to a borrower on the verge of default, near the repayment date of an existing loan, to facilitate its repayment (Tantri, 2020). Such transactions go undetected as banks are not required to disclose them, unlike restructurings that warrant disclosures.

Source: Economic Survey 2020-21 Vol-1

30) Consider the following statements.

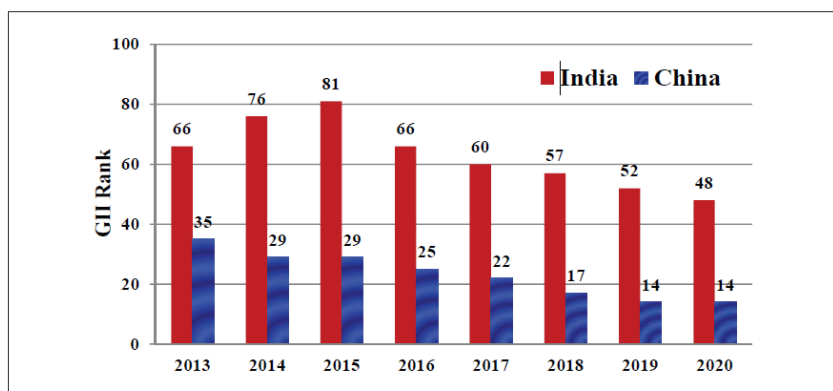
1. India has consistently improved in its Global Innovation Index (GII) Performance from 2015 to 2020.
2. The government sector contribution in India's gross domestic expenditure on R&D (GERD) is lower than business sector's contribution.

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)

Figure 24: GII Performance (2013-20)



Source: GII database

India's gross domestic expenditure on R&D (GERD) is lowest amongst other largest economies.

The government sector contributes a disproportionate large share in total GERD at three times the average of other largest economies. However, the business sector's contribution to GERD is amongst the lowest. The

business sector's contribution to total R&D personnel and researchers also lags behind that in other large economies.

Source: Economic Survey 2020-21 Vol-1

31) Consider the following statements regarding Fiscal Deficit.

1. Fiscal deficit is reflective of the total borrowing requirements of the Government.
2. A higher fiscal deficit can lead to higher interest rates in the economy.

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)

Fiscal Deficit is "reflective of the total borrowing requirements of the Government".

If the fiscal deficit ratio is too high, it implies that there is a lesser amount of money left in the market for private entrepreneurs and businesses to borrow.

Lesser amount of this money, in turn, leads to higher rates of interest charged on such lending.

So, simply put, a higher fiscal deficit means higher borrowing by the government, which, in turn, mean higher interest rates in the economy.

A high fiscal deficit and higher interest rates would also mean that the efforts of the Reserve Bank of India to reduce interest rates are undone.

32) Participatory Notes commonly known as P-Notes are one of the instruments of foreign investment. In this context, consider the following statements:

1. These are financial instruments used by overseas investors that are not registered with the SEBI to invest in Indian securities.
2. The investors enjoy the voting rights in relation to shares invested through the P - Notes.

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)

Participatory Notes, also called P-Notes or just PNs are instruments that are issued by registered FIIs to overseas investors who want to invest in the stock markets in India, without registering themselves with the market regulatory authority SEBI. PNs are not used within India but by investors abroad. Hence, they are also known as **offshore derivative instruments**. They are used by clients of FIIs who do not wish to directly participate in the stock market in India, but do it through the FIIs using PNs.

**The P-Note holder also does not enjoy any voting rights in relation to security/shares referenced by the P-Note.**

33) Arrange the following sectors that are considered to calculate Index of industrial production (IIP) in the decreasing order of their weights.

1. Mining
2. Electricity
3. Manufacturing

Select the correct answer code

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

d) 3-1-2

Solution: d)

There are two ways to classify the basket of products mapped under IIP.

One way to classify is to look at the sectoral composition. As such all products in the basket are categorised under one of three sectors: manufacturing, mining or electricity.

The relative weights of these three sectors are 77.6% (manufacturing), 14.4% (mining) and 8% (electricity).

[Source](#)

34) Which of the following sub-sectors are considered while calculating Index of Industrial Production (IIP)?

1. Capital Goods
2. Infrastructure Goods
3. Consumer Non-durables
4. Intermediate Goods

Select the correct answer code:

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

Solution: c)

The second way to classify the basket of products mapped under IIP.

As such, there are 6 sub-categories:

- Primary Goods (consisting of mining, electricity, fuels and fertilisers)
- Capital Goods (e.g. machinery items)
- Intermediate Goods (e.g. yarns, chemicals, semi-finished steel items, etc)
- Infrastructure Goods (e.g. paints, cement, cables, bricks and tiles, rail materials, etc)
- Consumer Durables (e.g. garments, telephones, passenger vehicles, etc)
- Consumer Non-durables (e.g. food items, medicines, toiletries, etc)

[Source](#)

35) Consider the following statements regarding AT1 bonds (additional tier-1 bonds).

1. These are unsecured bonds which have a fixed tenure.
2. These bonds are typically used by banks to bolster their core or tier-1 capital.
3. Mutual funds (MFs) are among the largest investors in these bonds.

Which of the above statements is/are correct?

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

Solution: b)

AT1 Bonds stand for additional tier-1 bonds. These are **unsecured bonds which have perpetual tenure**. In other words, the **bonds have no maturity date**. They have call option, which can be used by the banks to buy these bonds back from investors. **These bonds are typically used by banks to bolster their core or tier-1 capital**. AT1 bonds are subordinate to all other debt and only senior to common equity. **Mutual funds (MFs) are among the largest investors in perpetual debt instruments**, and hold over Rs 35,000 crore of the outstanding additional tier-I bond issuances of Rs 90,000 crore.

[Source](#)

36) Consider the following statements.

1. The First Finance Commission was constituted in the year 1952 under the chairmanship of KC Neogy.
2. The Fifteenth Finance Commission is the first ever Commission to have given recommendations

spanning a period of six years, that is, 2020-26.

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)

It was in the year **1952 that the First Finance Commission was constituted under the chairmanship of KC Neogy** for the period 1952-57. The latest in this chain is the Fifteenth Finance Commission, which has performed the daunting and challenging task of submitting its report in COVID times. This is also the **first ever Commission to have given recommendations spanning a period of six years, that is, 2020-26**. Though the Ninth and Eleventh Commissions also came out with interim reports, the total span of the Commissions was limited to five years.

[Source](#)

37) Bharat 22 scheme, sometimes seen in news is related to

- a) Increase maritime and land security of all coastal and border states of India
- b) Bolster Government's disinvestment programme
- c) Improve conservation of the 22 scheduled languages in the Constitution of India
- d) Facilitate housing for all by 2022

Solution: b)

Bhart 22 ETF is an open-ended exchange traded fund investing in S&P BSE Bharat 22 Index. Bharat 22 scheme was launched by the Government to fulfil its disinvetsment target in PSUs.

38) Consider the following statements.

1. An economy's annual GDP is the total money value of all final and intermediate goods and services produced within the geographical boundaries in a year.
2. As the overall GDP goes up, the economic inequalities will always reduce accordingly.

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)

**An economy's annual GDP is the total money value of all final (not intermediate) goods and services produced within the geographical boundaries in a year.**

It can be argued — and quite justifiably — that the GDP does not really map the wellbeing of a population. It is quite possible — and is often quite likely — that **even as the overall GDP goes up, economic inequalities also rise, fuelling discontent.**

[Source](#)

39) Consider the following statements regarding Bilateral investment treaty (BIT).



1. A bilateral investment treaty (BIT) is an agreement establishing the terms and conditions for private investment by nationals and companies of one state in another state.
2. They allow for an alternative dispute resolution mechanism under the auspices of the International Centre for Settlement of Investment Disputes (ICSID).
3. BITs must compulsorily protect the environment, labour rights, social provisions or natural resources in the country where investments are made.

Which of the above statements is/are correct?

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

Solution: a)

A **bilateral investment treaty (BIT)** is an agreement establishing the terms and conditions for **private investment by nationals and companies of one state in another state**. This type of investment is called foreign direct investment (FDI). BITs are established through trade pacts.

The distinctive feature of many BITs is that they **allow for an alternative dispute resolution mechanism**, whereby an investor whose rights under the BIT have been violated could have recourse to international arbitration, **often under the auspices of the International Centre for Settlement of Investment Disputes (ICSID)**, rather than suing the host State in its own courts. This process is called investor-state dispute settlement (ISDS).

The world's first BIT was signed on November 25, 1959 between Pakistan and Germany. There are currently more than 2500 BITs in force, involving most countries in the world.

NGOs have spoken against the use of BITs, stating that they are essentially designed to protect foreign investors and do not take into account obligations and standards to protect the environment, labour rights, social provisions or natural resources.

[Source](#)

40) Consider the following statements regarding Intellectual Property Rights policy 2016

1. It is entirely in compliance with the WTO's agreement on TRIPS
2. It aims to remove compulsory licensing clause from India's Patents Act.

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)

Intellectual Property Rights Policy which is in **compliance with WTO's (World Trade Organisation) agreement on TRIPS (Trade Related aspects of IPRs)**, aims to sustain entrepreneurship.

As per the WTO norms, a compulsory licensing (CL) can be invoked by a government allowing a company to produce a patented product without the consent of the patent owner in public interest. Under the Indian Patents Act, a CL can be issued for a drug if the medicine is deemed unaffordable, among other conditions, and the government grants permission to qualified generic drug makers to manufacture it.

41) The Fiscal Policy intends to

1. Maintain the economy's growth rate
2. Control the price level of the country
3. Achieve full employment, or near full employment

Select the correct answer code:

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

Solution: d)

**Main objectives of Fiscal Policy in India:**

**Economic growth:** Fiscal policy helps maintain the economy's growth rate so that certain economic goals can be achieved.

**Price stability:** It controls the price level of the country so that when the inflation is too high, prices can be regulated.

**Full employment:** It aims to achieve full employment, or near full employment, as a tool to recover from low economic activity.

[Source](#)

42) Consider the following statements regarding the Importance of Fiscal Policy in India.

1. Fiscal policy plays a key role in elevating the rate of capital formation both in the public and private sectors.
2. Fiscal policy helps in providing stimulus to elevate the savings rate.
3. Fiscal policy aims to minimise the imbalance in the dispersal of income and wealth.

Which of the above statements is/are correct?

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

Solution: c)

**Importance of Fiscal Policy in India:**

- In a country like India, fiscal policy plays a key role in elevating the rate of capital formation both in the public and private sectors.
- Through taxation, the fiscal policy helps mobilise considerable amount of resources for financing its numerous projects.
- Fiscal policy also helps in providing stimulus to elevate the savings rate.
- The fiscal policy gives adequate incentives to the private sector to expand its activities.
- Fiscal policy aims to minimise the imbalance in the dispersal of income and wealth.

[Source](#)

43) Which of these is/are not included in the Eight Core Sector Industries?

1. Crude Oil
2. Iron Ore
3. Fertilizers

Select the correct answer code:

- a) 1 only
- b) 1, 3
- c) 2 only
- d) All of them are included.

Solution: c)

Eight Core Industries are Electricity, steel, refinery products, crude oil, coal, cement, natural gas and fertilizers.

44) With reference to the Finance Commission, consider the following statements:

1. The recommendations made by the Finance Commission are binding on the government.
2. The commission submits its report to the union Finance minister.

Which of the statements given above is/are incorrect?

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

Solution: c)

Article 280 of the Constitution of India provides for a Finance Commission as a quasi-judicial body. It is constituted by the president of India every fifth year or at such earlier time as he considers necessary.

**The commission submits its report to the president.** He lays it before both the Houses of Parliament along with an explanatory memorandum as to the action taken on its recommendations.

The recommendations made by the Finance Commission are only of advisory nature and hence, not binding on the government. It is up to the Union government to implement its recommendations on granting money to the states.

45) Consider the following statements.

1. Primary deficit implies that the government is unable to contain recurring expenditure such as subsidies and other discretionary expenditures within the limits of recurring non-debt revenue.
2. Increasing primary deficit will lead to higher revenue deficit and unsustainable debt servicing in future.

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)

Primary deficit is the revenue deficit net of interest payments and the implication is that the government is unable to contain recurring expenditure such as subsidies and other discretionary expenditures within the limits of recurring non-debt revenue. So, the primary deficit ratio is the leading indicator for the revenue deficit ratio to follow and increasing primary deficit is the surest route to higher revenue deficit and unsustainable debt servicing in future.

Source

## 2. Ecology and Environment

1) Consider the following statements regarding Caracal, a wildcat.

1. Recently, the National Board for Wildlife and Union Ministry of Environment, Forest and Climate Change included caracal in the list of critically endangered species.
2. It is native to only Indian sub-continent.
3. There are evidences of the caracal from a fossil dating back to the Indus Valley civilisation.

Which of the above statements is/are correct?

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

Solution: b)

The National Board for Wildlife and Union Ministry of Environment, Forest and Climate Change last month included the caracal, a medium-sized wildcat found in parts of Rajasthan and Gujarat, in the list of critically endangered species. Though not under grave threat in its other habitats, the animal is on the verge of extinction in India, some experts believe.

**Besides India, the caracal is found in several dozen countries across Africa, the Middle East, Central and South Asia.** While it flourishes in parts of Africa, its numbers in Asia are declining.

The earliest evidence of the caracal in the subcontinent comes from a fossil dating back to the civilisation of the Indus Valley c. 3000-2000 BC, according to a reference in 'Historical and current extent of occurrence of the Caracal in India', one of the few published studies on the animal.



[Source](#)

2) Consider the following statements about UNFCCC.

1. The UNFCCC was adopted in 1992 at the Rio Earth Summit.
2. The UNFCCC established a framework for action to stabilise concentrations of *greenhouse gases in the earth's atmosphere*.
3. The framework sets non-binding limits on greenhouse gas emissions for individual countries.
4. Nearly all member states of the United Nations have ratified the convention.

Which of the above statements is/are correct?

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

Solution: a)

**The UNFCCC was adopted in 1992 at the Rio Earth Summit**, which marked the beginning of the international community's first concerted effort to confront the problem of climate change.

Known also as the Rio Convention, the **UNFCCC established a framework for action to stabilise concentrations of greenhouse gases in the earth's atmosphere.**

The UNFCCC entered into force in 1994, and **nearly all of the world's nations—a total of 197 (as of 2020)—have ratified.**

The **framework sets non-binding limits** on greenhouse gas emissions for individual countries and contains no enforcement mechanisms.

- 3) Flexitarian Movement is often seen in news. It is related to
- Providing protein rich food to Children and adolescents
  - Moving to flexible interest rates for loans rather than the fixed interest rate
  - Reducing the animal-based food and increasing the plant-based food
  - None of the above

Solution: c)

The Flexitarian Diet is a style of eating that encourages mostly plant-based foods while allowing meat and other animal products in moderation. It's more flexible than fully vegetarian or vegan diets.

- 4) Consider the following statements regarding Intergovernmental Panel on Climate Change (IPCC)
- IPCC is a joint initiative of World Meteorological Organization (WMO) and United Nations Development Programme (UNDP).
  - IPCC was established to provide the public scientific information on climate change.

Which of the above statements is/are correct?

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

Solution: b)

- Created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP).** IPCC reports are also a key input into international climate change negotiations.
- The IPCC is an organization of governments that are members of the United Nations or WMO. Thousands of people from all over the world contribute to the work of the IPCC. The IPCC does not conduct its own research.

The Intergovernmental Panel on Climate Change (IPCC) was established by the United Nations to provide the public scientific information on climate change.

- 5) Consider the following statements regarding Earth Overshoot Day.
- Earth Overshoot Day marks the date when humanity's demand for ecological resources and services in a given year exceeds what Earth can regenerate in that year.
  - Earth Overshoot Day is hosted and calculated by UN Environment.
  - In the last ten years, every year the overshoot date has been advancing compared to the previous year.

Which of the above statements is/are correct?

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

Solution: a)

Earth Overshoot Day marks the date when humanity's demand for ecological resources and services in a given year exceeds what Earth can regenerate in that year. We maintain this deficit by liquidating stocks of ecological

resources and accumulating waste, primarily carbon dioxide in the atmosphere. Earth Overshoot Day is hosted and calculated by Global Footprint Network, an international research organization that provides decision-makers with a menu of tools to help the human economy operate within Earth's ecological limits.

Past Earth Overshoot Days			
Year	Overshoot Date	Year	Overshoot Date
1987	October 23	2013	August 3
1990	October 11	2014	August 5
1995	October 5	2015	August 6
2000	September 23	2016	August 5
2005	August 26	2017	August 3
2010	August 8	2018	August 1
2011	August 4	2019	July 29
2012	August 4	2020	August 22

6) Which of the following are some of the main modes of seed dispersal?

1. Gravity
2. Wind
3. Animals

Select the correct answer code:

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

Solution: c)

Seed dispersal is the movement, spread or transport of seeds away from the parent plant.

Plants have very limited mobility and consequently rely upon a variety of dispersal vectors to transport their propagules, including both abiotic vectors such as the wind and living (biotic) vectors like birds.

There are five main modes of seed dispersal: gravity, wind, ballistic, water, and by animals.

7) Arrange the following National Park and Wildlife Sanctuaries of India from South to North.

1. Dudhwa
2. Bandhavgarh
3. Keibul Lamjao
4. Simlipal

Select the correct answer code:

- a) 4231
- b) 3142
- c) 4213
- d) 1243

Solution: a)

The Dudhwa National Park is a national park in the Terai belt of marshy grasslands of northern Uttar Pradesh.

Bandhavgarh National Park is one of the national parks of India, located in the Umaria district of Madhya Pradesh.

The Keibul Lamjao National Park is a national park in the Bishnupur district of the state of Manipur.



Simlipal National Park is a national park and a tiger reserve in the Mayurbhanj district in the Indian state of Odisha.

- 8) Under the Wild Life (Protection) Act, 1972, Wildlife Crime Control Bureau (WCCB) is mandated to
1. Collect and collate intelligence related to organized wildlife crime activities and to disseminate the same to State and other enforcement agencies.
  2. Establish a centralized wildlife crime data bank.
  3. Assists and advises the Customs authorities in inspection of the consignments of flora & fauna.

Select the correct answer code:

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

Solution: d)

Wildlife Crime Control Bureau is a statutory multi-disciplinary body established by the Government of India under the Ministry of Environment and Forests, to combat organized wildlife crime in the country.

Under Section 38 (Z) of the Wild Life (Protection) Act, 1972,

- it is mandated to collect and collate intelligence related to organized wildlife crime activities and to disseminate the same to State and other enforcement agencies for immediate action so as to apprehend the criminals;
- to establish a centralized wildlife crime data bank;
- co-ordinate actions by various agencies in connection with the enforcement of the provisions of the Act;
- assist foreign authorities and international organization concerned to facilitate co-ordination and universal action for wildlife crime control;
- capacity building of the wildlife crime enforcement agencies for scientific and professional investigation into wildlife crimes and assist State Governments to ensure success in prosecutions related to wildlife crimes;
- and advise the Government of India on issues relating to wildlife crimes having national and international ramifications, relevant policy and laws.
- It also assists and advises the Customs authorities in inspection of the consignments of flora & fauna as per the provisions of Wild Life Protection Act, CITES and EXIM Policy governing such an item.

- 9) India's seed vault, to protect important genetic material in case of a major man-made or natural disaster, is located in
- a) Kangchenjunga
  - b) Karakoram Pass
  - c) Ladakh
  - d) Nanda Devi

Solution: c)

**At Chang La in the Himalayas, at a height of 17,300 feet, India has its seed storage facility.** The vault is a joint venture of the National Bureau of Plant Genetic Resources (which comes under the Indian Council of Agricultural Research) and the Defence Institute of High-Altitude Research (under Defence Research and Development Organisation).

- 10) Consider the following statements regarding Emperor Penguin.
1. Emperor penguin is the shortest of all living penguin species and is endemic to Antarctica.
  2. It is the only penguin species that breeds during the Antarctic winter.
  3. Disappearing sea ice impacts Emperor Penguins directly, as the animals use it as a home base for their breeding season.

Which of the above statements is/are correct?

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

Solution: c)

The emperor penguin (*Aptenodytes forsteri*) is the tallest and heaviest of all living penguin species and is endemic to Antarctica. It is the only penguin species that breeds during the Antarctic winter.

Disappearing sea ice impacts Emperor Penguins directly, as the animals use it as a home base for their nine-month breeding season and for feeding and moulting.



[Source](#)

11) Consider the following statements regarding Coastal Regulation Zone (CRZ) notification 2011.

- 1. The CRZ notification 2011 declared that the coastal stretches of the country and India's territorial waters, including Andaman and Nicobar and Lakshadweep islands, as Coastal Regulation Zone (CRZ).
- 2. It restricted the setting up and expansion of any industry and manufacture or handling or storage or disposal of hazardous substances in Coastal Regulation Zone 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: b)

The CRZ notification 2011 declared that the coastal stretches of the country and India's territorial waters, **excluding Andaman and Nicobar and Lakshadweep islands**, as Coastal Regulation Zone (CRZ) and restricted the setting up and expansion of any industry, operations or processes and manufacture or handling or storage or disposal of hazardous substances there.

[Source](#)

12) The coastal ecosystems of mangroves, tidal marshes, and seagrass meadows provide numerous benefits and services along coasts like

- 1. Protection from storms and sea level rise
- 2. Regulation of coastal water quality
- 3. Provision of habitat for commercially important fisheries
- 4. Food security for many coastal communities
- 5. Sequester and store coastal blue carbon from the atmosphere

Select the correct answer code:

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

Solution: d)

The coastal ecosystems of mangroves, tidal marshes, and seagrass meadows provide numerous benefits and services that are essential for climate change adaptation along coasts globally, including protection from storms and sea level rise, prevention of shoreline erosion, regulation of coastal water quality, provision of habitat for commercially important fisheries and endangered marine species, and food security for many coastal communities. Additionally, these ecosystems sequester and store significant amounts of coastal blue carbon from the atmosphere and ocean and hence are now recognized for their role in mitigating climate change.

13) Consider the following statements regarding Simlipal forest reserve.

- 1. Simlipal is both a national park and a tiger reserve.
- 2. It lies in the western end of the eastern ghats in Odisha.
- 3. It is part of the UNESCO World Network of Biosphere Reserves.

Which of the above statements is/are correct?

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

Solution: b)

The Simlipal forest reserve area frequently witnesses forest fires during dry weather conditions.

Similipal, which derives its name from 'Simul' (silk cotton) tree, is a **national park and a tiger reserve** situated in the northern part of Odisha's Mayurbhanj district. Similipal and the adjoining areas, comprising 5,569 sq km, was declared a biosphere reserve by the Government of India on June 22, 1994, and lies in the **eastern end of the eastern ghat**.

**Government of India declared Simlipal as a biosphere reserve in 1994. UNESCO added this national park to its list of Biosphere Reserves in May 2009.**

[Source](#)

14) Consider the following statements.

- 1. India is prone to heat waves conditions, which is declared when the maximum temperatures rise over 10 degrees from normal recorded at a location.
- 2. Heatwaves are common along the Core Heatwave Zone (CHZ) areas which covers Vidarbha in Maharashtra, parts of Gangetic West Bengal, Coastal Andhra Pradesh and Telangana.
- 3. La Nina favours cooler than normal temperatures and it is the only dominating factor affecting the temperature of a place during summer months.

Which of the above statements is/are correct?

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

Solution: c)

**India is prone to heat waves conditions, which is declared when the maximum temperatures rise over 4 degrees from normal recorded at a location.**

But past records suggest that heatwaves are common along the Core Heatwave Zone (CHZ) areas every summer. The CHZ covers Rajasthan, Punjab, Haryana, Chandigarh, Delhi, West Madhya Pradesh, Uttar Pradesh, Chhattisgarh, Odisha, Vidarbha in Maharashtra, parts of Gangetic West Bengal, Coastal Andhra Pradesh and Telangana.

**What role will La Nina play during the season?**

La Nina is a Pacific Ocean phenomenon when the sea surface temperatures along its central and equatorial belt remain cooler than normal. Even though higher temperatures are associated with El Nino and the opposite scenario for La Nina, both these ocean conditions influence temperatures globally.

At present, a moderate-intensity La Nina prevails over the Pacific Ocean. Despite the current nearing the end of its cycle, the Met office has confirmed that it will prevail all through summer with its remnants lingering during June, as well.

**“La Nina favours cooler than normal temperatures and it is not the only dominating factor affecting the temperatures during summer months.** There are other atmospheric and ocean parameters, local wind factors all of which together decide the temperatures during summer season over India.”

[Source](#)

15) Consider the following statements regarding Coal Bed Methane (CBM).

1. Coal Bed Methane (CBM) is an unconventional source of natural gas that can be used for power generation and running internal combustion engines
2. Coal bed methane forms at the same time coal forms.
3. The extraction of coal bed methane is similar to the extraction of shale gas.
4. Ministry of Coal is the administrative Ministry for development of CBM in the country.

Which of the above statements is/are correct?

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

Solution: b)

Coal Bed Methane, or CBM, can chip in as a clean energy source. It is an unconventional natural gas that occurs in coal beds in adsorbed form during coalification process and is rich in methane content.

Coal bed methane forms at the same time coal forms. The extraction of coal bed methane is similar to the extraction of shale gas.

CBM is known by different nomenclatures depending on its mechanism of extraction. In any form, methane has energy potential and the captured gas can be used for power generation, running internal combustion engines and as domestic fuel on commercial lines.

The flip-side is that methane is 25 times more potent greenhouse gas than carbon dioxide and poses safety challenge in underground coal mines.

The Ministry of Petroleum and Natural Gas became the administrative Ministry and the Directorate General of Hydrocarbons (DGH) was made the nodal agency for development of CBM in the country.

16) Consider the following stages of Coal formation.

1. Peat deposits
2. Bituminous coal
3. Lignite

4. Anthracite coal

Arrange the above in chronological order

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

Solution: c)

As organic material dies and is deposited in swamps or swampy lakes, the material undergoes bacterial and chemical changes to create **peat deposits**. Over millions of years, this peat gets buried under many layers of sediment the pressure and temperature of the peat increases. Gradually, the peat turns into **lignite or brown coal**, then sub-bituminous coal, **bituminous coal**, and finally hard **anthracite coal**. While coal is being formed, the decomposing organic material produces methane gas - the main component of natural gas - along with nitrogen and carbon dioxide. With the pressure of being buried under sediment, most of the methane stays trapped on the surface of the coal.

17) When coal is burned, it releases a number of airborne toxins and pollutants like

- 1. Mercury
- 2. Lead
- 3. Sulfur dioxide
- 4. Nitrogen oxides

Select the correct answer code:

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

Solution: d)

When coal is burned it releases a number of airborne toxins and pollutants. They include Carbon dioxide, mercury, lead, sulfur dioxide, nitrogen oxides, particulates, and various other heavy metals. Health impacts can range from asthma and breathing difficulties, to brain damage, heart problems, cancer, neurological disorders, and premature death.

18) Consider the following statements regarding Carbon offsetting.

- 1. Carbon offsetting allows a country to help reach its own emissions reduction targets by funding emission reductions in another country.
- 2. The United Nation's Clean Development Mechanism (CDM) set up under the 1997 Kyoto Protocol is first major Carbon offsetting scheme.
- 3. Carbon offsets can be bought by individuals, companies or countries.

Which of the above statements is/are correct?

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

Solution: d)

**Carbon offsetting allows a country to help reach its own emissions reduction targets by funding emission reductions in another country.** Companies are also increasingly using carbon credits to offset their emissions. **The first major offsetting scheme, the U.N.s clean development mechanism (CDM),** was set up under the 1997 Kyoto Protocol, in which 190 countries agreed country-by-country emission reduction targets. The scheme was designed to help fund emission reduction projects in developing countries, while also providing offset credits to the developed world to help meet its Kyoto targets.

More than 8,100 projects in 111 countries have registered with the CDM scheme, which has handed out over 2 billion carbon credits, called Certified Emission Reductions (CERs), representing 2 billion tonnes of carbon dioxide reduction.

Projects registered under the scheme range from capturing and using methane gasses in pig manure to create electricity to replacing traditional wood and coal burning cookstoves with cleaner alternatives such as ethanol.

**Offsets can be bought by individuals, companies or countries.**

19) Which of the following are the reasons that can be attributed to the frequent landslides and debris avalanches in Himalayan region?

1. The Himalayas are tectonically stable.
2. They are mostly made up of sedimentary rocks and unconsolidated deposits.
3. The slopes are very steep.

Select the correct answer code:

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

Solution: c)

The reasons that can be attributed to the frequent landslides and debris avalanches in Himalayan region are

(i) **The Himalayas are tectonically active. Thus, tectonically unstable.**

(ii) They are mostly made up of sedimentary rocks and unconsolidated and semi-consolidated deposits.

(iii) The slopes are very steep.

20) Operation 'Clean Art', sometimes seen in news is the initiative of

- a) Centre for Cultural Resources and Training (CCRT)
- b) Ministry of Environment, Forest and Climate Change
- c) Wildlife Crime Control Bureau
- d) None of the above

Solution: c)

Operation 'Clean Art':

It is first pan India operation to crackdown on the smuggling of mongoose hair.

**Conceived by WCCB.**

Aim: To ensure that the mongoose hair brush trade should be closed down across the country.

21) The ocean has several micronutrients like nitrates, sulphates and silicates, minerals like iron ore and zinc, and trace metals like cadmium or copper. Trace metals are supplied to oceans via

1. Continental run-offs
2. Atmospheric deposition
3. Hydrothermal activities
4. Continental shelf interaction

Select the correct answer code:

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

Solution: d)

Trace metals like cadmium or copper are supplied to oceans via continental run-offs, atmospheric deposition, hydrothermal activities and continental shelf interaction. They are essential for ocean productivity.



[Source](#)

22) Trace metals like cadmium or copper are essential for ocean productivity. **Studying the interactions of trace metals and marine plant and animal life help to**

1. Understand the nutrient cycling and productivity of the oceans
2. Track the movement of water masses responsible for ocean circulation
3. Study the biological, geochemical and ecosystem processes and food web analyses in the oceans.

Select the correct answer code:

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

Solution: c)

**What is the objective of studying the interactions of trace metals and marine plant and animal life?**

- Trace metals like cadmium or copper are supplied to oceans via continental run-offs, atmospheric deposition, hydrothermal activities and continental shelf interaction.
- They are essential for ocean productivity. Scientists say that it is important to understand the interactions of trace metals with marine biota “for having a holistic understanding about nutrient cycling and productivity of the oceans”.
- Apart from their reactions on marine life, isotopic forms of trace metals can be utilised to track the movement of water masses responsible for ocean circulation and as tools to study the biological, geochemical and ecosystem processes and food web analyses.

[Source](#)

23) Consider the following statements regarding Seabuckthorn.

1. It is a shrub which produces an orange-yellow coloured edible berry.
2. In India, it is found in the Himalayan region, generally in dry areas such as the cold deserts of Ladakh and Spiti.
3. It is a soil-binding plant which prevents soil-erosion, checks siltation in rivers and helps preserve floral biodiversity.

Which of the above statements is/are correct?

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

Solution: d)

The Himachal Pradesh government has decided to start planting seabuckthorn in the cold desert areas of the state.

What is seabuckthorn?

**It's a shrub which produces an orange-yellow coloured edible berry.** In India, it is **found above the tree line in the Himalayan region, generally in dry areas such as the cold deserts of Ladakh and Spiti.** In Himachal Pradesh, it is locally called chharma and grows in the wild in Lahaul and Spiti and parts of Kinnaur.

As a folk medicine, seabuckthorn has been widely used for treating stomach, heart and skin problems. In the last few decades, scientific research worldwide has backed many of its traditional uses. “Its fruit and leaves are rich in vitamins, carotenoids and omega fatty acids, among other substances, and it can help troops in acclimatising to high-altitude

Besides being an important source of fuelwood and fodder, seabuckthorn is a **soil-binding plant which prevents soil-erosion, checks siltation in rivers and helps preserve floral biodiversity.**



[Source](#)

24) State Disaster Response Fund (SDRF) has been constituted by each state under the provisions of Disaster Management act 2005. Disaster(s) covered under SDRF include:

1. Flash floods
2. Frost damage
3. Avalanche
4. Pest attack
5. Hailstorm

Select the correct answer code:

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

Solution: c)

Disaster (s) covered under SDRF: Cyclone, drought, earthquake, fire, flood, tsunami, hailstorm, landslide, avalanche, cloudburst, pest attack, frost and cold waves.

[Source](#)

25) Consider the following statements.

1. National Green Tribunal is an independent environment regulator to oversee green clearances.
2. National Board for Wildlife has power to review all wildlife-related matters and approve projects in and around national parks and sanctuaries.
3. The role of National Board for Wildlife is advisory in nature and advises the Central Government on framing policies and measures for conservation of wildlife in the country.

Which of the above statements is/are correct?

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

Solution: c)

**The Supreme Court asked the government to explain why it had not set up an “independent environment regulator” to oversee green clearances.**

The top court had ordered the setting up of a national environment regulatory body to ensure independent oversight of green clearances way back in July 2011 in Lafarge Umiam Mining Private Limited v. Union of India, commonly known as the ‘Lafarge mining case’.

In 2011, the court had asked the Centre to appoint a national regulator for appraising projects, enforcing environmental conditions for approvals and to impose penalties on polluters.

**About National Board for Wildlife:**

1. It is a "Statutory Organization" constituted under the Wildlife Protection Act, 1972.
2. **Its roles is "advisory" in nature and advises the Central Government on framing policies and measures for conservation of wildlife in the country.**
3. Primary function of the Board is to promote the conservation and development of wildlife and forests.
4. **It has power to review all wildlife-related matters and approve projects in and around national parks and sanctuaries.**
5. No alteration of boundaries in national parks and wildlife sanctuaries can be done without approval of the NBWL.
6. The NBWL is chaired by the Prime Minister.

[Source](#)

26) Consider the following statements.

1. Since Independence, a fifth of India's land has consistently been under forests.
2. As per the biennial State of Forest Report, 2019, India's total forest cover has increased since 2017, but the very dense forest cover has moderately decreased.

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)

**Since Independence, a fifth of India's land has consistently been under forests, despite the population increasing more than three times.**

**As per the biennial State of Forest Report, 2019, India's forest cover has increased** by 3,976 sq km or 0.56% since 2017. For the second consecutive time since 2007, the report **recorded a gain — an impressive 1,275 sq km — in dense forest (including very dense forest** with a canopy density of over 70%, and moderately dense forest with a canopy density of 40-70%).

[Source](#)

27) Consider the following statements regarding Great Indian Bustard.

1. They are among the heaviest flying birds in India and are protected under the Wildlife Protection Act.
2. They are categorised as Least Concern by the IUCN Red data list.

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)

Great Indian bustards are large birds with unique black caps over their heads and are found in the Indian subcontinent. **They are among the heaviest flying birds in the country and are protected under the Wildlife Protection Act.** There are around only 150 of them left in India, according to the report by the wildlife division.

The Supreme Court swooped-in to intervene on behalf of the **critically endangered Great Indian Bustards** over the birds falling dead after colliding with power lines running through their dwindling natural habitats in Gujarat and Rajasthan.

[Source](#)

28) Consider the following statements regarding Rare Earth elements.

1. Rare Earth elements are not radioactive in nature.
2. These elements are used in clean energy, healthcare, environmental mitigation, and national defence.
3. China's Rare Earths deposits account for 80% of identified global reserves.

Which of the above statements is/are correct?

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

Solution: c)

Rare Earth Elements or Rare Earth Metals are a set of 17 chemical elements in the periodic table — the 15 lanthanides, plus scandium and yttrium, which tend to occur in the same ore deposits as the lanthanides, and have similar chemical properties.

Despite their classification, most of these elements are not really “rare”. **One of the Rare Earths, promethium, is radioactive.**

These elements are important in technologies of consumer electronics, computers and networks, communications, clean energy, advanced transportation, healthcare, environmental mitigation, and national defence, among others.

Scandium is used in televisions and fluorescent lamps, and yttrium is used in drugs to treat rheumatoid arthritis and cancer.

Rare Earth elements are used in space shuttle components, jet engine turbines, and drones. Cerium, the most abundant Rare Earth element, is essential to NASA's Space Shuttle Programme. China's Rare Earths deposits account for 80% of identified global reserves.

29) Consider the following statements.

1. A “carbon credit” is an electronic and serialized unit that represents one kg of CO<sub>2</sub> equivalent that is reduced, avoided, or sequestered from projects applying an approved carbon credit methodology.
2. Decarbonization refers to the conversion of the economic system or individual carbon emitting entity reducing the carbon intensity of its (direct or value chain) emissions over time.

Which of the above statements is/are correct?

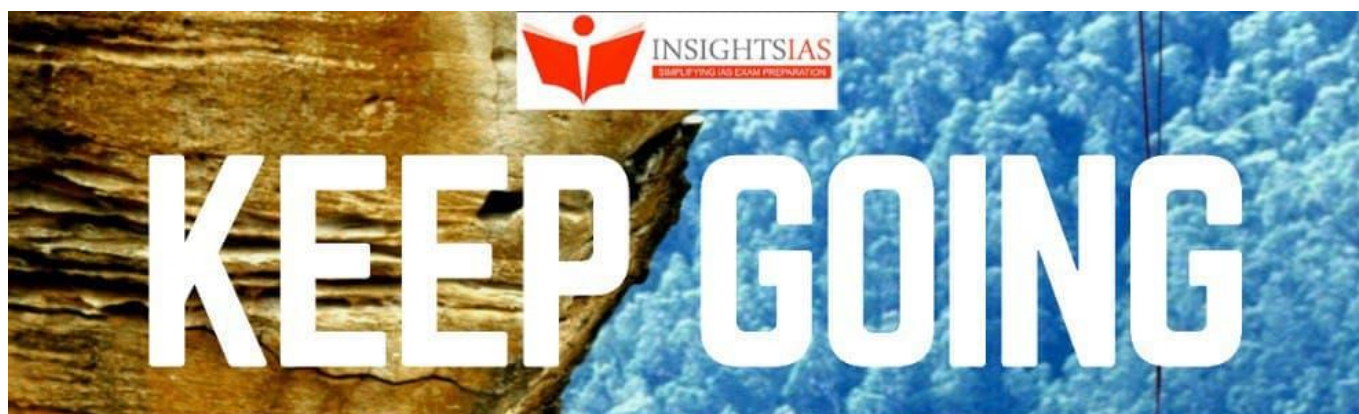
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Solution: b)

A “carbon credit” (also known as a “carbon offset”) is an electronic and serialized unit that represents one ton of CO<sub>2</sub> equivalent that is reduced, avoided, or sequestered from projects applying an approved carbon credit methodology.



Decarbonization means the reduction of carbon. More specifically, the term refers to the conversion of the economic system or individual carbon emitting entity converting to reduce the carbon intensity of its (direct or value chain) emissions over time.



AT TIMES, YOU MAY FAIL, YOU MAY FALL, YOU MAY GET DISHEARTENED. BUT KEEP GOING

**YOUR HARDEST TIMES  
OFTEN LEAD TO THE  
GREATEST MOMENTS OF  
YOUR LIFE. KEEP GOING.  
TOUGH SITUATIONS  
BUILD STRONG PEOPLE  
IN THE END.**

**WWW.INSIGHTSONINDIA.COM**

### 3. Government Schemes and Programmes

1) Consider the following statements regarding Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PM-JAY).

1. Ayushman Bharat Pradhan Mantri Jan Arogya

Yojana (AB-PM-JAY) was launched in 2018 to provide healthcare access to the most vulnerable sections in the country.

2. Beneficiaries were included based on the deprivation and occupational criteria from the Socio-Economic Caste Census 2011 (SECC 2011) for rural and urban areas respectively.

3. The scheme provides

for secondary and tertiary hospitalization through a network of public and empanelled private healthcare providers.

Which of the above statements is/are correct?

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

Solution: c)

- In 2018, Government of India approved the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PM JAY) as a historic step to provide healthcare access to the most vulnerable sections in the country.
- Beneficiaries included approximately 50 crore individuals across 10.74 crores poor and vulnerable families, which form the bottom 40 per cent of the Indian population.
- The households were included based on the deprivation and occupational criteria from the Socio-Economic Caste Census 2011 (SECC 2011) for rural and urban areas respectively.
- The scheme provides for healthcare of up to INR 5 lakh per family per year on a family floater basis, which means that it can be used by one or all members of the family.
- The scheme provides for secondary and tertiary hospitalization through a network of public and empanelled private healthcare providers.
- It also provides for three days of pre-hospitalization and 15 days of posthospitalization expenses, places no cap on age and gender, or size of a family and is portable across the country.
- It covers 1573 procedures including 23 specialties. AB-PM-JAY also aims to set up 150,000 health and wellness centres to provide comprehensive primary health care service to the entire population.

2) Consider the following statements regarding 'eSanjeevani'.

1. 'eSanjeevani', is a web-based comprehensive telemedicine solution that provides specialized healthcare services to masses in both rural areas and isolated communities.

2. eSanjeevani can also be used to provide medical education to interns and people across various Common Service Centers (CSCs).

3. It caters to numerous medical specialties like Radiology, Cardiology and Gynecology

Which of the above statements is/are correct?

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

Solution: d)

'eSanjeevani', is a web-based comprehensive telemedicine solution. **'eSanjeevani' extends the reach of specialized healthcare services to masses in both rural areas and isolated communities.** Besides enhancing quality of medical services, addressing issues pertaining to uneven distribution and shortage of infrastructural as well as human resources, eSanjeevani also aims to make healthcare services equitable by bridging the digital



divide that exists between the urban vs. rural, rich vs. poor etc. **eSanjeevani can also be used to provide medical education to interns , people across various Common Service Centers (CSCs), etc.**

eSanjeevani caters to numerous medical specialties, these include

- Cardiology
- Diabetes
- Dermatology
- Gynecology
- Ophthalmology
- Pediatrics
- Pathology
- Radiology
- Pulmonary
- Pediatrics

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

- 3) Consider the following statements regarding Telecom Regulatory Authority of India (TRAI).
1. TRAI regulates telecom services, including fixation/revision of tariffs for telecom services.
  2. One of the objectives of TRAI is to provide a fair and transparent policy environment promoting a level playing field amongst players and facilitating fair competition.

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)

The entry of private service providers brought with it the inevitable need for independent regulation. The Telecom Regulatory Authority of India (TRAI) was, established in 1997 by an Act of Parliament, called the **Telecom Regulatory Authority of India Act, 1997**, to regulate telecom services, including **fixation/revision of tariffs for telecom services** which were earlier vested in the Central Government.

One of the main objectives of TRAI is to provide a **fair and transparent policy environment which promotes a level playing field and facilitates fair competition.**

The TRAI Act was amended by an ordinance, effective from 24 January 2000, establishing a Telecommunications Dispute Settlement and Appellate Tribunal (TDSAT) to take over the adjudicatory and disputes functions from TRAI.

[Source](#)

- 4) Consider the following statements regarding Project-75 I.
1. Six Scorpene class of submarines are being built under Project-75 I by Mazagon Dock Limited (MDL), Mumbai.
  2. INS Karanj is the first submarine under Project-75 I commissioned into the Indian Navy.
  3. The technology for these submarines were developed by Defence Research and Development Organisation (DRDO).

Which of the above statements is/are incorrect?

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



Solution: b)

The Indian Navy on March 10, 2021 inducted its **third Scorpene-class conventional diesel electric submarine, INS Karanj, into service.**

**The first submarine of the class, INS Kalvari, was commissioned in December 2017** and the second, INS Khanderi, in September 2019. A fourth submarine, Vela, was launched into the water in May 2019 and the fifth, Vagir, in November 2020, and both are undergoing sea trials.

The Scorpene class submarines are one of the most advanced conventional submarines in the world. The Scorpene class of submarines were **designed by French naval shipbuilding firm DCNS in partnership with Spanish shipbuilding firm Navantia.**

#### Project 75I

Under this project of the Indian Navy, six latest-generation attack submarines are being built. They are expected to be completed by 2022. **The project is taking shape at Mazagon Dock in Mumbai.**

Naval Group is among the five Original Equipment Manufacturers (OEM) shortlisted for the Navy's project that was processed through the Strategic Partnership (SP) model of defence procurement. MDL and Larsen & Toubro are the two Indian companies shortlisted under it.

#### [Source](#)

5) Consider the following statements.

1. National Food Security Act, 2013 (NFSA) provides a legal basis for the public distribution system (PDS).
2. Commission for Agricultural Costs & Prices (CACP) that recommend minimum support price (MSP) is a statutory body set up through an Act of Parliament.
3. Sugar cane pricing is governed by the Sugarcane (Control) Order, 1966 issued under the Essential Commodities Act.

Which of the above statements is/are correct?

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

Solution: b)

The **National Food Security Act, 2013 (NFSA) provides a legal basis for the public distribution system (PDS).** The NFSA made access to the PDS a right, entitling every person belonging to a "priority household" to receive 5 kg of foodgrains per month at a subsidised price not exceeding Rs 2/kg for wheat and Rs 3/kg for rice. Priority households were further defined so as to cover up to 75% of the country's rural population and 50% in urban areas.

MSP, by contrast, is devoid of any legal backing. Access to it, unlike subsidised grains through the PDS, isn't an entitlement for farmers. They cannot demand it as a matter of right.

**CACP is a statutory body set up through an Act of Parliament. "CACP is an attached office of the Ministry of Agriculture and Farmers Welfare, Government of India". It recommends MSPs.**

**Sugarcane pricing being governed by the Sugarcane (Control) Order, 1966 issued under the Essential Commodities Act.** That order, in turn, provides for the fixation of a 'fair and remunerative price' (FRP) for cane during every sugar year (October-September).

6) Consider the following statements regarding Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PM-JAY).

1. PM-JAY is being used significantly for high frequency, low cost care such as dialysis and continued to be utilised without disruption even during the Covid pandemic and the lockdown.

2. General medicine – the overwhelmingly major clinical specialty accounted for over half the claims - exhibited a V-shaped recovery after falling during the lockdown and reached pre-Covid-19 levels in December 2020.

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)

PM-JAY is being used significantly for high frequency, low cost care such as dialysis and continued to be utilised without disruption even during the Covid pandemic and the lockdown. General medicine – the overwhelmingly major clinical specialty accounting for over half the claims - exhibited a V-shaped recovery after falling during the lockdown and reached pre-Covid-19 levels in December 2020.

Source: Economic Survey 2020-21 Vol-1

7) Consider the following statements regarding National Disaster Response Fund (NDRF).

- 1. NDRF is located in the "Public Accounts" of Government of India under "Reserve Funds not bearing interest".
- 2. The relief activities for all the calamities are monitored by the Ministry of Home Affairs.
- 3. NDRF amount can be spent only towards meeting the expenses for emergency response, relief and rehabilitation.

Which of the above statements is/are correct?

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

Solution: b)

National Disaster Response Fund is defined in Section 46 of the Disaster Management Act, 2005 (DM Act) as a **fund managed by the Central Government for meeting the expenses for emergency response, relief and rehabilitation** due to any threatening disaster situation or disaster. NDRF is constituted to supplement the funds of the State Disaster Response Funds (SDRF) of the states to facilitate immediate relief in case of calamities of a severe nature.

**NDRF amount can be spent only towards meeting the expenses for emergency response, relief and rehabilitation.** For projects exclusively for the purpose of mitigation, i.e, measures aimed at reducing the risk, impact or effect of a disaster or threatening disaster situation a separate fund called **National Disaster Mitigation Fund** has to be constituted.

The NDRF is financed through the levy of a cess on certain items, chargeable to excise and customs duty, and approved annually through the Finance Bill. The requirement for funds beyond what is available under the NDRF is met through general budgetary resources.

Currently, a National Calamity Contingency Duty (NCCD) is levied to finance the NDRF and additional budgetary support is provided as and when necessary. A provision also exists in the DM Act to encourage any person or institution to make a contribution to the NDRF.

**NDRF is located in the "Public Accounts" of Government of India under "Reserve Funds not bearing interest".**

Department of Agriculture and Cooperation under Ministry of Agriculture (MoA) monitors relief activities for calamities associated with drought, hailstorms, pest attacks and cold wave /frost while rest of the natural calamities are monitored by Ministry of Home Affairs (MHA).

[Source](#)

8) Consider the following statements regarding Essential Commodities Act.

1. The Essential Commodities Act is an act of Parliament of India which was established to ensure the delivery of certain commodities or products, the supply of which if obstructed owing to hoarding or blackmarketing would affect the normal life of the people.

2. The states can include new commodities as and when the need arises, and only the centre can take them off the list once the situation improves.

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 Essential Commodities Act is an act of Parliament of India which was established to ensure the delivery of certain commodities or products, the supply of which if obstructed owing to hoarding or blackmarketing would affect the normal life of the people.**

Additionally, the government can also fix the maximum retail price (MRP) of any packaged product that it declares an "essential commodity".

**The Centre can include new commodities as and when the need arises, and take them off the list once the situation improves.**

The act empowers Central and State Governments concurrently to control production, supply and distribution of certain commodities in view of rising pricing. When difference arise between Centre and States, the act specifies that the Centre will prevail.

9) Access to "the bare necessities" are a sine qua non to live a decent life. In order to improve access to "the bare necessities," the successive Governments have launched which of the following schemes?

- 1. Swachh Bharat Mission (SBM)
- 2. National Rural Drinking Water Programme (NRDWP)
- 3. Pradhan Mantri Awaas Yojana (PMAY)
- 4. Saubhagya
- 5. Ujjwala Yojana

Select the correct answer code:

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

Solution: d)

The "bare necessities" of housing, water, sanitation, electricity and clean cooking fuel are jointly consumed by all the members of a household.

In order to improve access to "the bare necessities," successive governments have made constant efforts. The network of schemes designed to deliver these necessities include inter-alia the Swachh Bharat Mission (SBM),

National Rural Drinking Water Programme (NRDWP), Pradhan Mantri Awaas Yojana (PMAY), Saubhagya, and Ujjwala Yojana.

10) Consider the following statements regarding National Cooperative Development Corporation (NCDC)

1. NCDC is the apex financing organization of Ministry of Commerce and Industry.
2. NCDC is a statutory Corporation set up under an Act of Indian Parliament.
3. NCDC carries out planning and promoting programmes for production, processing, marketing, storage, export and import of agricultural produce.

Which of the above statements is/are correct?

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

Solution: c)

The **National Cooperative Development Corporation (NCDC)** is the apex financing organization of Union Agriculture Ministry.

About NCDC:

It is a **statutory corporation** set up under the National Cooperative Development Corporation Act, 1962.

The objectives of NCDC are **planning and promoting programmes for production, processing, marketing, storage, export and import of agricultural produce**, foodstuffs, industrial goods, livestock and certain other notified commodities and services on cooperative principles.

## 4. Science and Technology

1) TrueNat machines, recently seen in news can be used to test

1. Covid-19
2. Tuberculosis
3. HIV

Select the correct answer code:

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

Solution: d)

### TrueNat

This is a privately designed test that works on the same principle as RT-PCR, but with a smaller kit and with faster results. TrueNat, designed by MolBio Diagnostics Pvt Ltd, Goa, is commonly used for **tuberculosis** and **HIV testing**. The ICMR approved TrueNat for screening and confirmation for **Covid-19**.

[Source](#)

2) Which of the following services generally use encryption to secure data transmission?

1. Payment gateways
2. Messaging services
3. Wireless microphones and Bluetooth devices

Select the correct answer code:

- a) 1, 2

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

Solution: b)

Encryption is the process of encoding messages or information in such a way that only authorized parties can read it.

For example: word "ABC" can become "BCD" in encrypted form, if every letter is replaced by next alphabet. Those who know how it is encoded can only be able to read "ABC" correctly.

All messaging services like WhatsApp, Viber, Google Chat, Yahoo messenger use encrypted services. Banks (payment gateways) and e-commerce sites also use encryption to protect financial and private data including passwords.

Encryption is also used to protect data in transit, for example data being transferred via networks (e.g. the Internet, e-commerce), **mobile telephones, wireless microphones, wireless intercom systems, Bluetooth devices and bank automatic teller machines.**

- 3) Which of the following is/are examples of natural nanomaterials, i.e. those which occur naturally in the world?
1. Haemoglobin in our blood
  2. Particles in volcanic ash
  3. Nano-structures that give colour to peacock's feathers
  4. Exhaust from fossil fuel burning engines

Select the correct answer code:

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

Solution: c)

**Natural nanomaterials**, as the name suggests, are those that occur naturally in the world. These include particles that make up **volcanic ash, smoke, and even some molecules in our bodies, such as the hemoglobin in our blood.** The **brilliant colors of a peacock's feathers** are the result of spacing between nanometer-scale structures on their surface.





Man-made nanomaterials are those that occur from objects or processes created by people. Examples include exhaust from fossil fuel burning engines and some forms of pollution.

- 4) The commercial applications of nano-technology in agriculture sector include
1. Delivery of pesticides and fertilizers
  2. Monitoring soil conditions and plant growth
  3. Detection of animal and plant pathogens
  4. Deliver DNA to plants

Select the correct answer code:

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

Solution: c)

			
Agriculture	Food Processing	Food Packaging	Supplements
<ul style="list-style-type: none"> <li>• Single molecule detection to determine enzyme/substrate interactions</li> <li>• Nanocapsules for delivery of pesticides, fertilizers and other agrichemicals more efficiently</li> <li>• Delivery of growth hormones in a controlled fashion</li> <li>• Nanosensors for monitoring soil conditions and crop growth</li> <li>• Nanochips for identity preservation and tracking</li> <li>• Nanosensors for detection of animal and plant pathogens</li> <li>• Nanocapsules to deliver vaccines</li> <li>• Nanoparticles to deliver DNA to plants (targeted genetic engineering)</li> </ul>	<ul style="list-style-type: none"> <li>• Nanocapsules to improve bioavailability of nutraceuticals in standard ingredients such as cooking oils</li> <li>• Nanoencapsulated flavor enhancers</li> <li>• Nanotubes and nanoparticles as gelation and viscosifying agents</li> <li>• Nanocapsule infusion of plant based steroids to replace a meat's cholesterol</li> <li>• Nanoparticles to selectively bind and remove chemicals or pathogens from food</li> <li>• Nanoemulsions and -particles for better availability and dispersion of nutrients</li> </ul>	<ul style="list-style-type: none"> <li>• Antibodies attached to fluorescent nanoparticles to detect chemicals or foodborne pathogens</li> <li>• Biodegradable nanosensors for temperature, moisture and time monitoring</li> <li>• Nanoclays and nanofilms as barrier materials to prevent spoilage and prevent oxygen absorption</li> <li>• Electrochemical nanosensors to detect ethylene</li> <li>• Antimicrobial and antifungal surface coatings with nanoparticles (silver, magnesium, zinc)</li> <li>• Lighter, stronger and more heat-resistant films with silicate nanoparticles</li> <li>• Modified permeation behavior of foils</li> </ul>	<ul style="list-style-type: none"> <li>• Nanosize powders to increase absorption of nutrients</li> <li>• Cellulose nanocrystal composites as drug carrier</li> <li>• Nanoencapsulation of nutraceuticals for better absorption, better stability or targeted delivery</li> <li>• Nanocochleates (coiled nanoparticles) to deliver nutrients more efficiently to cells without affecting color or taste of food</li> <li>• Vitamin sprays dispersing active molecules into nanodroplets for better absorption</li> </ul>

5) Ministry of Science and Technology recently released new guidelines for the Geo-spatial sector in India. Consider the following statements regarding Geospatial data.

1. Geospatial data is the data about objects or events that have a location on the surface of the earth.
2. The location may be static like the location of a road or dynamic like a moving vehicle or pedestrian.

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 Ministry of Science and Technology released new guidelines for the Geo-spatial sector in India, which deregulates existing protocol and liberalises the sector to a more competitive field.

Geospatial data is data about objects, events, or phenomena that have a location on the surface of the earth. The location may be static in the short-term, like the location of a road, an earthquake event, malnutrition among children, or dynamic like a moving vehicle or pedestrian, the spread of an infectious disease. Geospatial data combines location information, attribute information (the characteristics of the object, event, or phenomena concerned), and often also temporal information or the time at which the location and attributes exist. Geo-spatial data usually involves information of public interest such as roads, localities, rail lines, water bodies, and public amenities. The past decade has seen an increase in the use of geo-spatial data in daily life with various apps such as food delivery apps like Swiggy or Zomato, e-commerce like Amazon or even weather apps.

[Source](#)

6) Artificial Intelligence is beneficial in which of the following areas?

1. Personalized online Shopping
2. Credit card frauds prevention
3. GPS mapping technology
4. Identify nutrient deficiencies in the soil
5. Self-driving vehicles



Select the correct answer code:

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

Solution: c)

### AI's exponential growth

It is embedded in the recommendations we get on our favourite streaming or shopping site; in GPS mapping technology; in the predictive text that completes our sentences when we try to send an email or complete a web search.

### AI in E-Commerce

#### Personalized Shopping

Artificial Intelligence technology is used to create recommendation engines through which you can engage better with your customers.

#### Fraud Prevention

Credit card frauds and fake reviews are two of the most significant issues that E-Commerce companies deal with. By considering the usage patterns, AI can help reduce the possibility of credit card frauds taking place.

#### AI in Agriculture

Artificial Intelligence is used to identify defects and nutrient deficiencies in the soil. This is done using computer vision, robotics, and machine learning, AI can analyze where weeds are growing.

#### AI in Automobiles

Artificial Intelligence is used to build self-driving vehicles. AI can be used along with the vehicle's camera, radar, cloud services, GPS, and control signals to operate the vehicle.

[Source](#)

[Source](#)

- 7) Acinetobacter baumannii, Enterococcus faecalis, Escherichia coli are
- a) Agents of Non-Communicable Diseases (NCDs)
  - b) Pathogens that have the ability to develop resistance to antibiotics.
  - c) Drugs administered to livestock as painkillers/anti-inflammatory drugs.
  - d) Vectors that cause Malaria

Solution: b)

Some of the pathogens to look out for are Acinetobacter baumannii, Enterococcus faecalis, Escherichia coli, Salmonella typhi, Streptococcus pneumoniae and many more. "These pathogens are commonly implicated as causative agents of healthcare associated infections because of their ability to develop resistance to antibiotics.

Source

- 8) Which of the following are considered as main drivers of antimicrobial resistance?
1. Misuse and overuse of antimicrobials
  2. Lack of access to clean water and hygiene for animals
  3. Poor infection and disease prevention in health-care facilities

Select the correct answer code:

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

Solution: d)



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

[Source](#)

9) Hydrogen is considered to be the fuel of the future. Consider the following about it.

1. It is highly flammable.
2. Hydrogen does not occur in deposits or reserves like fossil fuel.
3. Water is the most abundant compound of hydrogen found on earth.

Select the correct answer code:

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

Solution: b)

- Hydrogen is the lightest and first element on the periodic table. Since the weight of hydrogen is less than air, it rises in the atmosphere and is **therefore rarely found in its pure form, H<sub>2</sub>.**
- At standard temperature and pressure, hydrogen is a nontoxic, non-metallic, odorless, tasteless, colorless, **and highly combustible diatomic gas.**
- Hydrogen fuel is a zero-emission fuel burned with oxygen. It can be used in fuel cells or internal combustion engines. It is also used as a fuel for spacecraft propulsion.

**Occurrence of Hydrogen:**

- It is the **most abundant element in the universe.** The sun and other stars are composed largely of hydrogen.
- Astronomers estimate that **90% of the atoms in the universe are hydrogen atoms.** Hydrogen is a **component of more compounds than any other element.**
- **Water is the most abundant compound of hydrogen** found on earth.

## 5. International Relations and Organisations

1) Consider the following statements regarding International Court of Justice.

1. ICJ acts as an appeal court for any international tribunal.
2. The judgements of the ICJ are final and without appeal.
3. UN Security Council can enforce ICJ rulings.

Which of the above statements is/are correct?

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

Solution: c)

The ICJ is not a supreme court to which national courts can turn; it does not act as a court of last resort for individuals. **Nor is it an appeal court for any international tribunal.** It can, however, rule on the validity of arbitral awards.

The Court can only hear a dispute when requested to do so by one or more States. It cannot deal with a dispute on its own initiative. Neither is it permitted, under its Statute, to investigate and rule on acts of sovereign States as it chooses.

**Judgments are final and without appeal.** If there is a dispute about the meaning or scope of a judgment, the only possibility is for one of the parties to make a request to the Court for an interpretation. In the event of the discovery of a fact hitherto unknown to the Court which might be a decisive factor, either party may apply for revision of the judgment.

United Nations Charter authorizes the UN Security Council to enforce Court rulings. However, such enforcement is subject to the veto power of the five permanent members of the council.

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

2) UN convention on the Rights of persons with disabilities includes which of these rights for the differently abled?

1. Rights to accessibility including the information technology
2. Rights to live independently and be included in the community
3. Rights to participate in political and public life

Select the correct answer code:

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

Solution: d)

Rights specific to this convention include the rights to accessibility including the information technology, the rights to live independently and be included in the community (Article 19), to personal mobility (article 20), habilitation and rehabilitation (Article 26), and to participation in political and public life, and cultural life, recreation and sport (Articles 29 and 30).

3) Consider the following statements.

1. India is the world's largest crude oil importer.
2. At present, OPEC countries meet 90% of India's crude oil demand.

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)

India is the world's third-largest crude oil importer.

OPEC meets 78% of India's crude oil demand, 59% of its LPG needs, and nearly 38% of LNG consumption.

Traditionally, OPEC nations offer bigger discounts on crude oil sold to western economies in comparison to eastbound cargoes.

- 4) Hague Code of Conduct (HCOC), sometimes seen in news, is related to
- a) Code of Conduct for civil servants working for United Nations
  - b) Prevention of the proliferation of ballistic missiles
  - c) Prohibition of the usage of biological weapons by the member countries
  - d) None of the above

Solution: b)

The International Code of Conduct against Ballistic Missile Proliferation, also known as the Hague Code of Conduct (HCOC), was established on 25 November 2002 as an arrangement to prevent the proliferation of ballistic missiles.

- 5) Consider the following statements.

1. At present, Saudi Arabia is the largest supplier of Crude oil to India.
2. OPEC+ is an alliance of crude producers, who have been undertaking corrections in supply in the oil markets.
3. OPEC membership is open to any country that is a substantial exporter of oil and which shares the ideals of the organization.

Which of the above statements is/are correct?

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

Solution: c)

US crude oil exports to India jumped to 2.11 million metric tonnes in February, helping it dislodge Saudi Arabia as the second largest supplier to India, the world's third largest oil importer.

This comes in the backdrop of India increasing its oil imports from the US, with the Indian government working on diversifying the country's energy basket with crude oil supplies from non-Organization of the Petroleum Exporting Countries (Opec) sources.

India's dramatic surge in US crude inflows has helped the exporter to displace Saudi Arabia for the first time.

Global crude oil prices have surged after the Opec-plus grouping's decision to retain supply curbs.

OPEC+ is an alliance of crude producers, who have been undertaking corrections in supply in the oil markets. OPEC membership is open to any country that is a substantial exporter of oil and which shares the ideals of the organization.

[Source](#)

[www.insightsonindia.com](http://www.insightsonindia.com)

- 6) Consider the following statements regarding UN Security Council.
1. It is the only UN body with the authority to issue binding resolutions to member states.
  2. The presidency of the Council is held by each of the members in turn for one month, following the English alphabetical order of the Member States names.
  3. It was established in 1945 and headquartered in Geneva.

Which of the above statements is/are correct?

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

Solution: d)

All members of the United Nations agree to accept and carry out the decisions of the Security Council. While other organs of the United Nations make recommendations to member states, only the Security Council has the power to make decisions that member states are then obligated to implement under the Charter.

The presidency of the Council is held by each of the members in turn for one month, following the English alphabetical order of the Member States names.

It was established in 1945 and headquartered in New York.

- 7) Consider the following statements about the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC).
1. Nepal and Bhutan are members of the BIMSTEC.
  2. It was established through the Bangkok Declaration.
  3. It is an implicit free trade agreement among the member nations.

Which of the above statements is/are correct?

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

Solution: a)

The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a regional organization comprising seven Member States lying in the littoral and adjacent areas of the Bay of Bengal constituting a contiguous regional unity.

This sub-regional organization came into being in 1997 through the **Bangkok Declaration**. It constitutes seven Member States: five deriving from South Asia, including Bangladesh, Bhutan, India, Nepal, Sri Lanka, and two from Southeast Asia, including Myanmar and Thailand.

**It is not an FTA. It is a sector-driven organization** focussing on sharing best practices and help each other in agriculture, public health, poverty alleviation, counter-terrorism, environment, culture etc. Fourteen priority sectors of cooperation have been identified and several BIMSTEC centres have been established to focus on those sectors.

- 8) Shanghai Cooperation Organisation (SCO) member states include
1. Afghanistan
  2. Belarus
  3. Mongolia
  4. Iran

Select the correct answer code:

- a) 2, 3
- b) 1, 3
- c) 1, 2, 4
- d) None of the above

Solution: d)

The SCO currently comprises eight Member States (China, India, Kazakhstan, Kyrgyzstan, Russia, Pakistan, Tajikistan and Uzbekistan).

- 9) Survival International sometimes seen in news advocates the rights of
- a) Trafficked human beings
  - b) Leprosy patients
  - c) Tribal people
  - d) Refugees

Solution: c)

Survival International is a human rights organisation formed in 1969 that campaigns for the **rights of indigenous and/or tribal peoples** and uncontacted peoples. The organisation's campaigns generally focus on tribal peoples' desires to keep their ancestral lands. Survival International states that it aims to help foster tribal people's self-determination.

- 10) Consider the following statements regarding International Atomic Energy Agency (IAEA).

1. IAEA is entrusted with the task of upholding the principles of the Nuclear Non-Proliferation Treaty of 1970.
2. IAEA works with its member states and multiple partners worldwide to promote the safe, secure and peaceful use of nuclear technologies.
3. Established under the UN treaty, the agency reports to both the UN General Assembly and the UN Security Council.

Which of the above statements is/are correct?

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

Solution: a)

As the preeminent nuclear watchdog under the UN, the IAEA is entrusted with the task of upholding the principles of the Nuclear Non-Proliferation Treaty of 1970. Established as an autonomous organisation on July 29, 1957, at the height of the Cold War between the U.S. and the Soviet Union, the IAEA claims that it **“works with its member states and multiple partners worldwide to promote the safe, secure and peaceful use of nuclear technologies”**. Though established independently of the UN through its own international treaty, the agency reports to both the UN General Assembly and the Security Council.

Source

- 11) Consider the following statements.

1. China is the largest producer of generic medicines in the world.
2. India launched 'Vaccine Maitri' campaign, aimed at provisioning COVID-19 vaccines to countries both near to and away from its immediate neighbourhood.

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)

India is the largest producer of generic medicines in the world.

India's ongoing 'Vaccine Maitri' campaign, which is aimed at provisioning COVID-19 vaccines to countries both near to and away from its immediate neighborhood, is one of the most important recent initiatives to leverage its science and technological advantages for the furtherance of its foreign policy objectives.

Source Source

## 6. Polity

1) Consider the following statements.

1. The "inner-line permit" (ILP) system restricts movement in areas close to the border for everyone other than those with a formal permission.
2. Uttarakhand shares border with China and Nepal.
3. Uttarakhand does not have any ILP system.

Which of the above statements is/are correct?

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

Solution: a)

The Uttarakhand government, had sought withdrawal of "inner-line permit" (ILP) system in Niti Valley of Chamoli district and Nelang Valley of Uttarkashi district for better border management and expansion of tourism and other economic activities in villages located there.

The ILP system restricts movement in areas close to the border for everyone other than those with a formal permission. In Uttarakhand, tourists have to obtain ILP for locations near China border, at least in the three districts of Uttarkashi, Pithoragarh and Chamoli.

Uttarakhand shares a 350-km border with China and a 275-km boundary with Nepal.

Source

2) Consider the following statements.

1. It requires presidential assent for states notifying changes to OBC categories.
2. According to Indra Sawhney judgement, under no circumstances the Centre can exceed 50 percent limit on reservations.
3. Article 16 of the Constitution deals with equality of opportunity in public employment.

Which of the above statements is/are correct?

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

Solution: b)

The Supreme Court recently said it would hear arguments on the issue of whether the landmark 1992 judgement in the Indra Sawhney case should be re-looked at and referred to a larger bench.

The verdict in the case of the *Indra Sawhney vs Union of India*— also known as the Mandal verdict — capped reservations at 50 percent.

**The judgment also laid down that the extent of reservation should not cross the 50 percent limit, unless a special case was made out for extraordinary situations and peculiar conditions to relax the rule.**

**Article 16 of the Constitution deals with equality of opportunity in public employment**, and Clause 4 under it reads, "Nothing in this article shall prevent the State from making any provision for the reservation of appointments or posts in favor of any backward class of citizens which, in the opinion of the State, is not adequately represented in the services under the State."

**Article 342A introduced by the 102nd Constitution Amendment Act (2018), which requires presidential (Centre's) assent for states notifying changes to OBC categories.**

[Source](#)

[Source](#)

3) Consider the following statements.

1. Delhi's current status as a Union Territory with a Legislative Assembly was included in the original Constitution.
2. The status, powers and functions of the Lieutenant Governor of Delhi is similar to that of a Governor of a State.
3. The Lieutenant Governor of Delhi have the power to refer any matter, over which there is a disagreement with the elected government, to the President.

Which of the above statements is/are incorrect?

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

Solution: b)

Delhi's current status as a Union Territory with a Legislative Assembly is an outcome of the 69th Amendment Act through which Articles 239AA and 239BB were introduced in the Constitution.

The Bench of then Chief Justice of India Dipak Misra and Justices A K Sikri, A M Khanwilkar, D Y Chandrachud and Ashok Bhushan, in three separate yet concurring orders, had said: "The status of the Lieutenant Governor of Delhi is not that of a Governor of a State, rather he remains an Administrator, in a limited sense, working with the designation of Lieutenant Governor".

The L-G does have the power to refer any matter, over which there is a disagreement with the elected government, to the President under Article 239AA(4).

[Source](#)

4) Consider the following statements.

1. Nominated members of the Rajya Sabha have the same rights and privileges as elected members of Rajya Sabha with the right to vote in the election of the President.
2. The anti-defection law was not present in the original Constitution.
3. The Nominated members of the Rajya Sabha are subjected to disqualification, if they join a political party within six months of being nominated to the House.

Which of the above statements is/are correct?

- a) 1, 2



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

Solution: b)

**In 1985 the Tenth Schedule, popularly known as the anti-defection law, was added to the Constitution.**

The law specifies the circumstances under which changing of political parties by MPs invite action under the law. The law covers three types of scenarios with respect to an MP switching parties. The first is when a member elected on the ticket of a political party “voluntarily gives up” membership of such a party or votes in the House contrary to the wishes of the party. The second possibility is when an MP who has won his or her seat as an independent candidate after the election joins a political party. In both these instances, the MP lose the seat in the House on changing (or joining) a party.

The third scenario relates to nominated MPs. In their case, the law specifies that **within six months of being nominated to the House, they can choose to join a political party.**

[Source](#)

- 5) Consider the following statements regarding Privilege motion.
1. It can be moved only in the Lok Sabha.
  2. Any notice should be relating to an incident of recent occurrence.
  3. The Speaker is the first level of scrutiny of a privilege motion.

Which of the above statements is/are correct?

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

Solution: c)

**Parliamentary privileges** are certain rights and immunities enjoyed by members of Parliament, individually and collectively, so that they can “effectively discharge their functions”. When any of these rights and immunities are disregarded, the offence is called a breach of privilege and is punishable under law of Parliament.

- A notice is moved in the form of a motion by any member of either House against those being held guilty of breach of privilege.
- A member may, with the consent of the Speaker or the Chairperson, raise a question involving a breach of privilege either of a member or of the House or of a committee thereof. The rules however mandate that any notice should be relating to an incident of recent occurrence and should need the intervention of the House.
- The Speaker/RS chairperson is the first level of scrutiny of a privilege motion. The Speaker/Chair can decide on the privilege motion himself or herself or refer it to the privileges committee of Parliament.

- 6) Consider the following statements regarding President’s rule that is imposed under Article 356 of the Constitution.

1. It cannot be imposed without the written recommendation of the Governor of the concerned state.
2. Every proclamation of President’s rule must be approved by both the houses of Parliament within a stipulated time.

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)

Article 356 empowers the President to issue a proclamation, if he is satisfied that a situation has arisen in which the government of a state cannot be carried on in accordance with the provisions of the Constitution.

**Notably, the president can act either on a report of the governor of the state or otherwise too (ie, even without the governor's report).**

A proclamation imposing President's Rule must be approved by both the Houses of Parliament within two months from the date of its issue. If approved by both the Houses of Parliament, the President's Rule continues for six months.

- 7) The 102<sup>nd</sup> Constitutional Amendment Act, sometimes seen in news is related to
- 10% reservation for Economically weaker sections
  - Constitutional status to National Commission for Backward Classes
  - Extend reservation for Scheduled Castes (SCs) and Scheduled Tribes (STs) to Lok Sabha and legislative bodies
  - Abolition of Legislative Councils in certain States

Solution: b)

102nd Constitution Amendment introduced in 2018, this amendment grants constitutional status to the National Commission for Backward Classes and says the President would notify the lists of backward classes for all States in consultation with the Governors.

Source

- 8) With reference to administration of Union Territories, consider the following statements
- Every union territory is administered by the President acting through an administrator appointed by him.
  - An administrator of a union territory is an agent of the President and head of state like a governor.
- Which of the above statements is/are correct?
- 1 only
  - 2 only
  - Both 1 and 2
  - Neither 1 nor 2

Solution: a)

Under Article 1 of the Constitution, the territory of India comprises three categories of territories: (a) territories of the states; (b) union territories; and (c) territories that may be acquired by the Government of India at any time. Every union territory is administered by the President acting through an administrator appointed by him.

**An administrator of a union territory is an agent of the President and not head of state like a governor.** The President can specify the designation of an administrator; it may be Lieutenant Governor or Chief Commissioner or Administrator.

- 9) Consider the following statements regarding Sedition Law in India.
- Section 124A of the Indian Penal Code (IPC), which deals with sedition, was drafted by Thomas Babington Macaulay.
  - Mahatma Gandhi was never held under the **sedition trial during freedom movement.**

Which of the above statements is/are correct?

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

Solution: a)

Famous sedition trials during freedom movement:

The first is the trial of Jogendra Chandra Bose in 1891. Bose, the editor of the newspaper, Bangobasi, wrote an article criticizing the Age of Consent Bill for posing a threat to the religion and for its coercive relationship with Indians.

The other most well-known cases are the sedition trials of Bal Gangadhar Tilak and the trial of Mahatma Gandhi in 1922. **Mahatma Gandhi for his articles published in Young India.**

10) Shreya Singhal v. Union of India case is related to

- a) Right to constitutional remedies would remain suspended during a national emergency.
- b) Right to fair trial
- c) Right to privacy
- d) None of the above

Solution: d)

Shreya Singhal case is well known for the **striking down of Section 66A of the IT Act.**

Section 69A grants to the government the power to issue directions to intermediaries for blocking access to any information that it considers prejudicial to, among other things, the sovereignty and integrity of India, national security, or public order. Section 69A (3) envisages a jail sentence for up to seven years for intermediaries who fail to comply.

11) Consider the following with regards to Anti-defection provisions.

1. Legislators in no circumstances can change their party without the risk of disqualification.
2. The provisions allows a party to merge with or into another party provided that at least two-thirds of its legislators are in favour of the merger.

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)

Exceptions under the law:

Legislators may change their party without the risk of disqualification in certain circumstances.

The law allows a party to merge with or into another party provided that at least two-thirds of its legislators are in favour of the merger.

In such a scenario, neither the members who decide to merge, nor the ones who stay with the original party will face disqualification.

Decision of the Presiding Officer is subject to judicial review

[Source](#)

## 7. History, Art and Culture

1) Consider the following statements regarding pottery during Harappan civilisation.

1. The pottery of the Harappan culture consisted of mainly wheel-made ware, turned in various shapes and sizes, but without any colours.
2. They used various mortars and cements made of limestone, gypsum and mica.

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)

Chemical techniques in India can be traced back all the way to the Indus valley or Harappan civilisation (3rd millennium BCE).

Pre-Harappan Indians were acquainted with the art of making baked or burnt clay pottery as well as painting the same with two or more colours.

**The pottery of the Harappan culture consisted of mainly wheel-made ware, turned in various shapes, sizes and colours out of the well-levigated alluvium of the Indus.**

The colour and other characteristics of the wares depended upon the composition of the clay used and techniques of firing under either oxidising or reducing conditions. The Harappans also experimented with various mortars and cements made of burnt limestone, gypsum and mica, among other components.

The Harappan artisans must have had an intimate knowledge of the processing and properties of several naturally occurring chemical substances. The craftsmen were highly skilled in the art of shaping and polishing the precious and semi-precious stones used for the production of beads.

A type of pottery, now known as 'Painted Grey Ware', is associated with the Vedic period. Later, 'Northern Black Polished Ware' also came into being in the eastern part of the Gangetic plains.

Source

2) Consider the following statements regarding Sattras of Assam.

1. Sattras are monastic institutions created as part of the 16th century Neo-Vaishnavite reformist movement started by Vaishnavite saint-reformer Srimanta Sankaradeva.
2. These Sattras were established as centres of religious, social and cultural reforms.
3. During the Ahom reign, most of the Sattras across Assam were destroyed.

Which of the above statements is/are correct?

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

Solution: a)

**Sattras are monastic institutions created as part of the 16th century Neo-Vaishnavite reformist movement started by Vaishnavite saint-reformer Srimanta Sankaradeva (1449-1596).** As the saint travelled across Assam, spreading his teachings and propagating an egalitarian society, these Sattras/Thans were established as **centres of religious, social and cultural reforms** in the 16th century. Today, Sattras are spread across the state,

promulgating Sankardeva's unique "worship through art" approach with music (borgeet), dance (xattriya) and theatre (bhauna).

Sankardeva propagated a form of Bhakti called eka-sharana-naam-dhrama, and espoused a society based on equality and fraternity, free from caste differences, orthodox Brahmanical rituals and sacrifices. His teaching focused on prayer and chanting (naam) instead of idol worship. His dharma was based on the four components of deva (god), naam (prayers), bhakats (devotees), and guru (teacher).

Scholars, however, argue that post the demise of Sankardeva, the nature of the Vaishnavite movement has changed significantly. "After his demise, due to ideological differences among his disciples, the Sattras got divided into four independent sectarian divisions.

**During the Ahom reign, the Sattras received a lot of donations in the form of land or money from the kings.**

[Source](#)

## 8. Defence and Security

- 1) The term 'Brute Force Acquisition' is related to
  - a) Encryption of mobile data
  - b) Private land acquisition
  - c) Mobile device forensics
  - d) None of the above

Solution: c)

Brute force acquisition can be performed by 3rd party passcode brute force tools that send a series of passcodes / passwords to the mobile device. This technique uses trial and error in an attempt to create the correct combination of password or PIN to authenticate access to the mobile device.

- 2) 'Christchurch call to action' essentially tackles the issue of
  - a) Combat terrorism and extremism online
  - b) Limiting the spread of nuclear weapons
  - c) Safe and Environmentally sound recycling of Ships
  - d) Reduction and Limitation of Strategic Offensive Arms

Solution: a)

India has joined a major global initiative to combat terrorism and extremism online and secure the internet. The initiative -- 'Christchurch call to action' -- has been named after the New Zealand city where 51 people were killed in an attack on mosques. The declaration on Christchurch call to action said a free, open and secure internet is a powerful tool by which to promote connectivity, enhance social inclusiveness and foster economic growth.

- 3) If the Government set-up a dedicated non-lapsable fund for Defence and Internal Security, it cannot receive funds to it from which of the following sources
  - a) Consolidated Fund of India
  - b) Disinvestment proceeds of *Defence Public Sector Undertakings*.
  - c) Proceeds from the monetisation of surplus defence land
  - d) It can receive funds from all the above sources

Solution: d)

To bridge the gap between projected budgetary requirements and budget allocation for defence and internal security and to provide greater predictability for enabling critical defence capital expenditure, the Commission has recommended setting up of a dedicated non-lapsable fund, the Modernisation Fund for Defence and Internal Security (MFDIS), with four specific sources: (a) **Transfers from the Consolidated Fund of India**, (b) **disinvestment proceeds of DPSEs**, (c) **proceeds from the monetisation of surplus defence land** and (d) **proceeds of receipts from defence land** likely to be transferred to state governments and for public projects in the future.

[Source](#)

- 4) The Budapest Convention, sometimes seen in news is related to
- World Trade Organization
  - Cyber Security
  - Organic Farming
  - Ozone Depletion

Solution: b)

The Convention on Cybercrime, also known as the **Budapest Convention on Cybercrime** or the Budapest Convention, is the first international treaty seeking to **address Internet and computer crime (cybercrime)** by harmonizing national laws, improving investigative techniques, and increasing cooperation among nations. It was drawn up by the Council of Europe in Strasbourg, France, with the active participation of the Council of Europe's observer states Canada, Japan, Philippines, South Africa and the United States.

Since 2018, India has been reconsidering its stand on the Convention after a surge in cybercrime, though concerns about sharing data with foreign agencies remain.

## 9. Reports and Indices

- 1) Global Innovation Index seeks to assist economies in evaluating their innovation performance. Which of the following are the pillars of GII?
- Human Capital and Research
  - Infrastructure
  - Knowledge and Technological outputs
  - Market Sophistication
  - Creative outputs

Select the correct answer code:

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

Solution: d)

GII has two sub-indices: the Innovation Input Sub-Index and the Innovation Output Sub-Index, and seven pillars, each consisting of three sub-pillars, further divided into a total of 80 indicators. The Innovation Input sub-index and the Innovation Output Sub-Index have equal weight in calculating the overall GII. The Innovation Input sub-index has five pillars: (i) Institutions; (ii) Human Capital and Research; (iii) Infrastructure; (iv) Market Sophistication; and (v) Business Sophistication. The Innovation Output Sub-Index has two pillars (i) Knowledge and Technological outputs and (ii) Creative outputs.

Source: Economic Survey 2020-21 Vol-1

- 2) Global Risks Report, 2021 is released by
- United Nations Environment Programme
  - Financial Action Task Force (FATF)
  - World Economic Forum
  - World Bank

Solution: c)

The **WEF's Global Risks report for 2021** states that environmental risks continue to threaten the global economy. The **top five risks** are extreme weather, climate action failure, human environmental damage, infectious diseases and biodiversity loss.

In terms of impact, infectious diseases top the list, followed by climate action failure.

## 10. Maps / Places

- 1) Arrange the following Islands from North to South
- Takeshima Island
  - Kuril Island
  - Senkaku Island

Select the correct answer code:

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

Solution: c)



- 2) Bamiyan, sometimes in news is located in
- Iran
  - Turkey
  - Afghanistan
  - Syria

Solution: c)



Bamiyan is situated in the high mountains of the Hindu Kush in the central highlands of Afghanistan. The valley, which is set along the line of the Bamiyan River, was once integral to the early days of the Silk Roads, providing passage for not just merchants, but also culture, religion and language.

[Source](#)

3) Lithium Triangle is a region rich in lithium reserves around the borders of

1. Venezuela
2. Bolivia
3. Brazil
4. Chile
5. Argentina

Select the correct answer code:

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

Solution: c)



The Lithium Triangle is a region of the Andes rich in lithium reserves around the borders of **Argentina, Bolivia and Chile**. The lithium in the triangle is concentrated in various salt pans that exist along the Atacama Desert and neighboring arid areas.

The area is thought to hold around 54% of the world's lithium reserves.

4) Which of the following African countries border Indian Ocean?

1. Ethiopia
2. Kenya
3. Somalia
4. Zambia

Select the correct answer code:

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

Solution: b)



5) Which of the following glaciers are located in Uttarakhand?

1. Bandarpunch Glacier
2. Zemu Glacier
3. Nubra Glacier
4. Nanda Devi Glacier

Select the correct answer code:

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

Solution: c)

Zemu Glacier is located in Sikkim

Nubra Glacier is located in Ladakh

[Source](#)

[Source](#)

6) Consider the following statements regarding Chambal River.

1. Chambal River is a tributary of the River Ganga and is part of the greater Gangetic drainage system.
2. Kunnu, Pranhita and Kalisindh are the tributaries of Chambal River.

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)

The Eastern Rajasthan Canal Project aims to harvest surplus water available during the rainy season in rivers in southern Rajasthan such as **Chambal and its tributaries including Kunnu, Parvati, Kalisindh** and use this water in south-eastern districts of the state where there is a scarcity of water for drinking and irrigation.

**Chambal River** is a tributary of the Yamuna River in central India, and thus forms part of the greater Gangetic drainage system. The river flows north-northeast through Madhya Pradesh, running for a time through Rajasthan, then forming the boundary between Rajasthan and Madhya Pradesh before turning southeast to join the Yamuna in Uttar Pradesh state.

**Pranhita River** is the tributary of Godavari river.

[Source](#)

7) Consider the following statements.

1. The term 'Indo-Pacific' refers to the maritime space stretching from the littorals of East Africa and West Asia, across the Indian Ocean and Eastern Pacific Ocean.
  2. Paracel Islands is present to the north of Spratly 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: b)

The term 'Indo-Pacific' refers to the maritime space stretching from the littorals of East Africa and West Asia, across the Indian Ocean and western Pacific Ocean, to the littorals of East Asia.

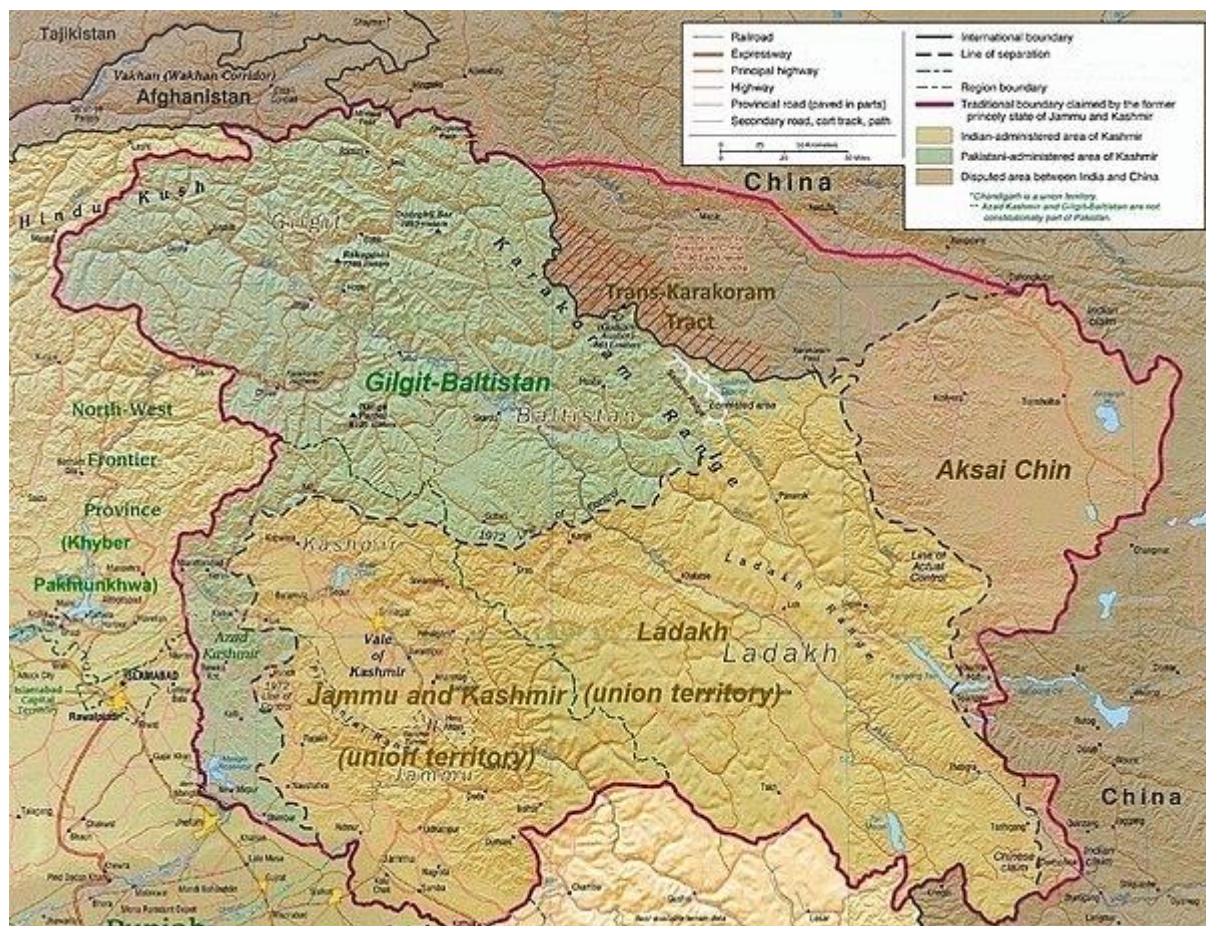


8) India-China Line of Actual Control touches through which of these regions?

- a) Siachen Glacier
- b) Aksai Chin
- c) Srinagar
- d) Kargil

Solution: b)





The western portion of the Line of Actual Control, separating the Eastern Ladakh and Aksai Chin.

9) Consider the following statements regarding Mekong River.

1. Mekong River rises in the Tibetan Plateau and flows into South China Sea.
2. The capital of Laos and Cambodia are situated on the banks of the Mekong River.

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 Mekong begins on the Tibetan Plateau and runs for more than 2,600 miles through China, Myanmar, Thailand, Laos, Cambodia, and Vietnam before emptying into the South China Sea.

The capital of Laos, and the capital of Cambodia both stand on its banks.

10) Arrange these geographical regions from the West to east.

1. Gulf of Aden
2. Laccadive Sea
3. Gulf of Thailand
4. South China Sea

Select the correct answer code:

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

Solution: a)



11) Which of the following Central Asian countries border China?

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

Select the correct answer code:

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

Solution: c)



12) Bhasan Char, an Island recently in news is located in

[www.insightsonindia.com](http://www.insightsonindia.com)



- a) Arabian Sea
- b) Bay of Bengal
- c) South China Sea
- d) Sea of Japan

Solution: b)

Rohingya refugees are transported to Bhashan Char, or floating island, in the Bay of Bengal.

