



All India Civil Services Coaching Centre

(Under the aegis of Government of Tamil Nadu)

Answer Key Explanation

Test 7 – GS Paper I

Maximum Questions: 100

Maximum Marks: 200

1. Ans. B

Exp:

- Statement 1 is incorrect: It is a centrally sponsored scheme.
- Statement 2 is incorrect: It is being implemented by the Ministry of Women and Child Development.

National Creche Scheme

- National Creche Scheme (earlier named as Rajiv Gandhi National Creche Scheme) is being implemented as a Centrally Sponsored Scheme through States/UTs with effect from 1.1.2017 to provide day care facilities to children (age group of 6 months to 6 years) of working mothers. It is being implemented by the Union Ministry of Women and Child Development.
- The salient features of the National Creche Scheme are as follows:
- Daycare Facilities including Sleeping Facilities.
- Early Stimulation for children below 3 years and pre-school Education for 3 to 6 years old children.
- Supplementary Nutrition (to be locally sourced)
- Growth Monitoring
- Health Check-up and Immunization
- Further, the guidelines provide that:
- Crèches shall be open for 26 days in a month and for seven and half (7-1/2) hours per day.
- The number of children in the crèche should not be more than 25 per crèche with 01 Worker and 01 helper respectively.

- The Minister of Women and Child Development informed Lok Sabha about the National Crèche Scheme.

2. Ans. B

Exp: Option (b) is correct: Delhi Government launched Operation SHIELD to combat and to contain the spread of the highly contagious virus. Also, check the complete list of COVID-19 hotspots in Delhi.

The description of SHIELD as follows:

- **S for Sealing:** Sealing the contaminated areas based on risk factors and spread of the disease.
- **H for Home quarantine:** After sealing the area, the next step is to home quarantine all the people living in the contaminated areas.
- **I for Isolation and tracing:** The third stage refers to tracing the first and second contacts of the COVID-19 hit patients and later on isolating them to contain its spread.
- **E for Essential supply:** Delhi Government has ensured that all the essential items will be delivered in the areas declared as hotspots.
- **L for Local sanitisation:** After tracing and isolating the positive COVID-19 cases, the Delhi Government will sanitise the areas.
- **D for Door-to-door health checks:** In the last stage of this Operation, the Delhi Government will conduct door-to-door check-ups to ensure that no one has developed symptoms over this period.

3. Ans. D

Exp: Option (d) is the correct answer.

Statement 1 is incorrect. Adjournment Motion can only be brought in the Lok Sabha to discuss matter which is definite, factual, urgent and of public importance. It involves an element of censure against the government and hence Rajya Sabha is not permitted to make use of this device.

Statement 2 is incorrect. Council of ministers need not resign on passing of Adjournment Motion in the Lok Sabha. On passing of No Confidence motion, However Council of ministers must resign.

4. Ans. B

Exp: Option (b) is the correct answer.

Statement 1 is incorrect. A cantonment board is established for municipal administration for civilian population in the cantonment area.

Statement 3 is incorrect. It is set up under the provisions of the Cantonments Act of 2006—a legislation enacted by the Central government. It works under the administrative control of the defence ministry of the Central government. Thus, unlike the above four types of urban local bodies, which are created and administered by the state government, a cantonment board is created as well as administered by the Central government.

Statement 2 is correct. A cantonment board consists of partly elected and partly nominated members. The elected members hold office for a term of five years while the nominated members (i.e., ex-officio members) continue so long as they hold the office in that station. The military officer commanding the station is the ex-officio president of the board and presides over its meetings. The vice-president of the board is elected by the elected members from amongst themselves for a term of five years.

The Cantonments Act of 2006 was enacted to consolidate and amend the law relating to the administration of cantonments with a view to impart greater democratization, improvement of their financial base to make

provisions for developmental activities and for matters connected with them. This Act has repealed the Cantonments Act of 1924. At present (2016), there are 62 cantonment boards in the country. They are grouped into four categories on the basis of the civil population.

The functions performed by a cantonment board are similar to those of a municipality. These are statutorily categorized into obligatory functions and discretionary functions. The source of income includes both tax revenue and non-tax revenue.

The executive officer of the cantonment board is appointed by the president of India. He implements all the resolutions and decisions of the board and its committees. He belongs to the central cadre established for the purpose.

Source: Indian Polity by Laxmikant, Chapter 39: Municipalities, Page No.39.7

5. Ans. B

Exp: Sources for obtaining info about the interior of the earth:

- **Direct Sources:** The most easily available solid earth material is surface rock or the rocks we get from mining areas. Volcanic eruption forms another source of obtaining direct information.
- **Indirect Sources:** Meteors reaching the earth - It may be noted that the material that becomes available for analysis from meteors, is not from the interior of the earth.
- **Gravitation force:** The uneven distribution of mass of material within the earth influences this value. The reading of the gravity at different places is influenced by many other factors. These readings differ from the expected values. Such a difference is called gravity anomaly. Gravity anomalies give us information about the distribution of mass of the material in the crust of the earth.

- **Seismic Activity:** The study of seismic waves provides a complete picture of the layered interior.

6. Ans. D

Exp: India's offshore and deep sea fish is very poor as only 10-12 per cent of potential is caught at present.

Following is/are the prominent reasons for this sad state of affairs –

- **Tropical Climate:** India has tropical climate in which fish cannot be preserved for a long time and spoils very quickly.
- Indian coast does not have many gulfs, bays, estuaries and backwaters as is the case with Norway. As such, it lacks good fishing grounds.
- **Monsoonal Climate:** Marine fishing in India is a seasonal phenomena. Strong winds during the monsoon season accompanied by tropical cyclones often hinder fishing operations.

7. Ans. D

Exp:

- In order to mobilize gold for productive purpose and to reduce the country's reliance on imports of gold, two main schemes were launched in 2015:
 - 1) the Sovereign Gold Bond Scheme (SGBS) and
 - 2) the Gold Monetization Scheme (GMS).
- GMS is intended to mobilise gold held by households and institutions of the country and facilitate its use for productive purposes, and in the long run, to reduce country's reliance on the import of gold.
- All Scheduled Commercial Banks excluding RRBs are eligible to implement the scheme.
- The customer earns an interest rate decided by the bank, which will be exempted from income, wealth or capital gains taxes.
- **Sovereign Gold Bond (SGB):** government securities denominated in grams of gold, substitutes for holding physical gold.

Investors have to pay the issue price in cash and the bonds will be redeemed in cash on maturity. Bond is issued by Reserve Bank on behalf of Government of India.

- The risks and costs of storage are eliminated. Investors are assured of the market value of gold at the time of maturity and periodical interest, free from issues like making charges and purity in the case of gold in jewellery form.
- The Bonds bear interest at the rate of 2.75 per cent (fixed rate) per annum on the amount of initial investment. Interest will be credited semi-annually to the bank account of the investor.

8. Ans. B

Exp:

- Currencies in our country are issued by the RBI with the backing of reserves comprised of gold and foreign exchange (foreign currencies). For the issue of currencies, the RBI follows Minimum Reserve System at present. The Minimum Reserve System (MRS) is followed from 1956 onwards.
- Under the Minimum Reserve System, the RBI has to keep a minimum reserve of Rs 200 crore comprising of gold coin, gold bullion and foreign currencies. Out of the total Rs 200 crores, Rs115 crore should be in the form of gold coins or gold bullion. The purpose of shifting to MRS was to expand money supply to meet the needs of increasing transactions in the economy.
- The minimum reserve is a token of confidence and doesn't have any practical connection with amount new currencies issued by the RBI. Under the Minimum Reserve System, RBI can issue unlimited amount of currency by keeping the reserve. But RBI follows some principle or rule for issuing new currencies based upon economic growth and transaction needs of the people.

9. Ans. B

Exp:

- Tank Irrigation: The ratio of tank irrigated land to the total irrigated land of the country has reduced from 14 per cent at the time of independence to about 3 per cent at present.
- Canal Irrigation: The ratio of canal irrigated land to the total irrigated land of the country has reduced from about 40 per cent at the time of independence to about 26 per cent at present.
- So, percentage of area under well and tubewell irrigation has increased in the total irrigated area since independence. Well and Tubewell Irrigation now accounts for 62 per cent of the net irrigated area in the country as against 26 per cent of canal and only 3 per cent of tank irrigation.

10.Ans. A

Exp:

- The Gupta Empire existed between 320 to 550 AD. There are only two known examples of cave paintings of the Gupta period in ancient India. One of these is paintings of Ajanta Caves and other Bagh caves.
- The world famous paintings at Ajanta also fall into two broad phases. The earliest is noticed in the form of fragmentary specimens in cave nos. 9 & 10, which are datable to second century B.C. The headgear and other ornaments of the images in these paintings resemble the bas-relief sculpture of Sanchi and Bharhut. The second phase of paintings started around 5th – 6th centuries A.D. and continued for the next two centuries.
- There are seven Buddhist rock cut caves situated on the bank of Baghini river. These consist of Viharas stupa in chaitya hall and residential cells. There are several sculptures of Buddha and Bodhisattvas and was one covered lavishly with painting of which there are some traces now. A painting of the bodhisattva Padmapani, of these caves is reputed as a prototype of the well-known Padmapani figure at Ajanta. The

rock cut caves were quarried between 5th -6th century AD.

- **Bagh Caves:** The Bagh Caves are a group of nine rock-cut monuments, situated among the southern slopes of the Vindhyas in Bagh town of Dhar district in Madhya Pradesh state in central India. These are examples of Indian rock-cut architecture. The Bagh caves, like those at Ajanta, were excavated by master craftsmen on perpendicular sandstone rock face of a hill on the far bank of a seasonal stream, the Baghani. Buddhist in inspiration, of the nine caves, only five have survived.
- **Lomash caves:** The Lomas Rishi Cave, is a sacred architectural feature located in the Barabar and Nagarjuni hills of Jehanabad district in the Indian state of Bihar. This rock-cut cave was carved out as a sanctuary. It was built during the Ashokan period of the Maurya Empire in the 3rd century BC, for Ajivikas.

11.Ans. A

Exp:

Discretionary Powers of the President of India are those that the President can exercise without the aid and advice of Council of Ministers.

In cases except the last case, the President is not bound by the advice of the council as the council does not enjoy the confidence of the House. In the last case, issuing of an ordinance - The President acts on aid and advice of the Council of Ministers.

12.Ans. C

Exp:

The term Union only denotes the states whereas territory denotes the states as well as Union Territories and any territories that may be acquired in future. Hence statement 1 is wrong.

Individual States in India have no right to secede from the Union, and nor is the Indian Union a result of agreement between the constituent States - like the United States of

America. In fact the Indian Union can create new states and redraw state boundaries. Hence India is called an indestructible Union of destructible states

13.Ans. C

Exp: A team of scientists from Harvard University has created a unique bionic leaf that uses sunlight (solar energy) to split water molecules into oxygen and hydrogen and hydrogen-eating bacteria to produce liquid fuels from CO₂. This artificial photosynthesis device has been dubbed bionic leaf 2.0.

- The new system can convert solar energy to biomass with 10% efficiency. Its efficiency is much higher than the 1% seen in the fastest growing plants.
- Scientists had used a new cobalt-phosphorous alloy catalyst for this experiment in order to increase efficiency. The catalyst chemical design allows the system to self-heal i.e. doesn't allow material to leech into solution.

14.Ans. A

Exp:

- Atmospheric brown cloud, a layer of air pollution containing aerosols such as soot or dust that absorb as well as scatter incoming solar radiation, leading to regional and global climatic effects and posing risks to human health and food security.
- **Five regional ABC hotspots around the world have been identified:**
 - 1) East Asia
 - 2) Indo-Gangetic Plain in South Asia
 - 3) Southeast Asia
 - 4) Southern Africa; and
 - 5) the Amazon Basin.
- It is certain that ABCs have caused dimming at the surface. It is virtually certain that India and China are dimmer (at the surface) today by at least 6 per cent, compared with the pre-industrial values. Absorbed solar radiation at the surface in China and India are lower today by 15 W m⁻² or more, compared with the pre-industrial values. It is certain

that soot in ABCs has increased solar heating of the atmosphere. It is highly likely that black carbon (BC) in ABCs has increased the vertically averaged annual mean solar absorption in the troposphere (from the surface up to 14 km in altitude) by about 15 per cent (about 14 W m⁻²) and the solar heating at elevated levels (1 - 4 km) over India and China by as much as 20 - 50 per cent (6 - 20 W m⁻²).

15.Ans. D

Exp:

- Public Private Partnership (PPP) Project means a project based on a contract or concession agreement, between a Government or statutory entity on the one side and a private sector company on the other side, for delivering an infrastructure service on payment of user charges.
- Viability Gap Funding or Grant means a grant one-time or deferred, provided with the objective of making a project commercially viable.

The common PPP Projects eligible for VGF are from the sectors:

- 1) Roads and bridges, railways, seaports, airports, inland waterways;
- 2) Power;
- 3) Urban transport, water supply, sewerage, solid waste management and other physical infrastructure in urban areas;
- 4) Infrastructure projects in Special Economic Zones; and
- 5) International convention centres and other tourism infrastructure Projects.

16.Ans. C

Exp: All of the above statements are correct. However, Note that in the Paris Agreement, to the CBDR principle, a phrase has been added.

Definition of CBDR has been expanded and it now includes the phrase "in the light of different national circumstances". It appears to have diluted the notion of hitherto "historical responsibility" of the developed

countries. How this is going to break the wall between developed and developing countries, is yet to be seen.

17.Ans. A

Exp:

- Established in April 1987, it is a voluntary association of 34 countries — 35, once India is formally included. The group aims to slow the spread of missiles and other unmanned delivery technology that could be used for chemical, biological and nuclear attacks.
- The regime urges members, which include most of the world's major missile manufacturers, to restrict exports of missiles and related technologies capable of carrying a 500 kg payload at least 300 km, or delivering any type of weapon of mass destruction.
- There is no formal linkage between MTCR and United Nations. The MTCR is not a treaty and does not impose any legally binding obligations on Partners (members). Rather, it is an informal political understanding among states that seek to limit the proliferation of missiles and missile technology.

18.Ans. D

Exp: Statement 1 is incorrect - A proclamation of financial emergency issued shall cease to operate at the expiration of two months, unless before the expiration of that it has been approved by both the Houses of Parliament.

19.Ans. A

Exp: It's CFL and Mercury containing lamps. Earlier rules did not contain them so, taking into account the lack of any regulation for management of CFL and other mercury containing lamp, they been included in Schedule I of the rules.

20.Ans. C

Exp: In 2017, the World Bank created what's officially known as the Pandemic Emergency Financing Facility, or PEF. The idea is to raise dollars from investors willing to contribute to a pool of money that developing countries

could tap into as needed to help fight the next pandemic.

The World Bank began selling the high-yielding securities a year after the most severe outbreak of Ebola virus on record ended in 2016. They're modelled on catastrophe bonds that payout in response to insurance claims for events like hurricanes.

Therefore, the correct answer is (c).

21.Ans. C

Exp: All of the below factors re responsible for it.

1. **Violation of the principle of One Product - One Price** : Urea imported for Agriculture only is subsidised. Subsidy is as high as 75%. So the same Urea is available at 2 different prices in the market. Naturally, people uptake urea under subsidy and sell it in black market. This even leads to subsidised urea being smuggled to Nepal and Bangladesh.
2. **Cannalisation** - Only three companies are allowed to import Urea in India and the Canalisers are also instructed quantity as well as district in which to sell. The process is so slow it takes 60-70 days for Urea under subsidy to reach the farmer. By this time, largely farmers buy the Urea they need from open market.
3. **Policy of larger subsidy incentive to less efficient firms** - Today there are 30 manufacturing units with varying levels of efficiency. Policies encourage those that are on survival mode (and not profit mode) to be subsidised.

22.Ans. A

Exp: The Vice President of India is the ex - officio Speaker of the Rajya Sabha. For his removal, a resolution by Rajya Sabha with effective majority is required - which should be accepted and approved by the Lok Sabha by a simple majority. There is no limitation on the number of terms. Unlike the President's Office, election to the Vice President's office does not include members of State Legislative Assemblies

23.Ans. B**Exp:**

- The Poona Sarvajanik Sabha was founded in 1867 by Mahadeo Govind Ranade and others, with the object of serving as a bridge between the government and the people.
- The Indian National Association (or Indian Association) superseded the Indian League and was founded in 1876 by younger nationalists of Bengal led by Surendranath Banerjea and Ananda Mohan Bose.
- The Madras Mahajan Sabha was founded in 1884 by M. Veeraraghavachary, B. Subramaniya Aiyer and P. Anandacharlu.
- The Bombay Presidency Association was started by Badruddin Tyabji, Pherozshah Mehta and K.T. Telang in 1885.
- Therefore, the correct answer is (b).

24.Ans. C**Exp:**

- **Zaid Season:** Traditionally some vegetables and fruits are grown in this season. Now with the provision of irrigation facilities rice, maize, groundnut and some pulses like moong and urad are successfully grown as zaid crop.

Cropping Season	Major Crops Cultivated	
	Northern States	Southern States
Kharif June-September	Rice, Cotton, Bajra, Maize, Jowar, Tur	Rice, Maize, Ragi, Jowar, Groundnut
Rabi October – March	Wheat, Gram, Rapeseeds and Mustard, Barley	Rice, Maize, Ragi, Groundnut, Jowar
Zaid April-June	Vegetables, Fruits, Fodder	Rice, Vegetables, Fodder

25.Ans. B**Exp:**

- Many Moderate Congressmen, who were dissatisfied with the inactivity into which the Congress had lapsed, joined the Home Rule agitation. Members of Gokhale's Servants of India Society, though not permitted to become members of the League, were encouraged to add their

weight to the demand for Home Rule by undertaking lecture tours and publishing pamphlets. The increasing popularity of the Home Rule Movement soon attracted the Government's wrath. The Government of Madras was the most harsh and first came out with an order banning students from attending political meetings.

26.Ans. A**Exp:**

- The Preamble to the Indian Constitution is based on the objective resolution, moved by Pandit Nehru.
- It stipulates November 26, 1949 as the date of the adoption of the Constitution.
- The Preamble states that the constitution derives its authority from the people of India.
- Hence, only statements 1 is correct . 2nd and 3rd statements is incorrect.

27.Ans. C**Exp:**

Jai Singh II (1688 – 1743) was the Hindu Rajput ruler of the kingdom of Amber. Sawai Jai Singh was the first Hindu ruler in centuries to perform the ancient Vedic ceremonies like the Ashwamedha sacrifices and the Vajapeya and on both occasions, vast amounts were distributed in charity.

He initiated reforms in Hindu society like the abolition of Sati and curbing the wasteful expenditures in Rajput weddings.

Five observatories were built at Delhi, Mathura (in his Agra province), Benares, Ujjain (capital of his Malwa province), and his own capital of Jaipur. His astronomical observations were remarkably accurate. He drew up a set of tables, entitled Zij Muhammadshahi, to enable people to make astronomical observations.

Jai Singh's greatest achievement was the construction of Jaipur city (known originally as Jainagara), the planned city, which later

became the capital of the Indian state of Rajasthan. Jai Singh also translated works by people like John Napier. For these multiple achievements, Sawai Jai Singh II is remembered as the most enlightened king of 18th-century India even to this date.

Therefore, the correct answer is (c).

28. Ans. A

Exp:

In Both Lok Sabha and Rajya Sabha, there is a 'Leader of Opposition'. The leader of the largest Opposition party which has not less than one-tenth seats of the total strength of the House is recognised as the leader of the Opposition.

However, it is not a constitutional post and was accorded statutory recognition in 1977 through the Salary and Allowances of Leaders of Opposition in Parliament Act, 1977. It was in 1969 that an official leader of the opposition was recognised for the first time.

So, statement 1 is not correct.

Under the same Act, the Leaders of Opposition in both the Houses are entitled to the salary, allowances and other facilities equivalent to that of a Cabinet Minister. So, statement 2 is correct.

Therefore, the answer is (a).

29. Ans. C

Exp: Today's challenge for governments is to create sustainable, dynamic economies that build prosperity and work for everyone. To achieve this goal, we need creative cities with high levels of inclusive prosperity – engines of economic activity that enable all to contribute and share in the benefits.

The annual Prosperity & Inclusion City Seal and Award meet this need by recognising cities around the world that build economic success and empower all their citizens. Three Indian cities - Bengaluru, Delhi and Mumbai - have been named in the list. The three cities appeared in the lower half of the index, with

Bengaluru ranking 83rd, while Delhi and Mumbai stood at 101st and 107th positions, respectively on the list that ranked 113 cities across the globe in terms of their inclusive prosperity. So, option (a) is not correct.

The report further said that many of the world's wealthiest cities are failing to create inclusive economies for their citizens. Signalling that conventional measures of prosperity have become poor barometers in judging economic success, the world's top 10 richest cities have not scored well for inclusive prosperity.

London is the highest, at 33rd place, while New York City comes in at 38th. So, option (b) is not correct.

The PICS Index aims to compare cities around the world according to their levels of inclusive prosperity. Cities are quantitatively assessed by an international jury of experts on the basis of data from three areas: economic productivity, social inclusion and spatial inclusion. So, option (c) is correct.

The PICS (Prosperity & Inclusion City Seal Award) is instituted by D&L Partners in association with the Basque Regional Government of Biscay. To assess and rank 113 global cities according to their level of inclusive prosperity, the contribution of an international jury of experts and business leaders from a range of renowned private and public organisations is also sought. So, statement (d) is not correct.

Therefore, the correct answer is (c).

30. Ans. D

Exp: According to the Lindeman's principles of energy flow in an ecosystem-

- As the distance between organisms at a given trophic level and initial source of energy increases, the probability of organisms to depend exclusively on preceding trophic level for energy decreases which means that organisms at trophic level 3 and beyond tend to be

generalists rather than specialists in their feeding habits. So, statement 1 is correct.

- The relative loss of energy due to respiration is higher at higher trophic levels because species at higher trophic levels being relatively large in size have to work more in getting food and thus energy lost is more. So, statement 2 is correct.
- Species at higher trophic levels appear to be progressively more efficient in utilizing their available food because increased activity by predators increases their chances of encountering suitable prey species.
- Higher trophic levels tend to be less discrete than lower ones because they receive energy from more than one source. Food chains tend to be relatively short because around 10% of the usable energy is transferred from one trophic level to another thus residual energy decreases and no further trophic level can be supported. So, statement 3 is correct.
- Therefore, the correct answer is (d).

31.Ans. B

Exp: Soaps and detergents lowers the surface tension of water which leads to increase in the wetting power of water or its ability to detach dirt particles from clothes and utensils.

32.Ans. C

Exp:

Coal gasification is the process of producing syngas [a mixture consisting of carbon monoxide (CO), hydrogen (H₂), carbon dioxide (CO₂) and water vapor (H₂O)].

In current practice, large-scale instances of coal gasification are primarily for electricity generation, for production of chemical feed stocks, or for production of synthetic natural gas. Gas output may be combusted for electricity production.

The hydrogen obtained from coal gasification can be used for various purposes such as making ammonia, powering a hydrogen economy, or upgrading fossil fuels.

Compared to traditional coal mining and processing, the underground coal gasification eliminates surface damage and solid waste discharge, and reduces sulfur dioxide (SO₂) and nitrogen oxide (NO_x) emissions.

33.Ans. B

Exp:

A lithium-ion battery or Li-Ion battery is a rechargeable type of battery which features lithium ions that moves from the negative electrode to the positive electrode during discharge and comes back to its original points while charging.

Since Li-ion batteries contain less toxic metals than other types of batteries which may contain lead or cadmium, they are generally categorized as non-hazardous waste. Li-ion battery elements including iron, copper, nickel and cobalt are considered safe for incinerators and landfills. These metals can be recycled, but mining generally remains cheaper than recycling. So, statement 1 is correct.

Lithium-ion batteries are used in the Indian Electric vehicles sector and have already been introduced into the market. Electric cars, 2-wheelers and 3-wheelers are already available in the Indian market. So, statement 2 is not correct.

Therefore, the answer is (b).

34.Ans. B

Exp:

There are 29 earmarked elephant corridors with the operating zone of Northeast Frontier Railway (NFR) spread across the north-eastern states and parts of Bihar and West Bengal.

But elephants have ventured into the path of trains even in non-corridor areas, often leading to accidents resulting in elephant deaths.

In this background, the Northeast Frontier Railway (NFR) implemented the Plan Bee.

Indian Railways have come up with a novel way of getting elephants to buzz off from

train tracks: speakers that play the sound of bees to scare the jumbos away.

Nearly 50 buzzing amplifiers have been deployed as part of "Plan Bee" at a dozen "elephant corridors" in the vast forests of Assam state, home to nearly 6,000 elephants, and 20 percent of the country's total.

The buzzing is played as trains approach vulnerable points and can be heard up to half a mile (600 metres) away.

Therefore, the correct answer is (b).

35.Ans. D

Exp:

Article 110 of the Constitution deals with the definition of Money Bills. It states financial matter like an imposition, abolition, remission, alteration or regulation of any tax; regulation of the borrowing of money by the Union government; The custody of the Consolidated Fund of India or the Contingency Fund of India, the payment of moneys into or the withdrawal of money from any such fund etc.

It can only be introduced only in the Lok Sabha and not in the Rajya Sabha. If any question arises whether a Bill is a Money Bill or not, the decision of the Speaker of the Lok Sabha is final. His decision in this regard cannot be questioned in any court of law or in either House of the Parliament or even by the President. When a Money Bill is transmitted to the Rajya Sabha for recommendation and presented to the President for assent, the Speaker endorses it as a Money Bill. So, option (a) is correct.

It can be introduced only by a minister, as s/he is a part of the treasury bench that needs financial resources at its disposition to implement executive actions. So, option (b) is correct.

It cannot be amended or rejected by the Rajya Sabha. The Rajya Sabha should return the Bill with or without recommendations, which may be accepted or rejected by the Lok Sabha. It can be detained by the Rajya Sabha for a

maximum period of 14 days only. So, option (c) is correct.

It can be introduced only on the recommendation of the President. So, option (d) is not correct.

Therefore, the answer is (d).

36.Ans. B

Exp:

- The Alliance of Small Island States (AOSIS) is a coalition of small island and low-lying coastal countries that share similar development challenges and concerns about the environment, especially their vulnerability to the adverse effects of global climate change. It functions primarily as an ad hoc lobby and negotiating voice for small island developing States (SIDS) within the United Nations system.
- AOSIS has a membership of 44 States and observers, drawn from all oceans and regions of the world: Africa, Caribbean, Indian Ocean, Mediterranean, Pacific and South China Sea.

37.Ans. C

Exp:

- In observational astronomy an Einstein ring, also known as an Einstein-Chwolson ring or Chwolson ring, is the deformation of the light from a source (such as a galaxy or star) into a ring through gravitational lensing of the source's light by an object with an extremely large mass (such as another galaxy or a black hole). This occurs when the source, lens, and observer are all aligned.

38.Ans. C

Exp:

- The original Constitution did not contain provisions with respect to tribunals. The 42nd Amendment Act of 1976 added a new Part XIV-A to the Constitution entitled as 'Tribunals' and consists of two Articles- 323 A dealing with administrative

tribunals and 323 B dealing with tribunals for other matters.

- While tribunals under 323 A can be established only by Parliament, those under 323 B can be established both by the Parliament and state legislatures with respect to matters falling within their legislative competence.
- In Chandra Kumar case, the Supreme Court declared those provisions of these two articles which excluded the jurisdiction of the high courts and the Supreme Court as unconstitutional. Hence, the judicial remedies are now available against the orders of these tribunals.
- The Central Administrative tribunal is not bound by the procedure laid down in the Civil Procedure Code of 1908. It is guided by the principles of natural justice.

39.Ans. C

Exp:

- The labour force participation rates is calculated as the labour force (people employed or actively looking for work) divided by the total working-age population.
- **Worker Population Ratio:** The employment-to-population ratio is defined as the proportion of an economy's working-age population that is employed. As an indicator, the employment-to-population ratio provides information on the ability of an economy to create jobs. Worker population ratio is defined as the number of persons employed per thousand persons. $WPR = (\text{No. of employed persons} \times 1000) / \text{Total population}$.
- Worker Population Ratio is an indicator used for analysing the employment situation in the country. This is also useful in knowing the proportion of population that is actively contributing to the production of goods and services in the economy.

40.Ans. D

Exp:

For the first time in Union Budget 2019-20, the government has considered raising part of its gross borrowing from the overseas market in foreign currency – an indication that India is getting ready to gradually expose its bond market to the euphoria and uncertainties of overseas investors. If the government took some of its borrowing overseas in other currencies, it would help the Indian private sector to borrow more domestically and therefore raise private investments.

India's sovereign external debt-to-GDP ratio is among the lowest globally, less than 5 per cent. This would enable India to raise resources without many macroeconomic risks. So, factor 1 is correct.

Sovereign external borrowing is also considered a cheap source of raising money by the government as interest rates in advanced countries are very low. So, factor 2 is correct.

Several economists have expressed their concerns over the fact that India might follow the path of some Central and South American countries such as Mexico and Brazil. In the 1970s, several of these countries borrowed heavily overseas when the global market was flush with liquidity.

But then, when their currencies depreciated sharply a decade later, these countries were in big trouble as they could not repay their debt. A rupee depreciation for whatever external reason would prove disastrous as it would make it far more expensive for India to repay its external debt. So, factor 3 is not correct.

India currently has a current account deficit and not a current account surplus. The country's current account deficit (CAD) narrowed to 0.9% of the gross domestic product (GDP) at \$6.3 billion in the quarter

ended September 2019 as imports slowed down due to lower demand. Further, in the 3rd quarter (October-December 2019) (latest data) the CAD declined to .2% of GDP. Overseas borrowings would further raise the CAD. So, factor 4 is not correct.

Therefore, the answer is (d).

41. Ans. A

Exp:

Panipat had a strategic location. One of the parties of the war generally came from the north/northwest through the Khyber Pass to get hold over Delhi, the political capital of northern India. The rulers at Delhi considered Panipat as a comfortable strategic ground and hence they preferred to take the fight there. So, statement 1 is correct.

Panipat's surrounding region had a flat ground which was suitable for cavalry movement—the main mode of warfare at the time. After the construction of the Grand Trunk Road by Sher Shah Suri (1540- 45), Panipat was on this route. It became easier for conquerors to find their way there. So, statement 2 is not correct.

The duration of monsoon rainfall in the region is short in comparison to other areas making it easier to fight. The artisans/smiths of these regions were experts in making warfare-related materials and hence it became easier for forces of both parties to replenish their war materials. So, statement 3 is not correct.

Therefore, the correct answer is (a).

42. Ans. C

Exp:



The Pamir Mountains are a mountain range in Central Asia, at the junction of the Himalayas with the Tian Shan, Karakoram, Kunlun, Hindu Kush, Sulaiman and Hindu Raj ranges. They are among the world's highest mountains.

The Altai Mountains, also spelt Altay Mountains, are a mountain range in Central and East Asia, where Russia, China, Mongolia, and Kazakhstan come together, and where the rivers Irtysh and Ob have their headwaters.

The massif merges with the Sayan Mountains in the northeast, and gradually becomes lower in the southeast, where it merges into the high plateau of the Gobi Desert.

Therefore, the answer is (c).

43. Ans. B

Exp:

Joint sitting is extraordinary machinery provided by the Constitution to resolve a deadlock between the two Houses over the passage of a Bill.

A deadlock is deemed to have taken place under any one of the following three situations after a Bill has been passed by one House and transmitted to the other House: 1) if the Bill is rejected by the other House; 2) if the Houses have finally disagreed as to the amendments to be made in the Bill; or 3) if more than six months have elapsed from the date of the receipt of the Bill by the other House without the Bill being passed by it.

The Speaker of Lok Sabha presides over a joint sitting of the two Houses and the Deputy Speaker, in his absence. If the Deputy Speaker is also absent from a joint sitting, the Deputy Chairman of Rajya Sabha presides.

If he is also absent, such other person as may be determined by the members present at the joint sitting, presides over the meeting. It is clear that the Chairman of Rajya Sabha does not preside over a joint sitting as he is not a member of either House of Parliament. So, statement 1 is not correct.

The quorum to constitute a joint sitting is one-tenth of the total number of members of the two Houses. The joint sitting is governed by the Rules of Procedure of Lok Sabha and not of Rajya Sabha. So, statement 2 is correct.

Therefore, the correct answer is (b).

44.Ans. B

Exp:

Mysore had grown in strength under the leadership of powerful rulers like Haidar Ali (ruled from 1761 to 1782) and his famous son Tipu Sultan (ruled from 1782 to 1799). In 1785 Tipu Sultan stopped the export of sandalwood, pepper and cardamom through the ports of his kingdom, and disallowed local merchants from trading with the Company. So, statement 1 is correct.

The Maratha Empire, under its new Peshwa Madhavrao I, regained most of the Indian subcontinent, twice defeating Tipu's father. In 1767 Maratha Peshwa Madhavrao defeated both Hyder Ali and Tipu Sultan and entered Srirangapatna, the capital of Mysore. Hyder Ali accepted the authority of Madhavrao who gave him the title of Nawab of Mysore.

However, Tipu Sultan wanted to escape from the treaty of the Marathas and therefore leading to the Maratha–Mysore War. Marathas again humbled Tipu where he accepted to pay tributes again. So, statement 2 is not correct.

Therefore, the answer is (b).

45.Ans. B

Exp:

- Statement 1 is incorrect: Benthic organisms are those found living at the bottom of the water mass.
- Statement 3 is incorrect: Neustons live at the air-water interface, e.g. floating plants.
- **Neuston:** These organisms live at the airwater interface, e.g. floating plants.
- **Periphyton:** These are organisms which remain attached to stems and leaves of rooted plants or substances emerging above the bottom mud such as sessile algae.
- **Plankton:** Microscopic floating organisms such as algae, diatoms, protozoans and larval forms are called plankton. This group includes both microscopic plants like algae (phytoplankton) and animals like crustaceans and protozoans (zooplankton).
- **Nekton:** This group contains powerful swimmers that can overcome the water currents.
- **Benthos:** The benthic organisms are those found living at the bottom of the water mass.

46.Ans. D

Exp: All statements are correct

Biotic components in food chain – Detritus food chain

- This type of food chain starts from organic matter of dead and decaying animals and plant bodies from the grazing food chain.
- Dead organic matter or detritus feeding organisms are called detritivores or decomposers.
- The detritivores are eaten by predators.
- In an aquatic ecosystem, the grazing food chain is the major conduit for energy flow.

- As against this, in a terrestrial ecosystem, a much larger fraction of energy flows through the detritus food chain than through the grazing food chain.
- Decomposers are also known as saprotrophs.

47.Ans. A

Exp: Option (a) is correct

Operation Twist

- 'Operation Twist' means that the government or the country's Monetary Authority; sells the short term securities and buys long term securities simultaneously through Open Market Operations (OMO).
- So in the operation twist; the short term securities are converted into long term securities.
- By this RBI try to manage yields without expanding the balance sheet. They are trying to bring down term structure of interest rates or the longer end of the curve.

48.Ans. A

Exp: Pair 2 is incorrectly matched: Raqqa is the sixth largest city in Syria

49.Ans. D

Exp:

ASTROSAT is India's first dedicated multi-wavelength space observatory. This scientific satellite mission endeavours for a more detailed understanding of our universe. One of the unique features of ASTROSAT mission is that it enables the simultaneous multi-wavelength observations of various astronomical objects with a single satellite. Multi-wavelength observations of ASTROSAT can be further extended with co-ordinated observations using other spacecraft and ground-based observations.

The scientific objectives of the Mission are:

- To understand high energy processes in binary star systems containing neutron

stars and black holes. So, statement 1 is correct.

- Study star birth regions and high energy processes in star systems lying beyond our galaxy. So, statement 2 is correct.
- Detect new briefly bright X-ray sources in the sky and Estimate magnetic fields of neutron stars. So, statement 3 is correct.
- Perform a limited deep field survey of the Universe in the Ultraviolet region.
- Therefore, the correct answer is (d).

50.Ans. C

Exp:

The term mussel is used for several families of bivalve molluscs inhabiting lakes, rivers, and creeks, as well as intertidal areas along coastlines worldwide. The mussel's external shell is composed of two valves that protect it from predators and desiccation.

Recently scientists are deploying mussels across the oceans in the fight against water pollution. They act as 'super-filters', taking in phytoplankton for nourishment along with micro plastics, pesticides and other pollutants. As they pump and filter the water through their gills in order to feed and breathe, mussels store almost everything else that passes through. They are a super-filter in the marine world, filtering up to 25 litres of water per day. So, statement 1 is correct.

Like canaries in a coal mine, mussels are widely used as bio-indicators to monitor the health of aquatic environments in both freshwater and marine environments. They are particularly useful since they are distributed worldwide and are sessile.

These characteristics ensure that they are representative of the environment where they are sampled or placed. Their population status or structure, physiology, behaviour or the level of contamination with elements or compounds can indicate the status of the ecosystem. So, statement 2 is correct.

Therefore, the correct answer is (c)

51.Ans. B**Exp:**

The Public Financial Management System (PFMS), earlier known as Central Plan Schemes Monitoring System (CPSMS), is a web-based online software application developed and implemented by the Office of Controller General of Accounts (CGA).

PFMS was initially started during 2009 as a Central Sector Scheme of Planning Commission with the objective of tracking funds released under all Plan schemes of Gol, and real-time reporting of expenditure at all levels of Programme implementation. So, statement 1 is not correct.

In the year 2013, its scope was enlarged to cover direct payment to beneficiaries under both Plan and non-Plan Schemes. The latest enhancement in the functionalities of PFMS commenced in late 2014, wherein it has been envisaged that digitization of accounts shall be achieved through PFMS and the additional functionalities would be built into PFMS in different stages.

The primary objective of PFMS is to facilitate sound Public Financial Management System for Government of India (Gol) by establishing an efficient fund flow system as well as a payment cum accounting network.

PFMS provides various stakeholders with a real-time, reliable and meaningful management information system and an effective decision support system, as part of the Digital India initiative of Gol. So, statements 2 and 3 are correct.

Therefore, the correct answer is (b).

52.Ans. C**Exp:**

Both the statements are correct. The 1940 Lahore sessions of Muslim League It passed

the Pakistan resolution demanding a separate state for Muslims.

It also rejected the federal scheme proposed by the Government of India Act, 1935

53.Ans. C**Exp:**

The rate at which banks lend to its most trustworthy, low risk customers is called the Base Prime Lending Rate.

Base Rate is the minimum rate of interest that a bank is allowed to charge from its customer.

54.Ans. B**Exp:**

The Original Constitution had 395 articles over 22 Parts and eight schedules.

Panchayati Raj Institutions were given Constitutional position with the 73rd Amendment Act.

Fundamental Duties were again a part of Constitution, but Fundamental Duties were added later on recommendations of Swaran Singh Committee. DPSP had always been a part of the Constitution.

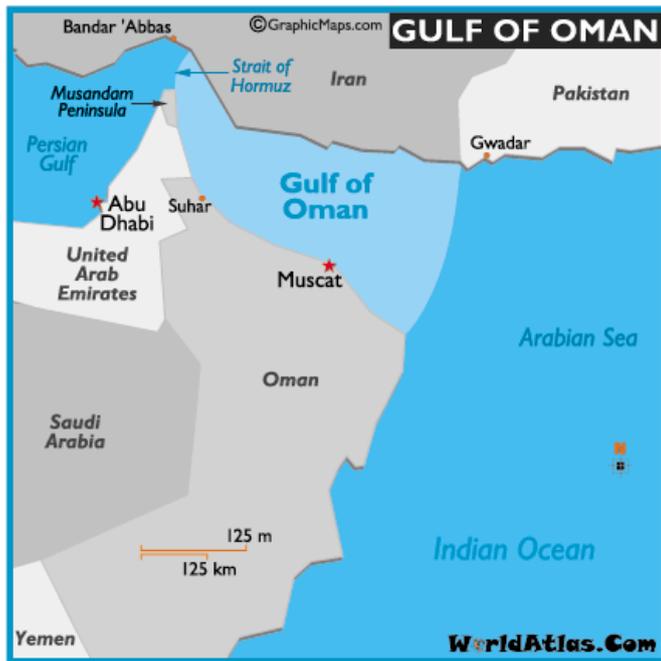
55.Ans. D**Exp:**

A strait is a naturally formed, narrow, typically navigable waterway that connects two larger bodies of water. It most commonly refers to a channel of water that lies between two land masses, but it may also refer to a body of water that is otherwise not navigable, for example because it is too shallow, or because it contains an un navigable reef or archipelago.

A bay is a body of water connected to an ocean or lake, formed by an indentation of the shoreline. A large bay may be called a gulf, a sea, a sound, or a bight. A cove is a smaller circular or oval coastal inlet with a narrow entrance; some coves may be referred to as bays. A fjord is a particularly steep bay shaped by glacial activity.

Gulf of Oman is a strait (and not an actual gulf) that connects the Arabian Sea with the Strait of Hormuz, which then runs to the Persian Gulf. It is generally included as a branch of the Persian Gulf, not as an arm of the Arabian Sea. The gulf borders Pakistan and Iran on the north, Oman on the south, and the United Arab Emirates on the west.

Please refer to the image below:



56. Ans. D

Exp:

Buddha did not involve himself in fruitless controversies regarding metaphysical questions like god, soul, karma, rebirth, etc., and concerned himself with the practical problems confronting man.

Buddha neither accepts god nor rejects the existence of god. He laid great emphasis on the law of karma. He argued that the condition of man in this life depends upon his own deeds. He taught that the soul does not exist.

However, he emphasized Ahimsa. By his love for human beings and all living creatures, he endeared himself to all. Even under the gravest provocation he did not show the least

anger or hatred and instead conquered everyone by his love and compassion.

His religion was identical with morality and it emphasized purity of thought, word and deed. He was a rationalist who tried to explain things in the light of reason and not on the basis of blind faith. Though he did not make a direct attack on the caste system, he was against any social distinctions and threw open his order to all.

Therefore, Buddhism was more a social than religious revolution. It taught the code of practical ethics and laid down the principle of social equality.

57. Ans. A

Exp:

The Sangams flourished under the royal patronage of the Pandyas is correct. Our knowledge of Sangam is largely derived from the works of the 3rd Sangam. No work from first Sangam remains and from second Sangam only Tolkappiyam remains.

During the Sangam period, hereditary Monarchy existed. It was around 4-5th century BC, that in the North, before the Mauryans small republics in India existed.

58. Ans. D

Exp: Statement 2 is incorrect: The mission envisages stakeholder investment of \$100 billion (Rs. 7 lakh crore), including Rs. 70,000 crore from Universal Service Obligation Fund (USOF) in coming years.

National Broadband Mission

- National Broadband Mission launched aims to fast track growth of digital communications infrastructure, bridge the digital divide and provide affordable and universal access of broadband for all.
- The main objective of the NBM is to provide broadband access to all villages by 2022.
- The ambitious project will involve laying down around 30 Lakhs kilometre route Optical Fiber Cable, increase tower

density from 0.42 to 1.0 tower per thousand of population by 2024 and significantly improve quality of services for mobile and internet. The mission envisages Rs 7 lakh crore investment in next 3 to 4 years.

- The Mission is part of the National Digital Communications Policy, 2018.
- The mission envisages stakeholder investment of \$100 billion (Rs. 7 lakh crore), including Rs. 70,000 crore from Universal Service Obligation Fund (USOF) in coming years and address policy and regulatory changes required to accelerate the expansion and creation of digital infrastructure and services.

59.Ans. A

Exp:

- Option (a) is correct: Currently, the DGCA has permitted food startups to conduct trials for drones Beyond the Visual Line of Sight (BVLOS).

Unmanned Aircraft System Rules, 2020

- Recently, the Ministry of Civil Aviation has notified the draft Unmanned Aircraft System (UAS) Rules, 2020.
- The draft rules have been issued at a time when the use of drones has increased due to a coronavirus lockdown, for purposes like surveillance, disinfection and videography.
- Earlier, the government had issued drone regulations 1.0 and the drone regulations 2.0. The government has also finalized National Counter Rogue Drone Guidelines for handling the threats from Unmanned Aircraft Systems.
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2.0. The government has also finalized National Counter Rogue Drone Guidelines for handling the threats from Unmanned Aircraft Systems.

60.Ans. C

Exp: Option (c) is correct

Maguri-Motapung Wetland

- Maguri Motapung Beel is less than 10 km from Dibru-Saikhowa National Park and part of the Dibru-Saikhowa Biosphere Reserve.
- The wetland derives its name from "Magur", the local word for the catfish 'Clarius batrachus'.
- It is an Important Bird Area notified by the Bombay Natural History Society.
- The recent Baghjan oil blowout in Assam have affected the flora, fauna and wetlands which is close to the Maguri-Motapung wetland and the ecologically fragile Dibru-Saikhowa National Park.

61.Ans. B

Exp:

- Many of the Moderate leaders of the Congress were also unhappy with the choice they had made in 1907 at Surat, and also with the fact that the Congress had lapsed into almost total inactivity. They were, therefore, quite sympathetic to Tilak's overtures. Further, they were under considerable pressure from Mrs. Annie Besant, who had just joined the Indian National Congress and was keen to arouse nationalist political activity, to admit the Extremists.
- At the annual Congress session in December 1914 Pheroze Shah Mehta and his Bombay Moderate group opposed the entry of Extremists.

62.Ans. B

Exp:

- The Congress met in September at Calcutta and accepted non-cooperation as its own. The main opposition, led by C.R. Das, was to the boycott of legislative councils, elections to which were to be

held very soon. But even those who disagreed with the idea of boycott accepted the Congress discipline and withdrew from the elections.

- By December, when the Congress met for its annual session at Nagpur, the opposition had melted away; the elections were over and, therefore, the boycott of councils was a non-issue, and it was CR. Das who moved the main resolution on non-cooperation.
- The adoption of the Non-Cooperation Movement (initiated earlier by the Khilafat Conference) by the Congress gave it a new energy and, from January 1921, it began to register considerable success all over the country. In the first month itself, thousands of students (90,000 according to one estimate) left schools and colleges and joined more than 800 national schools and colleges that had sprung up all over the country. Many leading lawyers of the country, like C.R. Das, Motilal Nehru, M.R. Jayakar, Saifuddin Kitchlew, Vallabhbhai Patel, C. Rajagopalachari, T. Prakasam and Asaf Ali gave up lucrative practices.
- The Congress Working Committee of 12 February 1922 through the Bardoli resolution announced the withdrawal of the non-cooperation movement.

63.Ans. B

Exp:

- At present the CCEA is chaired by the PM.
- CCEA has a mandate to review economic trends on a continuous basis, as also the problems and prospects, with a view to evolving a consistent and integrated economic policy framework for the country.
- It also directs and coordinates all policies and activities in the economic field including foreign investment that require policy decisions at the highest level. Matters regarding fixation of prices of agricultural products as well as reviewing progress of activities related to rural development including those concerning

small and marginal farmers are in CCEA's purview.

- Price controls of industrial raw materials and products, industrial licensing policies including industrial licensing cases for establishment of Joint Sector.
- Undertakings, reviewing performance of Public Sector Undertakings including their structural and financial restructuring are also within the purview of CCEA, as are all matters relating to disinvestment including cases of strategic sale, and pricing of Government shares in Public Sector Undertakings. In June 2014, the Cabinet Committee on Prices, Cabinet Committee on Unique Identification Authority of India related issues and Cabinet Committee on World Trade Organization Matters were merged with CCEA, subject to condition that whenever necessary, full cabinet will take decision on the WTO related matters.

64.Ans. D

Exp: All statements are correct

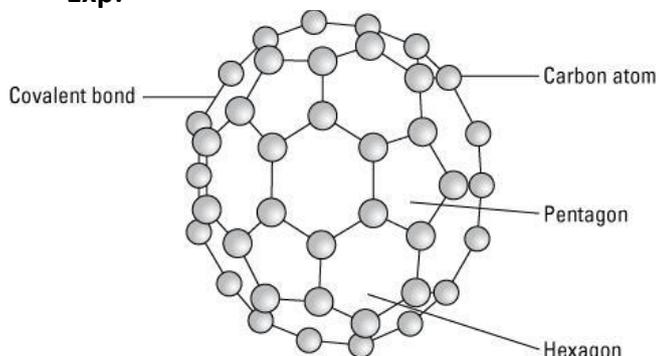
Reverse Transcriptase-Loop Mediated Isothermal Amplification

- CSIR-Indian Institute of Integrative Medicine, Jammu, a constituent lab of the Council of Scientific and Industrial Research (CSIR) is working to develop and scale up a new Reverse Transcriptase-Loop Mediated Isothermal Amplification (RT-LAMP) based COVID-19 diagnostic kit.
- RT-LAMP test is rapid, accurate and cost effective that can be done with indigenous components and set up with minimal expertise and instrumentation.
- The RT-LAMP based COVID-19 kit components are easily available and these can be completely manufactured in India.
- India is constantly ramping up its testing infrastructure, along with indigenous development, validation and production of testing kits for RT-PCR in order to have early and aggressive tracing of the infection by validating TrueNat-based test

for COVID-19 and including alternative testing platforms like CBNAAT/GeneXpert and Abbott HIV viral load testing machines

65. Ans. D

Exp:



Buckyballs, also called fullerenes, were one of the first nanoparticles discovered in 1985. They are composed of carbon atoms linked to three other carbon atoms by covalent bonds. The covalent bonds between carbon atoms make buckyballs very strong, and the carbon atoms readily form covalent bonds with a variety of other atoms.

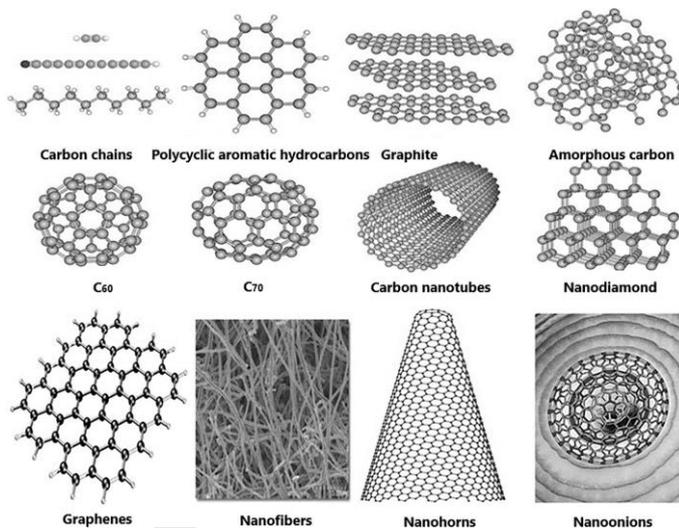
The most common buckyball contains 60 carbon atoms and is sometimes called C₆₀ or fullerene. They are used in composites to strengthen the material. They have the interesting electrical property of being very good electron acceptors, which means they accept loose electrons from other materials. This feature is useful, for example, in increasing the efficiency of solar cells in transforming sunlight into electricity.

Therefore, the correct answer is (d).

Additional Information –

Allotropy or allotropism is the property of some chemical elements to exist in two or more different forms, in the same physical state, known as allotropes of the elements.

Allotropes are different structural modifications of an element; the atoms of the element are bonded together in a different manner.



66. Ans. B

Exp:

According to Article 350 every person shall be entitled to submit a representation for the redressal of any grievance to any officer or authority of the Union or a State in any of the languages used in the Union or in the State, as the case may be. Hence a representation can't be rejected only on the ground that it is not an official language under Schedule 8.

According to Article 350A inserted into the Constitution by the 7th Amendment Act, it shall be the endeavour of every State and of every local authority within the State to provide adequate facilities for instruction in the mother-tongue at primary education stage to children belonging to linguistic minority groups; and the President may issue such directions to any State as he considers necessary or proper for securing the provision of such facilities. So, statement 1 is not correct.

The Constitution makes it compulsory for the post of a Special Officer for Linguistic Minorities for the protection of the linguistic minorities. It is given under Article 350B(1), that there shall be a Special Officer for Linguistic Minorities to be appointed by the President. So, statement 2 is correct.

Therefore, the correct answer is (b).

67.Ans. D**Exp:**

Stressed assets have been rising rapidly in India, mainly in public sector banks. Several factors can be identified that have led to this situation. These include global slow-down, governance-related issues, political factors as well as mal-intentions and misconduct. The Stressed Advances (SA) ratio of Scheduled Commercial Banks (SCBs) followed suit by remaining flat at 9.7 per cent (9.3 per cent Gross NPAs plus 0.4 per cent Restructured Advances) as at end September 2019.

Stressed assets by its definition include Non-Performing Assets, written-off assets and Restructured Advances. A non-performing asset (NPA) is a loan or advance for which the principal or interest payment remained overdue for 90 days.

A restructured advance means a change in the original loan terms done with the mutual consent of both the bank and the borrower to tide over events such as default in a loan, delay in payments, inability to pay due to losses, etc. So, statements (1) and (2) are correct.

SMA 1 accounts are those where repayments have been overdue for between 31 and 60 days. The classification of standard loans into SMA-0, SMA-1 and SMA-2 enable banks to identify stress in loan accounts. These are an indication of building up stress in loan accounts but do not form part of stressed assets of a bank. So, statement (3) is not correct.

A standard loan account means an account in which regular repayments are being received. It may happen that the security taken as collateral may have declined in value over the term of the loan. However, only when the regular repayments stop, then only the account will be classified as an NPA. So, statement (4) is not correct.

Therefore, the correct answer is (d).

68.Ans. B**Exp:**

The Ministry of Environment, Forests and Climate Change released the data of three species of endangered resident Gyps vultures – white-backed vulture, long-billed vulture, and the slender-billed vulture.

The major cause of mortality of vultures was found to be the veterinary non-steroidal anti-inflammatory drug 'Diclofenac', given to cattle in pain and inflammation.

The first vulture restaurant was built in South Africa in 1966. Vulture restaurants operate in a number of countries, including Nepal, India, Cambodia, South Africa, Swaziland, and Spain. India's first-ever vulture restaurant in the Phansad wildlife sanctuary near Murud in Maharashtra. In this new restaurant, the birds are fed their traditional meals of dead cattle, sheep or goats, guaranteed to be diclofenac-free. So, statement 1 is not correct.

The nationwide vulture surveys are being carried out by the Bombay Natural History Society (BNHS) every four years sponsored by the Ministry of Environment and Forest Departments of various States since 1990. So, statement 2 is not correct.

The surveys are carried out mainly for the three species of critically endangered resident Gyps vultures that are: Red-headed vulture; Slender-billed vulture and Long-billed vulture. So, statement 3 is correct.

Therefore, the correct answer is (b).

69.Ans. D**Exp:**

A zoonosis (zoonotic disease or zoonoses - plural) is an infectious disease that is transmitted between species from animals to humans. For eg. Kyasanur Forest disease (KFD) is caused by Kyasanur Forest disease virus (KFDV), a member of the virus family Flaviviridae. KFDV was identified in 1957 when it was isolated from a sick monkey from

the Kyasanur Forest in Karnataka. Since then, between 400-500 human cases per year have been reported. So, animal 1 is correct.

Nipah virus is a highly lethal, emerging henipavirus that can be transmitted to people from the body fluids of infected bats. Eating fruit or drinking date palm sap that has been contaminated by bats has been flagged as a transmission pathway. So, animal 2 is correct.

The bacteria that cause plague, *Yersinia pestis*, maintain their existence in a cycle involving rodents and their fleas. Many types of animals, such as rock squirrels, wood rats, ground squirrels, prairie dogs, chipmunks, mice, voles, and rabbits can be affected by the plague. Wild carnivores can become infected by eating other infected animals. So, animal 3 is correct.

Swine Influenza (swine flu) is a respiratory disease of pigs caused by type A influenza virus that regularly causes outbreaks of influenza in pigs. So, animal 4 is correct.

Therefore, the correct answer is (d).

70. Ans. A

Exp:

The Defence of India Act 1915 was an emergency criminal law enacted by the Governor-General of India in 1915 with purpose of curtailing the nationalist and revolutionary activities during and in the aftermath of the First World War. The Defence of India act could be applied to any subject of the King.

The passage of the act was supported unanimously by the non-official Indian members in the Viceroy's legislative council, and was seen as necessary to protect against British India from subversive nationalist violence.

The act was first applied during the First Lahore Conspiracy trial in the aftermath of the failed Ghadar Conspiracy of 1915, and was instrumental in crushing the Ghadar

movement in Punjab and the Anushilan Samiti in Bengal.

However its widespread and indiscriminate use in stifling genuine political discourse made it deeply unpopular, and became increasingly reviled within India.

The extension of the law in the form of the Rowlatt Act after the end of World War I was opposed unanimously by the non-official Indian members of the Viceroy's council

71. Ans. B

Exp:

When the light rays pass through the atmosphere having layers of different densities and refractive indices, then atmospheric refraction takes place. The actual sunrise takes place when the sun is above horizon.

When the sun is just below the horizon, the light rays coming from it, on entering the Earth's atmosphere suffer atmospheric refraction from a rarer to denser medium. So, they bend towards the normal at each refraction.

Due to continuous refraction of light rays at each layer, it follows a curved path and reaches the eye of the observer. As a result, we can see the sun few minutes before it rises above the horizon in the morning. It is also due to refraction that we can still see the sun for a few minutes, even after the sun has set below the horizon.

72. Ans. C

Exp:

Nehru Report in 1928 was prepared by a committee of the All Parties Conference chaired by Motilal Nehru with his son Jawaharlal as secretary.

This committee included Tej Bahadur Sapru, Subhash Chandra Bose, M. S. Aney, Mangal Singh, Ali Imam, Shuaib Qureshi and G.D. Pradhan as its members. Its important recommendations included following:

- Dominion status

- Rejection of separate electorates
- Linguistic provinces
- 19 fundamental rights
- Responsible government at the centre and provinces
- Full protection to cultural and religious rights
- Complete dissociation of state and religious interests of Muslims.

The rejection by Indian leaders of the all-white Simon Commission led Lord Birkenhead, the Secretary of State for India to make a speech in the House of Lords in which he challenged the Indians to draft a Constitution implying that they could not produce one that would be widely acceptable among the leaders of the various Indian communities. Indians accepted the challenge of Lord Birkenhead.

73.Ans. B

Exp:

Sargasso Sea is known for two things - floating algae - something that doesn't happen in oceans - because of water turbulence. Algae usually grows on ocean floors, not on the surface. Sargasso sea owes its name to the Sargassum.

Why does this happen? Because Sargasso sea is the area of calm between ocean currents. It's the only sea with no coastline. This is the second thing.



74.Ans. D

Exp:

This is a simple straight forward question from Polity. The Answer is the Attorney General of India.

From Wikipedia

The Solicitor General of India is subordinate to the Attorney General for India, who is the Indian government's chief legal advisor, and its primary lawyer in the Supreme Court of India.

The Solicitor General of India is appointed for the period of 3 years. The Solicitor General of India is the secondary law officer of the country, assists the Attorney General, and is himself assisted by several Additional Solicitors General of India.

Like the Attorney General for India, the Solicitor General and the Additional Solicitors General advise the Government and appear on behalf of the Union of India in terms of the Law Officers (Terms and Conditions) Rules, 1972. However, unlike the post of Attorney General for India, which is a Constitutional post under Article 76 of the Constitution of India, the posts of the Solicitor General and the Additional Solicitors General are merely statutory.

75.Ans. D

Exp: All the three statements are correct.

June 3 Plan is simply the Mountbatten Plan. A question on "June 3" Plan has been asked in Mains before and a number of candidates were not able to answer it because UPSC has not asked "Mountbatten Plan"

Having said that, this is an easy question, if you have had one reading of Spectrum or old NCERT.

76.Ans. D

Exp: India has presently 12 major ports and 200 minor ports in India. 12 major Ports of India.

Includes:

Name of the Major Port	Coast	State
Kandla	Western Coast	Gujarat
Mumbai	Western Coast	Maharashtra
Jawaharlal Nehru	Western Coast	Maharashtra
Marmugao	Western Coast	Goa
Manglore	Western Coast	Karnataka
Kochi	Western Coast	Kerala
Haldia	Eastern Coast	West Bengal
Paradip	Eastern Coast	Odisha
Vishakapatnam	Eastern Coast	Andhra Pradesh
Chennai	Eastern Coast	Tamil Nadu
Ennore	Eastern Coast	Tamil Nadu
Tuticorin	Eastern Coast	Tamil Nadu

77.Ans. D

Exp:

GST stands for Goods and Service Tax. So, obviously it will subsume Excise and Service Tax. But, it will also be subsuming other types of taxes to make a unified marked and simplified tax structure.

List of taxes covered under the umbrella of GST.

1. Central Excise Duty,
2. Countervailing Duty,
3. Service Tax,
4. State value added tax (VAT),
5. Octroi
6. Entry tax
7. Luxury tax

78.Ans. C

Exp:

The Mughal paintings during the Mughal period of Akbar holds special importance. Akbar loved painting. The two styles, Persian and Indian, at Akbar's court began gradually to fuse and in course of time became one. The foreign characteristics of the art gradually dropped out and, eventually, it became purely Indian.

The process of this evolution can be seen in the unique copy of the Tarikh-i-Khandan-i-Timuri and a copy of the Badshahnama, both of which are preserved in the Oriental Khuda Bakhsh Public Library at Patna.

In Jahangir Nama, several pictorial illustrations of Mughal Paintings are available. Therefore, both the statements are correct.

79.Ans. B

Exp:

Anti-Dumping duty (ADD) Anti-dumping-duty is imposed to provide protection to Community industry against the dumping of goods from non-Community countries at prices that are substantially lower than the normal commercial value. Goods are considered to be dumped if it is established that their export price to the Community is less than the price of the same or similar goods on the domestic market of the exporting country.

Countervailing duty (CD) Countervailing duty is levied on goods which have received Government subsidies in the originating or exporting country, thus enabling the goods to be imported into the Community at prices substantially lower than the normal commercial value.

For customs purposes CD is treated in the same way as ADD, it is possible to have both ADD and CD on the same product.

80.Ans. D

Exp:

Depletion of natural resources, Social Inequity and Exclusion, Failure of public policy, Denial of rights including merit goods are all causes of poverty. A common thinking is that people are poor because they refuse to work. This is incorrect.

81.Ans. C

Exp:

It is a type of assembly hall located between dwara (entrance) and garbagriha (sanctum) .

This is most prevalent in Odisha style of temple architecture. You can refer Indian Art Standard XI for further details.

82.Ans. C

Exp:

Carbon sequestration means the method by which the carbon is removed from the atmosphere.

So, option 4 is directly removed as it is a method to achieve carbon mitigation. Rest all methods help create biodiversity which can store the carbon thereby removing it from atmosphere.

83.Ans. C

Exp:

Brazil, Indonesia and India are statistically among the lowest per capita CO₂ emitters in the world.

1. Domestic policies discourage carbon intensive industries and promote green energy – while Governments are coming up with encouraging green energy, all the developing nations currently do not adopt policies that harm conventional energy sources. This is a prime concession that developing nations extract from industrialised nations - since industrialisation in developing nations happened much later than the industrialised nations. And it is financially viable to immediately give up on conventional sources of energy.
2. High population is a major reason why statistically per capita emissions of these countries are low.
3. Low level of industrialisation - is also a reason of low per capita emissions. The developing nations are not even close to the level of industrialisation achieved by more developed Western nations.
4. Lack of polluting industries - while there is low level of industrialisation, it will be incorrect to say that developing nations have lack of polluting industries. In fact pollution standards are usually more liberal - both in law and in action. This is incorrect.

84.Ans. C

Exp:

Kerala meets all the three criteria.

1. Kerala state has the lowest positive population growth in India. (Question : Which state has lowest population growth rate?)
2. Rubber is grown in Kerala state
3. Kerala state has very high endemism of species (Think : Western Ghats)

85.Ans. B

Exp:

The debate over the use of DC and AC has been in news. AC was used primarily because its voltage could be stepped up easily using an AC transformer and it could be transmitted over long distance with high efficiency.

86.Ans. B

87.Ans. A

Exp:

In mountains temperature inversion cause cold air which is dense to drain down towards valley bottom while the warm air of valley bottom is uplifted and almost reaches the slopes.

This is the reason that fruits and orchids are planted on the slopes because if they would be planted at the bottom, due to cold they would be affected by frost.

88.Ans. C

Exp:

- Statement 2 is incorrect: Sec 69A provides the government with emergency powers to hold inquiry after the ban. However the Blocking Rules, 2009 specifically provide for a defined process of notice, hearing, and reasoned order. These processes emerge from the Shreya Singhal judgment (2008) and apply to all grounds for blocking, including those premised on national security.
- Statement 3 is incorrect: A block disables access for a user in India through an internet service provider such as Airtel, Jio

etc. whereas a takedown results in the removal of content by an online platform such as Facebook.

Section 69A of the Information Technology Act

- The government recently issued an order banning 59 Chinese apps under Section 69A of the IT Act citing concerns to both data security and national sovereignty.
- Under this act, the government has emergency powers to block any content where it is satisfied that it is against the country's sovereignty, integrity, and defense, and in such cases, the law does not require it serving any prior notice to the concerned content providers before ordering a ban.
- It also provides the government with emergency powers to hold inquiries after the ban.

89.Ans. C

Exp:

- Statement 2 is incorrect: Protection from torture is a fundamental right enshrined under Article 21 (Right of Life) of the Indian constitution where rights such as Right to free legal aid, Right against inhuman treatment, Right against custodial harassment, Right of a prisoner to have necessities of life have been mentioned.
- Statement 3 is incorrect: India has signed the UNCAT in 1997 but has not ratified it.

Custodial Violence

- The recent death of a father-son duo from Tamil Nadu, allegedly due to custodial violence, has sparked anger across India.
- Custodial violence primarily refers to violence in police custody and judicial custody. Besides death, rape and torture are two other forms of custodial violence. However, the term custodial violence has not been defined under any law.
- The right to counsel is also a fundamental right under Article 22(1) of the Indian constitution.

- India does not have anti-torture legislation and is yet to criminalize custodial violence.
- Although India has signed the United Nations Convention against Torture (UNCAT) in 1997 its ratification remains. UNCAT aims to prevent torture and other acts of cruel, inhumane, or degrading treatment or punishment around the world.

90.Ans. D

Exp:

Near Earth Object (NEO) - Near Earth Objects are asteroids or comets that have orbits around the Sun that bring them close to the Earth. The actual definition of an NEO is a comet or asteroid whose orbit brings it close to Earth's orbit.

Asteroid - A relatively small, inactive body, composed of rock, carbon or metal, which is orbiting the Sun.

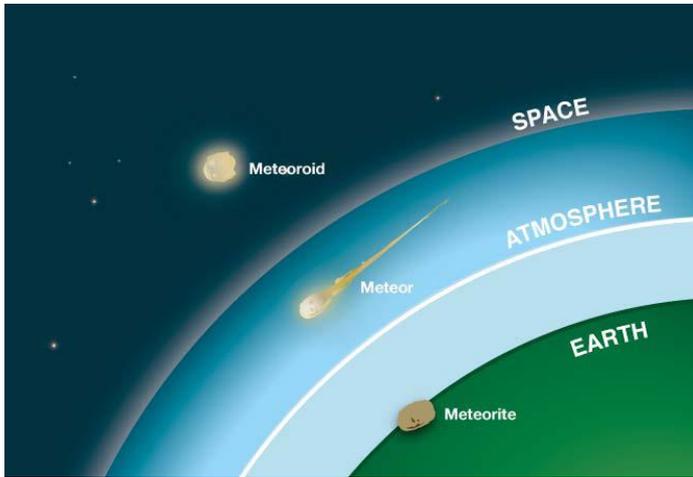
Comet - A relatively small, sometimes active object, which is composed of dirt and ices. Comets are characterised by dust and gas tails when in proximity to the Sun. Far from the Sun it is difficult to distinguish an asteroid from a comet.

Meteoroid - A small particle from an asteroid or comet orbiting the Sun.

Meteor - A meteoroid that is observed as it burns up in the Earth's atmosphere – a shooting star.

Meteorite - A meteoroid that survives its passage through the Earth's atmosphere and impacts the Earth's surface.

In summation, an asteroid is a relatively small object out in space. When an asteroid breaks through our atmosphere and burns up, it becomes a meteor. If the asteroid manages to get all the way through our atmosphere and actually hits the surface of the planet, it is classified as a meteorite.



91. Ans. A

Exp:

This has to do with the rays of the Sun falling on certain walls. New Delhi is located North of Tropic of Cancer.

The Sun rises in the East and before setting in the West, it takes the path from South to South-West. Thus, the total path of the Sun's movement is East (sunrise) - South-South West-West (sunset).

In a North facing house, you will receive very less sunlight during the day. This helps to keep the interiors cool naturally.

In a south facing house, you will receive comparatively more sunlight for a longer duration (because of the sun's path of movement). Plus the intensity of the heat is more.

Tropic of Cancer - throws the sun rays in the South facing walls and the houses facing it get heated up.

92. Ans. C

Exp:

How Lightning occurs: Most lightning happens inside a cloud, but sometimes it happens between the cloud and the ground. A build-up of positive charge builds up on the ground beneath the cloud, attracted to the negative charge in the bottom of the cloud.

The ground's positive charge concentrates around anything that sticks up - trees,

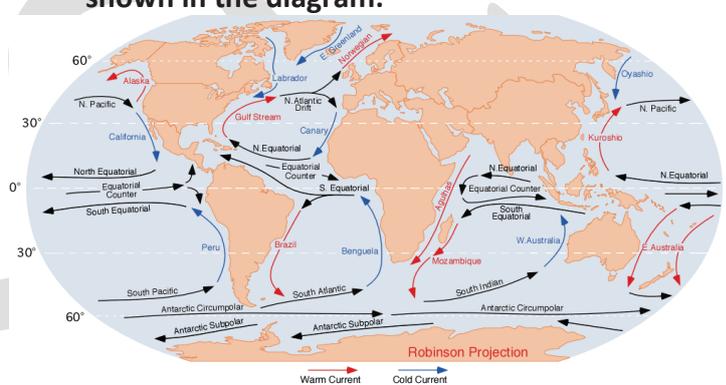
lightning conductors, even people! The positive charge from the ground connects with the negative charge from the clouds and a spark of lightning strikes.

93. Ans. D

Exp:

Newfoundland is the meeting place of Labrador current and Gulf Stream, Cape Agulhas is the meeting place of Agulhas current and Bengula current; whereas Oyashio current and Kurushio current meet at Eastern coast of Japan.

Major ocean currents in the world have been shown in the diagram:

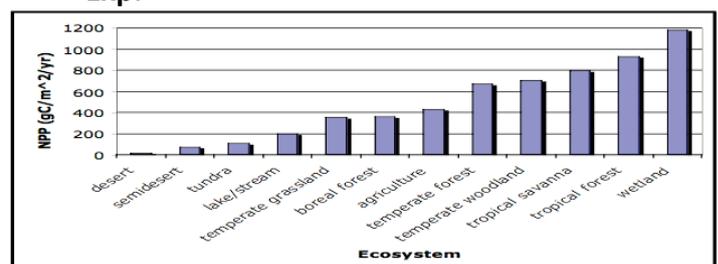


Source to Read: Class Xith NCERT – Ocean currents

94. Ans. A

95. Ans. C

Exp:



96. Ans. D

Exp:

This question is based on simple trick that, Sun is located over tropic of Capricorn on 22nd December, which is the southernmost position of Sun. So, on that day, Australia will have longest day.

97.Ans. A

Exp:

The Forest owl (*Athene blewitti*) is an owl that is endemic to the forests of central India. This bird is on the verge of extinction.

The Painted bush quail (*Perdica erythrorhyncha*) is a species of quail found in the hill forests of India, mainly along the Eastern Ghats and Western Ghats.

The Bengal florican (*Houbaropsis bengalensis*), also called Bengal bustard, is a bustard species native to the Indian subcontinent, Cambodia and Vietnam. It is listed as Critically Endangered on the IUCN Red List because fewer than 1,500 individuals were estimated to be alive as of 2013.

The Spoon-billed sandpiper (*Calidris pygmaea*) is a small wader which breeds in north-eastern Russia and winters in Southeast Asia.

98.Ans. D

Exp:

Cryogenics: Cryogenics is the science that addresses the production and effects of very low temperatures. It is not well-defined at what point on the temperature scale refrigeration ends and cryogenics begins, but scientists assume it starts at or below (-150 degrees C).

Applications of Cryogenics: Cryogenics is used in:

1. Rocket Engine
2. Electric Power transmission in big cities
3. Frozen food
4. Blood banking
5. Infrared sensors
6. Electronics
7. X-rays
8. Magnetic Levitation

99.Ans. C

Exp:

Scientists at Agharkar Research Institute (ARI), Pune, an autonomous institute under the Department of Science & Technology, have

isolated 45 different strains of methanotrophic bacteria which have been found to be capable of reducing methane emissions from rice plants.

Methanotrophs metabolise and convert methane into carbon-di-oxide. They can effectively reduce the emission of methane, which is the second most important greenhouse gas (GHG) and 26 times more potent as compared to carbon-di-oxide. So statement 1 is not correct.

In rice fields, methanotrophs are active near the roots or soil-water interfaces. The team found that there was a decrease in methane emissions in inoculated plants with a positive or neutral effect on the growth of the rice. This could lead to the development of microbial inoculants for methane mitigation in rice. Rice fields contribute to nearly 10% of global methane emissions. So, statement 2 is correct.

Methanotrophs can also be used in methane value addition (valorization) studies. Bio methane generated from waste can be used by the methanotrophs and can be converted to value-added products such as single-cell proteins, carotenoids, biodiesel, and so on. So statement 3 is correct.

Therefore, the correct answer is (c).

100.Ans. B

Exp:

- Statement 1 is incorrect: It is not an IoT (Internet of Things) based platform.

ASEEM Portal

- The Ministry of Skill Development and Entrepreneurship (MSDE) has launched 'Atma Nirbhar Skilled Employee Employer Mapping' (ASEEM) portal.
- ASEEM portal will provide employers a platform to assess the availability of skilled workforce and formulate their hiring plans.

- The portal will map details of workers based on regions and local industry demands and will bridge demand-supply gap of skilled workforce across sectors.
- The Artificial Intelligence-based platform will also provide real-time granular information by identifying relevant skilling requirements and employment prospects.
- The portal has been developed by the National Skill Development Corporation (NSDC) in collaboration with Better Place.

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