

Q.1) 'Pradhan Mantri Shram Yogi Maan-dhan' has been launched for

- providing financial help to marginalised communities
- providing for doubling the farmers' income
- promoting investment in unorganised sector
- providing old age protection and social security

Ans) d

Exp) Pradhan Mantri Shram Yogi Maan-dhan is a central government scheme meant for old age protection and social security of Unorganised Workers (UW).

KB)

Eligibility: For unorganized sector workers only; entry age: between 18 and 40 years; monthly income below Rs. 15000.

It is a voluntary and contributory pension scheme, under which the subscriber would receive a **minimum assured pension of Rs 3000/- per month** after attaining the age of 60 years and if the subscriber dies, the **spouse of the beneficiary shall be entitled to receive 50% of the pension** as family pension. Family pension is applicable only to spouse.

If he/ she exits the scheme within a period of less than 10 years, the beneficiary's share of contribution only will be returned to him with savings bank interest rate.

If subscriber exits after a period of 10 years or more but before 60 years of age, the beneficiary's share of contribution along with accumulated interest as actually earned by fund or at the savings bank interest rate whichever is higher.

If a beneficiary has given regular contributions and died due to any cause, his/ her spouse will be entitled to continue the scheme subsequently by payment of regular contribution or exit by receiving the beneficiary's contribution along with accumulated interest as actually earned by fund or at the savings bank interest rate whichever is higher.

After the death of subscriber as well as his/her spouse, the entire corpus will be credited back to the fund.

Source) Vikaspedia

Q.2) With reference to the Chief Information Commissioner, which of the following statements is/are correct?

- He/she will hold office for a fixed term of five years.
- His/her salary will be equivalent to the salary paid to the Chief Election Commissioner.

Select the correct answer using the code given below:

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

Ans) d

Exp) As per The recent Right to Information (Amendment) Act, 2019, term of office and salary of CIC will be notified by Central Government.

KB)

Provision	RTI ACT, 2005 (Earlier)	After RTI(Amendment) act, 2019

Term of office	Term of office of CICs and ICs of Central and State Information Commissions, was 5 years.	Term of office for the CIC and the ICs to be notified by the central Government.
Salary	Salaries of CICs and ICs of Central Information commission, equivalent to that of chief election commissioner and election commissioners respectively. Salaries of CICs and ICs of State Information commission, equivalent to that of election commissioners and chief secretary respectively	Salaries and allowances of CICs and ICs of both Central and State Information Commissions to be decided by the Central government.

Q.3) The 'Balfour Declaration', is related to

- a) national home for the Jewish people
- b) national home for the Arabs in Palestine
- c) dispute on Golan Heights
- d) dispute between Kurds and Turkey

Ans) a

Exp) The Balfour Declaration was a public statement issued by the United Kingdom's Foreign Secretary Arthur Balfour in 1917 during the First World War announcing support for the Zionist movement and establishment of a "**national home for the Jewish people**" in Palestine, then an Ottoman region with a less than 10% of Jewish population at the time. Upon the start of the mandate, the British began to facilitate the immigration of European Jews to Palestine. Between 1922 and 1935, the Jewish population rose to nearly 27 percent of the total population, laying the foundation of modern Israel and the Israel-palestinian conflict.

Q.4) Consider the following statements:

1. India's Gross Investment has constantly been on the rise in the last 4 years.
2. India's Gross Domestic Savings Rate has consistently decreased in the last 4 years.

Which of the statements given above is/are correct?

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

Ans) a

Exp) Gross investments have risen in absolute terms in the last 4 years. It has declined in terms of percentage of GDP.

2015-16	2016-17	2017-18	2018-19	Q1 2019-20	
GFCF at Constant Prices	Rs 34.48 trillion (US\$ 473.57 billion)	Rs 37.98 trillion (US\$ 521.59 billion)	Rs 40.88 trillion (US\$ 561.44 billion)	Rs 45.48 trillion	Rs 11.66 trillion

Gross Domestic savings has decreased since 2011-12, but has shown signs of rise in 2017-18. As per Economic survey 2018-19:

	2011-12	2014-15	2015-16	2016-17	2017-18
Gross Savings	34.6	32.2	31.1	30.3	30.5

Q.5) Which of the following seas is defined by ocean currents only?

- Red Sea
- Sargasso Sea
- Arabian Sea
- Bay of Bengal

Ans) b

Exp) The **Sargasso Sea** is a region of the North Atlantic Ocean bounded by four currents forming an **ocean gyre** (a system of circulating ocean currents). It is the only sea in the world that is bounded by ocean currents only. The sea is bounded on the west by the Gulf Stream, on the north by the North Atlantic Current, on the east by the Canary Current, and on the south by the North Atlantic Equatorial Current, a clockwise-circulating system of ocean currents termed the North Atlantic Gyre. *Sargassum seaweed* is found in the sea, giving it its name.

Q.6) Which one of the following sets of states of India does the Indian Standard Time (IST) longitude pass through?

- Uttar Pradesh, Madhya Pradesh, Maharashtra, Tamil Nadu
- Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Orissa
- Madhya Pradesh, Chhattisgarh, Orissa, Karnataka
- Chhattisgarh, Orissa, Maharashtra, Karnataka

Ans) b

Exp) Standard Meridian of India which is 82°30' East longitude passes through 5 states: Uttar Pradesh, Madhya Pradesh, Chattisgarh, Odisha and Andhra Pradesh.

Q.7) With reference to Fundamental rights enshrined in the Indian constitution, which of the following statements is/are correct?

- Freedom of speech is a qualified right.

2. Abolition of untouchability is an absolute right.

Select the correct answer using the code given below:

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

Ans) c

Exp) An **absolute right** is a legally enforceable right; a right to act or refuse to act that is at the sole discretion of the person possessing the right. Such a right is completely enforceable as written in the constitution and no other legal or extralegal process can infringe on that right. An example being **Article 17 which abolishes untouchability**. It is an absolute right because this right cannot be infringed by any other law or force, come what may.

A **qualified right** is where the state can lawfully interfere under certain circumstances as laid down in the constitution or as the need maybe. **Article 19, freedom of speech is a qualified right**. Citizens have freedom of speech & expression but subject to conditions like contempt of court, public decency, defamation, national security and so on as so forth.

Q.8) Which of the following is/are the main objective(s) of the Reserve Bank of India?

- a) maintaining price stability
- b) ensuring adequate flow of credit
- c) maintaining financial stability
- d) all of the above

Ans) d

Exp) The main functions of the RBI include:

1. **Monetary authority:** formulates, implements, and monitors India's monetary policy. The main objectives of which are **maintaining price stability, ensuring adequate flow of credit** to productive sectors, and financial stability.
2. **Issuer of currency:** issues currency and coins, and exchanges or destroys currency notes and coins unfit for circulation
3. **Banker and debt manager to government of India:** performs merchant banking functions for central and state governments and also acts as their banker, determines how best to raise money in debt markets to help the government finance its requirements
4. **Banker to banks:** enables clearing and settlement of inter-bank transactions, maintains banks' accounts for statutory reserve requirements, and acts as a lender of last resort
5. **Regulator and supervisor of the financial system:** protects the interests of depositors, facilitates orderly development and conduct of banking operations, and maintains financial stability through preventive and corrective measures
6. **Manager of foreign exchange:** regulates transactions related to the external sector, enables the development of the foreign exchange market (forex), ensures smooth functioning of the domestic forex market, and manages India's foreign currency assets and gold reserves
7. **Regulator and supervisor of payment and settlement systems**
8. **Maintaining financial stability:** an explicit objective of the RBI since the early 2000s
9. **Development:** ensures credit availability to productive economic sectors, establishes institutions to develop India's financial infrastructure, expands access to affordable financial services, and promotes financial education and literacy.

Q.9) Which among the following regions has the richest biodiversity?

- Tropic Regions
- Polar Regions
- Temperate Regions
- Oceans

Ans) a

Exp) Biodiversity is not found evenly on the earth. **It is consistently richer in the tropics, which is the result of the warm climate, adequate sunlight and higher evenly distributed rainfall.** tropical forest ecosystems cover less than 10 percent of earth's surface, and contain about 90 percent of the world's species.

As one approaches polar regions one finds larger and larger populations of fewer and fewer species.

KB) Biodiversity is a system in constant evolution, from a view point of species, as well as from the viewpoint of an individual organism. The average half-life of a species is estimated at between one and four million years, and 99 per cent of the species that have ever lived on earth are today extinct.

Q.10) Which of the following statements is/are correct regarding Rashtriya Bal Swasthya Karyakram (RBSK)?

- It is implemented by the Ministry of Health and Family Welfare.
- It is a scheme for universal screening of children between 6 years to 18 years for leprosy and tuberculosis (TB).

Select the correct answer using the code given below:

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

Ans) a

Exp) Statement 1 is correct. It was launched in 2013 under the National Health Mission. It is implemented by the Ministry of Health and Family Welfare.

Statement 2 is incorrect. The Ministry of Health and Family Welfare has launched a scheme for universal screening of children from birth to 18 years for leprosy and tuberculosis (TB). It is a part of the Rashtriya Bal Swasthya Karyakram (RBSK)

Aim: early identification and early intervention for children from birth to 18 years to cover **4 'D's viz. Defects at birth, Deficiencies, Diseases, Development delays including disability.** Child Health Screening and Early Intervention Services under RBSK covers 30 selected health conditions for screening, early detection and free management. Tuberculosis and Leprosy were previously not a part of it.

Q.11) Consider the following statements:

- Bioaccumulation is the process by which toxins enter the food web.
 - Biomagnification is the process by which toxins are passed from one trophic level to another.
 - For biomagnification to occur, the pollutant must be long lived, mobile and soluble in fat.
- Which of the statements given above is/are correct?

- 1 and 2 only
- 2 and 3 only

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

Ans) d

Exp) Statement 1 is correct : Bioaccumulation refers to how pollutants enter the food chain and food web. Bioaccumulation occurs when an organism absorbs a substance at a rate faster than that at which the substance is lost by catabolism and excretion.

Statement 2 is correct : Biomagnification refers to the tendency of pollutants to concentrate as they move from one trophic level to the next. There is an increase in the concentration of the pollutant from one link of the food chain to the next link.

Statement 3 is correct : For biomagnification to occur the pollutant must be long lived, mobile and soluble in fat. If the pollutant is soluble in water it may be excreted out of the organism. Fat soluble pollutant gets deposited in fat tissues of the organism.

Q.12) With reference to the National Green Tribunal (NGT), which of the following statements is/are correct?

1. It came into existence in 2010 under the National Green Tribunal Act 2010.
2. It is bound by the mainstream code of civil procedure.
3. The chairperson is appointed by the President of India in consultation with the Chief Justice of India.

Select the correct answer using the code given below:

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

Ans) a

Exp) Statement 1 is correct. The National Green Tribunal (NGT) came into existence in 2010 under the National Green Tribunal act 2010.

Statement 2 is incorrect. The tribunal is guided by principles of natural justice and is not bound by the mainstream code of civil procedure.

Statement 3 is incorrect. The chairperson is appointed by the Central Government in consultation with the Chief Justice of India.

KB) About NGT:

- The National Green Tribunal (NGT) came into existence in 2010 under the National Green Tribunal act 2010.
- The act provides for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources.
- The tribunal is guided by principles of natural justice and is not bound by the mainstream code of civil procedure.
- The Tribunal is mandated to make and endeavour for disposal of applications or appeals finally within 6 months of filing of the same.
- The tribunal has five places of sittings with New Delhi as the Principal place of sitting and Bhopal, Pune, Kolkata and Chennai are the other four.

Composition:

- The Tribunal comprises of the Chairperson, the Judicial Members and Expert Members. They shall hold office for a term of five years and are not eligible for reappointment.

- The chairperson is appointed by the Central Government in consultation with the Chief Justice of India.
- Judicial and expert members are appointed on recommendations by the Selection Committee.

Qualifications:

- Chairperson: A person who is or has been a Judge of the Supreme Court or Chief Justice of the High Court.
- Judicial Member: A person who is or has been a Judge of a High Court
- Expert Member: Qualification and experience in relevant scientific and technological field or practical experience in dealing with environmental matters.

Jurisdiction:

The NGT deals with civil cases under the seven laws related to the environment, these include:

- The Water (Prevention and Control of Pollution) Act, 1974,
- The Water (Prevention and Control of Pollution) Cess Act, 1977
- The Forest (Conservation) Act, 1980,
- The Air (Prevention and Control of Pollution) Act, 1981
- The Environment (Protection) Act, 1986
- The Public Liability Insurance Act, 1991 and
- The Biological Diversity Act, 2002.

The Wildlife (Protection) Act, 1972 and Scheduled Tribes and Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 have been kept out of NGT's jurisdiction.

Q.13) Which of the following best describes Core Investment Companies (CICs)?

- a) They are Non-Banking Financial Companies (NBFCs) having asset size of Rs 100 crore and above.
- b) They are a financial institution licensed to receive deposits and make loans.
- c) They are a legal entity formed by a group of individuals to engage in and operate a business commercial or industrial enterprise.
- d) They are high net worth individuals who provides financial backing for small start-ups or entrepreneurs, typically in exchange for ownership equity in the company

Ans) a

Exp) Core Investment Companies (CICs) are Non-Banking Financial Companies (NBFCs) having asset size of Rs 100 crore and above. The main business of CIC is of acquisition of shares and securities with certain conditions. It holds not less than 90% of its net assets in the form of investment in equity shares, preference shares, bonds, debentures, debt or loans in group companies. Further, investments in equity shares in group companies constitute not less than 60% of its net assets.

Q.14) The thermocline layer represents vertical zone of oceanic water below the first layer of the sea surface and is characterized by rapid rate of decrease of temperature with increasing depth. In which of the following regions can one find these layers almost permanently?

- a) Tropics
- b) Poles
- c) Temperate Region
- d) Southern Ocean

Ans) a

Exp) The thermocline layer lies below the first layer and is characterised by rapid decrease in temperature with increasing depth. The thermocline is 500 -1,000 m thick. In polar regions, including southern ocean, it is almost non-existent as the water column is cold from the surface to the bottom. It is variable in temperate regions depending on season

KB) The maximum temperature of the oceans is always at their surfaces because they directly receive the heat from the sun and the heat is transmitted to the lower sections of the oceans through the process of convection.

The first layer represents the top layer of warm oceanic water and it is about 500m thick with temperatures ranging between 20° and 25° C. This layer, within the tropical region, is present throughout the year but in mid latitudes it develops only during summer.

The second layer is the thermocline layer.

The third layer is very cold and extends upto the deep ocean floor. In the Arctic and Antarctic circles, the surface water temperatures are close to 0° C and so the temperature change with the depth is very slight. Here, only one layer of cold water exists, which extends from surface to deep ocean floor.

Q.15) Which of the following sets of pair is/are **incorrectly** matched?

School of Art	Material used Predominantly
1. Gandhara	Red Sandstone
2. Amravati	White Marble
3. Mathura	Blue – Grey Mica Schist

Select the correct answer using the code given below:

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

Ans) b

Exp) Pair 1 is incorrectly matched. Grey sandstone (Blue-grey Mica schist to be precise) is used in Gandhara School of Art.

Pair 2 is correctly matched. The material used in Amravati stupas is a distinctive white marble

Pair 3 is incorrectly matched. The material used in this school was the spotted red sandstone.

KB) Characteristics of Gandhara School of art:

- The reliefs of the Gandhara Sculpture depict Buddha's birth, his renunciation and his preaching and the best of the sculptures were produced during the first and second centuries A.D.
- The drapery was thick with large and bold fold lines also the human body was cast in a realistic manner with minute attention being given to physical features like a moustache, muscles, and curly hair.
- **Pair 1 is incorrectly matched. Grey sandstone (Blue-grey Mica schist to be precise) is used in Gandhara School of Art.**

Characteristics of Mathura School of Art:

Mathura School of art is famous for its assimilative character since the images of Vaishnava and Shaiva faiths along with Buddhist images are in prevalence in Mathura style. The records of Jain Tirthankaras are also found in Mathura Style.

Pair 3 is incorrectly matched. The material used in this school was the spotted red sandstone.

In Mathura School of art which is noted for its vitality and assimilative character, Sarnath and Kausambi also emerged as important centres of art production while the traditional centre, Mathura, remained the main art production site. Many Buddha images in Sarnath have plain transparent drapery covering both shoulders, and the halo around the head has very little ornamentation whereas the Mathura Buddha images continue to depict folds of the drapery in the Buddha images and the halo around the head is heavily decorated.

Characteristics of Amravati School of Art:

- **Pair 2 is correctly matched. The material used in Amravati stupas is a distinctive white marble** and Amravati sculptures have a sense of movement and energy with profound and quiet naturalism in human, animal and floral forms.
- Prominent places where this style developed are Amravati, Nagarjunikonda, Goli, Ghantasala and Vengi.
- Symbolic representation of Buddha's life, the Buddha almost always being represented by a symbol, though in two or three places he is personified.
- Like the Sanchi Stupa, the Amravati Stupa also has pradakshina patha enclosed within a vedika on which many narrative stories from the life of Buddha and bodhisattva dominating such episodes relating to the Birth, the miracles, Enlightenment and the victory over Mara, Sundari, Nanda, Tushita heaven and Angulimala are depicted.
- Sculptural form in Amravati Art is characterised by intense emotions as the figures are slim, have a lot of movement, bodies are shown with three bents (i.e. tribhanga), and the sculptural anatomy is more complex than at Stupa of Sanchi.
- Both religious and secular images were present in this style.

Source) Nitin Singhanian Art and Culture

Q.16) With reference to the Indian freedom struggle, which of the following statements is/are correct?

1. The Independence for India League was set up by Subhash Chandra Bose.
2. The All India Trade Union Federation was founded by N M Joshi.
3. The INC at the Karachi Session (1931) opposed the Gandhi Irwin Pact.

Select the correct answer using the codes given below:

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

Ans) b

Exp) Statement 1 is correct. The Independence for India League was set up by Subhash Chandra Bose and Jawaharlal Nehru after they were disappointed by the provision of the grant of dominion status demanded by the Nehru Report.

Statement 2 is correct. The All India Trade Union Congress (AITUC), was founded on Oct. 31, 1920 by the efforts of NM Joshi, Joseph Baptista, Lala Lajpat Rai and others. It was

influenced by the Social Democratic ideas of British labour party. The first session of AITUC was held in Mumbai. Lala Lajpat Rai was the President and Diwan Chaman Lal was the Secretary.

Statement 3 is incorrect. In the 1931 session of the Congress at Karachi, the Congress adopted the Gandhi Irwin Pact.

Q.17) Golden rice, recently seen in the news, is found to be abundant in

- Vitamin C
- Vitamin A
- Vitamin D
- Vitamin K

Ans) b

Exp) Golden rice is a variety of rice (*Oryza sativa*) produced through genetic engineering to biosynthesize beta-carotene, a precursor of vitamin A in the edible parts of rice.

KB) About Golden Rice:

- Golden rice is a variety of rice (*Oryza sativa*) produced through genetic engineering to biosynthesize beta-carotene, a precursor of vitamin A in the edible parts of rice.
- It is intended to produce a fortified food to be grown and consumed in areas with a shortage of dietary vitamin A.
- Research has indicated that one cup of Golden Rice can provide up to 50% of the daily requirement of an adult for vitamin A.
- But presently, it has a low shelf life of not more than 3 months as it may lose its nutrients after that.

Golden Rice and Bangladesh:

- The Golden Rice that is being reviewed in Bangladesh has been developed by the International Rice Research Institute (IRRI)
- According to the institute, this rice variety will not be more expensive than the conventional variety.

Q.18) With reference to Cartosat – 3, consider the following statements:

1. It is a third-generation agile advanced satellite having high-resolution imaging capability.
2. It will be used for weather mapping and communication purposes.
3. It was launched in the geosynchronous orbit.

Which of the statements given above is/are correct?

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

Ans) a

Exp) Statement 1 is correct. Cartosat-3 satellite is a third-generation agile advanced satellite having high-resolution imaging capability.

Statement 2 is incorrect. Potential uses of the Cartosat-3 satellite include weather mapping, cartography or army defence, and strategic applications. It will **not be used for communication purposes.**

Statement 3 is incorrect. The satellites would be launched by India's Polar Satellite Launch Vehicle, PSLV-C47 into a **Sun Synchronous Orbit**. PSLV-C47 is the 21st flight of PSLV in 'XL' configuration (with 6 solid strap-on motors).

Q.19) With reference to ecotone, which of the following statements is/are **incorrect**?

1. It is a meeting place of two or more diverse ecosystems.
2. It can be a very narrow or a very wide area.
3. It is characterised by poor species density.

Select the correct answer using the code given below:

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

Ans) c

Exp) Statement 1 is correct. An ecotone refers to a zone of junction between two or more diverse ecosystems (biomes). For example: the mangrove ecosystem represents an ecotone between marine and terrestrial ecosystem. It has conditions intermediate to the adjacent ecosystems. Hence it is a zone of tension.

Statement 2 is correct. An ecotone is a transition zone where two communities meet and integrate; it may be narrow (between grassland and forest) or wide (between forest and desert). One such example is the mangrove region, which is an ecotone between coastal and terrestrial ecosystems.

Statement 3 is incorrect. Generally, there is a greater number of species found in ecotones and this is called edge effect. The species found here are called edge species.

Q.20) Consider the following statements:

1. Ahmedabad Mill Strikes was the first Civil Disobedience Movement.
2. Chauri Chaura killings were termed as Himalayan blunder by Gandhi.
3. Dr. B R Ambedkar was part of Mahad Satyagraha.

Which of the statements given above is/are correct?

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

Ans) d

Exp) Statement 1 is incorrect: Champaran, Ahmedabad and Kheda satyagraha were the first 3 satyagrahas by MK Gandhi after his return from South Africa
Champaran Satyagraha :(First Civil disobedience movement)

- Mahatma Gandhi was persuaded by Raj Kumar Shukla, oppressed Indigo cultivator to visit the Champaran in Bihar.
- Farmers were forced to grow indigo crop.
- As a result of Gandhi's visit, the Champaran Satyagraha began in 1917
- He was supported by Brajkishore Prasad, Rajendra Prasad, Anugrah Narayan Sinha and Acharya Kripalani.

Statement 2 is incorrect: To protest against the draconian Rowlatt Act, Gandhi launched Rowlatt Satyagraha, as a non-violent movement of civil disobedience. However, after the

jallianwala bagh massacre, Gandhi withdrew the movement and called it a “Himalayan blunder”.

Statement 3 is correct: Mahad Satyagraha or Chavdar Tale Satyagraha was a satyagraha led by B. R. Ambedkar on 20 March 1927 to allow untouchables to use water in a public tank in Mahad (currently in Raigad district), Maharashtra, India. The day (20 March) is observed as Social Empowerment day in India.

Q.21) With reference to the new series of the Index of Industrial Production (IIP), which of the following statements is correct?

- Electricity generation from renewable sources are not included in the Electricity generation data.
- Coal Production has the highest weightage among the core industries.
- Natural gas is not among the eight core industries on the index.
- Petroleum Refinery product has the highest weightage among the core industries.

Ans) d

Exp) Option a is incorrect data on electricity generation figures from renewable sources is included in the Electricity generation data to calculate IIP.

Option b is incorrect and option d is correct: Petroleum Refinery Products (weight: 28.04 per cent) has the highest weightage.

Option c is incorrect: Natural gas is among the eight core industries on the index.

8 core industries in IIP are:

- Coal production (weight: 10.33 per cent)
- Crude Oil production (weight: 8.98 per cent)
- Natural Gas production (weight: 6.88 per cent)
- Petroleum Refinery Products (weight: 28.04 per cent)
- Fertilizers production (weight: 2.63 per cent)
- Steel production (weight: 17.92 per cent)
- Cement production (weight: 5.37 per cent)
- Cement production (weight: 5.37 per cent)

Q.22) Which of the following is the likely outcome in case of an increase in direct tax rate in India?

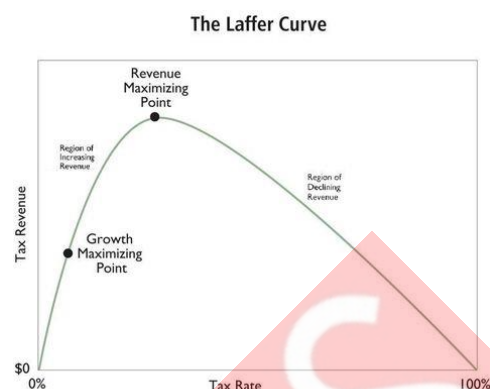
- It would lower the tax revenue of the government permanently.
- It would increase the tax revenue of the government permanently.
- Beyond a limit, increase in tax rate will lead to lower tax revenue.
- No significant change can be predicted.

Ans) c

Exp) The relationship between tax rates and tax revenue can be studied through **Laffer curve**. It explains how gradual reduction in tax rates from high levels or increase in tax levels from low levels to an optimum rate can maximize tax revenue collection for the government. Laffer curve is mostly applicable in direct taxes like personal income tax.

It says that both at zero percent tax rate and 100 percent tax rate, tax revenue will be zero. At 100 percent tax rate, all income goes to the government and nobody will work; producing zero income and zero tax revenue. At the optimum tax rate tax revenue can be the maximum.

It is widely believed that India is on the **Laffer curve**.



Thus, starting from a low tax rate and gradually increasing it, is positively related and increases tax revenue. However, **beyond a level, any increase in tax rates becomes counterproductive as it lowers tax revenue rather than increasing it.** This is because high tax rates lead to tax evasion, non-disclosure of income and generation of black money (taxes not paid). People will make all kinds of efforts to minimize the incidence of taxes legally and illegally. It will serve as a disincentive in the economy leading to lowering of income and the output.

Q.23) With reference to Starlink Project, which of the following statements is/are correct?

1. It is a low-cost satellite based broadband network delivering internet access to the entire globe.
 2. It is a joint venture of European Space Agency and Indian Space Research Organisation.
- Select the correct answer using the code given below.

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

Ans) a

Exp) Starlink Project is a SpaceX initiative that seeks to build a low-cost, satellite based broadband network capable of delivering internet access to the entire globe.

SpaceX has launched its first 60 of nearly 12,000 internet providing satellites under the Starlink Project.

SpaceX, is a private American aerospace manufacturer and space transportation services company, founded in 2002 by Elon Musk. SpaceX has developed the Falcon launch vehicle family and the Dragon spacecraft family.

Q.24) The phenomenon when there is a sustained price rise of one or a small group of commodities even though the general price levels remain constant, is termed as:

- a) Stagflation
- b) Inflation
- c) Reflation
- d) Skewflation

Ans) d

Exp) 'Skewflation' is a phenomenon in which there is a price rise of one or a small group of commodities over a sustained period of time.

KB) Stagflation is a condition of slow economic growth and relatively high unemployment, or economic stagnation, accompanied by rising prices, or inflation. It can also be defined as inflation and a decline in gross domestic product (GDP).

Inflation is a quantitative measure of the rate at which the average price level of a basket of selected goods and services in an economy increases over a period of time. It is the constant rise in the general level of prices where a unit of currency buys less than it did in prior periods. Often expressed as a percentage, inflation indicates a decrease in the purchasing power of a nation's currency.

Reflation is a fiscal or monetary policy designed to expand output, stimulate spending, and curb the effects of deflation, which usually occurs after a period of economic uncertainty or a recession. The term may also be used to describe the first phase of economic recovery after a period of contraction.

Q.25) Who among the following has been accorded the Jnanpith Award for 2019?

- Akkitham Achuthan Namboothiri
- Raghuveer Chaudhary
- Amitav Ghosh
- Krishna Sobti

Ans) a

Exp) Malayalam poet Akkitham Achuthan Namboodri, has been awarded the prestigious 55th Jnanpith Award, 2019. Apart from poetry, Akkitham has also written plays and novels. His most of the poetry works have a unique prophetic character. He predicts a range of socio-political developments in his poetry. Akkitham is famous for showing modernity through his poetry.

Akkitham has also been conferred with the Padma Shri. He has also been honoured with the Sahitya Akademi Award in 1973, the Kerala Sahitya Akademi Award in 1972 and the Kerala Sahitya Academy Award in 1988 and the Kabir Samman.

About Jnanpith Award

- The Jnanpith Award is the highest literary award given by the Indian Jnanpith Trust for Indian literature.
- Any citizen of India who writes in any of the 22 languages mentioned in the Eighth Schedule and English, is eligible for this award. It is not awarded posthumously.
- An award of eleven lakh rupees, a citation and a bronze statue of Vagdevi are given in the award.
- This award, which started in 1965 with prize money of Rs 1 lakh, has been increased to Rs 7 lakh in 2005, which have now been eleven lakh rupees.
- The first Jnanpith Award was presented to Malayalam writer G. Shankar Kurup in 1965.

Q.26) With reference to the Indian Independence Act, 1947, consider the following statements.

- It was based upon the June 3rd Plan.
- It made Lord Mountbatten the first governor general of both India and Pakistan.

3. It proposed to set up a boundary commission to determine the boundary between two dominions.

Which of the statements given above is/are correct?

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

Ans) c

Exp) The Indian Independence Act was based on the Mountbatten plan of June 3; it was passed by the British parliament on July 5, 1947 and received royal assent on July 18, 1947. It provided for two dominion states: India and Pakistan. Hence, **statement 1 is correct.**

As per the provisions of the Act, Lord Mountbatten was the first Governor General of India, whereas Mohammad Ali Jinnah became the first Governor General of Pakistan. Hence, **statement 2 is incorrect.**

It proposed to set up a boundary commission to determine the boundary between two dominions of India and Pakistan, which was set up under the chairmanship of Sir Cyril Radcliffe. Hence, **statement 3 is correct.**

KB) The June 3 plan was also known as the Mountbatten Plan. The British government proposed a plan announced on June 3, 1947, that included these principles:

1. Principle of the partition of British India was accepted by the British Government
2. Successor governments would be given dominion status
3. autonomy and sovereignty to both countries
4. can make their own constitution

Q.27) With reference to Supreme Court of India, which of the following statements is/are correct?

1. It runs the judicial administration of India.
 2. It acts as a guardian of the constitution.
 3. It acts as the sole interpreter of the constitution.
- Select the correct answer using the code given below.

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

Ans) b

Exp) Statement 1 is correct: The Constitution establishes a single integrated judicial system for the whole of India. The Supreme Court of India is the highest court in the country and below it are the High Courts at the state level. Other courts (Subordinate Courts) work under the High Courts. The Supreme Court controls and **runs the judicial administration of India.**

Statement 2 is correct: Under the constitution, Supreme Court of India has been envisaged as the guardian protector of the Constitution and the fundamental rights of the people (Article 32).

Statement 3 is Incorrect: Supreme Court is the ultimate interpreter of the Constitution. It can give final version to the spirit and content of the provisions of the Constitution and the

verbiage used in the Constitution. However, **it is not the sole interpreter as legislature and executive also have the power to interpret the constitution of India.**

Q.28) Which among the following statements is incorrectly stated?

- Nehru report of 1928 recommended dominion status for India.
- Nehru report of 1928 rejected the separate electorates for Muslims.
- Delhi proposals, 1927 demanded separate electorates for Muslims.
- Delhi proposals, 1927 were accepted in the Madras Congress session.

Ans) c

Exp) Statement c is incorrect : Delhi proposals proposed joint electorate with reservation for muslims

Nehru report:

The Nehru Report, 1928 was prepared by a committee of the All Parties Conference chaired by Pt. Motilal Nehru. This committee was created when Lord Birkenhead, Secretary of State of India asked the Indian leaders to draft a constitution for the country.

Nehru report Recommendations :

- Dominion status
- No separate electorates, but joint electorates with reserved seats for minorities.
- Linguistic provinces.
- Nineteen fundamental rights including equal rights for women, the right to form unions, and universal adult suffrage.
- Responsible government at the center and in provinces
- Full protection to cultural and religious interests of Muslims.
- Complete dissociation of state from religion

Delhi Proposals : In December 1927, a large number of Muslim leaders met at Delhi at the Muslim League session and evolved four proposals for Muslim demands to be incorporated in the draft constitution. These proposals, which were accepted by the Madras session of the Congress (December 1927), came to be known as the 'Delhi Proposals'. These were –

- Joint electorates in place of separate electorates with reserved seats for Muslims.
- One-third representation to Muslims in Central Legislative Assembly.
- Representation to Muslims in Punjab and Bengal in proportion to their population.
- Formation of three new Muslim majority provinces— Sindh, Baluchistan and North-West Frontier Province.

Q.29) Recently Government had planned to merge different banks. Which of the following is/ are not true about Bank Consolidation?

- Merger will have no impact on job loses and also in the long run it will significantly increase the employment opportunities in the banking sector.
- Merger will further contribute to NPA of banks as the management of large banks will become tedious and challenging.

Select the correct answer using the code given below:

- Only 1
- Only 2

- c) Both 1 and 2
- d) Neither 1 and 2

Ans) d

Exp) Statement 1 is incorrect: Government has assured that it will not allow any job losses as a result of consolidation of Public sector banks. But experts have argued that in the long run it will decrease employment opportunities in the sector.

Statement 2 is incorrect: Merger will ensure larger scale of operations, better efficiency and lower operation cost. Consolidation will increase capital efficiency, apart from improving the ability of banks to recover bad loans and managing NPAs.

Q.30) With reference to cloud seeding technology, which of the following statements is/are *incorrect*?

1. It is a kind of weather modification technology to create artificial rainfall.
2. Clouds are not a necessary requirement for the technology to work.
3. The seeds for inducing rain are made up of iodised silver or liquid propane.

Select the correct answer using the code given below.

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

Ans) b

Exp) Statement 1 is correct. Cloud seeding is a kind of weather modification technology to create artificial rainfall.

Statement 2 is incorrect. It works only when there is enough pre-existing clouds in the atmosphere.

Rain happens when moisture in the air reaches levels at which it can no longer be held and cloud seeding aims to facilitate and accelerate that process by making available chemical 'nuclei' around which the condensation can take place.

Statement 3 is correct. These seeds of rain can be the iodides of silver or potassium, dry ice (solid carbon dioxide) or liquid propane. The seeds can be delivered by plane or simply by spraying from the ground.

Q.31) Which of the following is/ are considered as the discretionary power(s) of the President of India?

1. Appointment of Prime Minister when no party or alliance is able to prove the majority.
2. President has discretion to send back money bill to Parliament for reconsideration purposes.
3. President can refuse to give assent on all types of bills passed by Parliament.

Select the correct answer using the code given below:

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

Ans) a

Exp) Statement 1 is correct: Though President has no constitutional discretion, he has some situational discretion under following situations:

1. Appointment of Prime Minister when no party has a clear majority in the Lok Sabha or when the Prime Minister in office dies suddenly and there is no obvious successor.
2. Dismissal of the council of ministers when it cannot prove the confidence of the Lok Sabha.
3. Dissolution of the Lok Sabha if the council of ministers has lost its majority.

Statement 2 is incorrect: In cases of Money bill, the President can either give his assent or withhold his assent but cannot return it for reconsideration of the Parliament. Normally, the President gives his assent to money bill as it is introduced in the Parliament with his previous permission.

President has discretion to send back ordinary bill to Parliament for reconsideration purposes. However, if the bill is passed again by the Parliament with or without amendments and again presented to the President, it is obligatory for the President to give his assent to the bill.

Statement 3 is incorrect: President can refuse to give assent on all types of bills passed by Parliament, except **Constitutional amendment bills**, which have to be ratified by the president.

Q.32) “Pegasus”, recently in the news, is a

- a) Spyware
- b) Ransomware
- c) Malware
- d) Quantum Computer

Ans) a

Exp) Pegasus is a **spyware** that can hack any iOS or Android device and steal a variety of data from the infected device.

KB) It was used to spy on journalists and human rights activists in India in early 2019 through WhatsApp. Pegasus works by sending an exploit link and if the target user clicks on the link, the malware or the code that allows the surveillance is installed on the user’s phone. Once Pegasus is installed, the attacker has complete access to the target user’s phone. The spyware was created by NSO Group, an Israeli cybersecurity firm founded in 2010. The NSO group has claimed to help governments and law enforcement agencies across the world fight crime and terrorism.

- **Spyware** is classified as a type of malware designed to gain access to or damage a computer, often without user’s knowledge. It gathers the user’s personal information and relays it to advertisers, data firms or external users.

Q.33) Kra Canal, recently seen in the news, is located in

- a) Japan
- b) Cambodia
- c) Thailand
- d) Malaysia

Ans) c

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



Q.34) The process by which all outstanding demands of the Budget are directly put to vote without further discussions in the House is known as

- Guillotine
- Policy Cut Motion
- Simple Closure
- Kangaroo Closure

Ans) a

Exp) Guillotine refers to process by which all outstanding demands of the Budget are directly put to vote without further discussions in the House. On the last of the allotted days at the appointed time, the Speaker puts every question necessary to dispose off all the outstanding matters in connection with the demands for grants. The guillotine concludes the discussion on demands for grants.

KB) Policy Cut motion intends to 'reduce the demand to Re. 1'. This represents disapproval of the policy underlying the demand—the discussion remains confined to the particular policy and is open to members to advocate an alternate policy.

Simple Closure is a Closure motion, where a member moves the motion that the 'matter having been sufficiently discussed be now put to vote'.

Kangaroo Closure is a Closure motion, where only important clauses are taken up for discussion and voting and intervening clauses are skipped and taken as passed.

Q.35) Which of the following sets of pair is/are correctly matched?

Delhi	Sultanate	Departments
Emperor		Established

- Firoz Shah Tughlaq Diwan-i-Kohi
- Muhammad Bin Tughlaq Diwan-i-Khairat
- Alauddin Khilji Diwan-i-Mustakhraj

Select the correct answer using the code given below.

- 3 only
- 2 and 3 only
- 2 only
- 1 and 2 only

Ans) a

Exp) Option (a) is the correct answer.

The machinery of administration as it evolved under the Delhi sultanate was derived from the Abbasid and following it, the Ghaznavid and the Seljukid systems of administration.

It was also influenced by the Iranian system of administration and the situation in India and Indian traditions. There were several new departments established by the Delhi sultanate rulers:

Pair 1 is incorrectly matched. Diwan-i-Bandagan: Department of slaves and **Diwan-i-Khairat:** Department of charity were started by **Firuz Shah Tughlaq.**

Pair 2 is incorrectly matched. Diwan-i-Amir Kohi or Diwan-i-Kohi: Department of agriculture was started by **Muhammed Bin Tughlaq.**

Pair 3 is correctly matched. Diwan-i-Mustakhraj: Department to look after and realize land revenue was created by **Alauddin Khilji.** it was to realize arrears from the collectors.

Q.36) With reference to different types of drainage patterns, consider the following statements

1. A dendritic pattern develops where the river channel follows the slope of the terrain.
2. A rectangular pattern develops where hard and soft rocks exist parallel to each other.
3. A trellis pattern develops on a strongly jointed rocky terrain.
4. The radial pattern develops when streams flow in different directions from a central peak or dome like structure.

Which of the statements given above is/are correct?

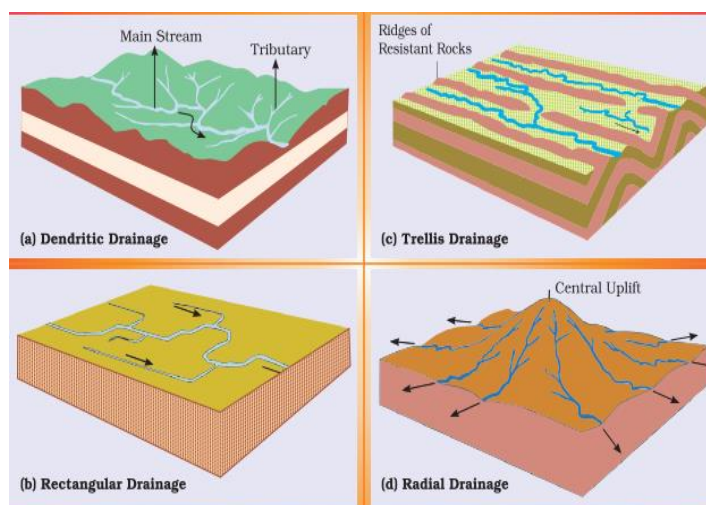
- a) 2 and 3 only
- b) 1 and 4 only
- c) 1 and 3 only
- d) 2 and 4 only

Ans) b

Exp) The streams within a drainage basin form certain patterns, depending on the slope of land, underlying rock structure as well as the climatic conditions of the area.

These are dendritic, trellis, rectangular and radial patterns.

- The dendritic pattern develops where the river channel follows the slope of the terrain.
- A trellis drainage pattern develops where hard and soft rocks exist parallel to each other.
- A rectangular drainage pattern develops on a strongly jointed rocky terrain.
- The radial pattern develops when streams flow in different directions from a central peak or dome like structure.



Source) NCERT Class 9 : Contemporary India - I, Chapter -3

Q.37) Which of the following statements about Attorney General is **incorrect**?

- He should be qualified to be appointed a judge of the High Court.
- He can participate in the proceedings of the Lok Sabha but has no right to vote.
- He holds office during the pleasure of the President.
- He has the right of audience in all courts in the territory of India.

Ans) a

Exp) The office of the Attorney General for India is provided under **Article 76** of the Constitution of India. He is the highest law officer in the country. He is appointed by the President of India.

Statement a is incorrect: He must be a person who is qualified to be appointed a **judge of the Supreme Court**. In other words, he must be a citizen of India and he must have been a judge of some high court for five years or an advocate of some high court for ten years or an eminent jurist, in the opinion of the president.

Statement b is correct: In addition to the members of the House, every minister and the **attorney general of India have the right to speak and take part in the proceedings of either House**, any joint sitting of both the Houses and any committee of Parliament of which he is a member, **without being entitled to vote**

Statement c is correct: The term of office of the AG is **not fixed** by the Constitution. Further, the Constitution does not contain the procedure and grounds for his removal. He holds office **during the pleasure of the president**. This means that he may be removed by the president at any time. He may also quit his office by submitting his resignation to the president.

Statement d is correct: He has the right of audience in all courts in the territory of India.

Q.38) Which of the following statements is correct with respect to National Park and Wildlife Sanctuary?

- Wildlife sanctuaries enjoy greater protection than National parks.
- Unlike wildlife sanctuary, national park is not primarily focused on a particular species.
- Like in national parks, grazing of livestock is prohibited in wildlife sanctuaries.
- Both National park and wildlife sanctuary are part of ex-situ mode of biodiversity conservation.

Ans) b

Exp) Statement 1 is incorrect : National parks enjoy greater protection than wildlife sanctuaries.

Statement 2 is correct: Wildlife sanctuary can be created for a particular species whereas the national park is not primarily focused on a particular species.

Statement 3 is incorrect : Grazing is regulated in wildlife sanctuary and prohibited in national park

Statement 4 is incorrect : Both are part of in-situ mode of biodiversity conservation

Q.39) Early Tamil literature like Sangam texts mentions different categories of people living in villages. In this context, consider the following statements.

- A large landowner was referred to as 'Uzhavar'.
- A ploughman was referred to as 'Vellalar'.
- A slave was referred to as 'Adimai'.
- The landless agricultural labourer were referred to as 'Kammakaras'.

Which of the statements given above is/are correct?

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

Ans) b

Exp) According to Tamil literature (Sangam texts), there were various kinds of people staying in the village which shows that there was inequality based on differential access to land and labour.

Statement 1 is incorrect. A large landowner was referred to as 'Vellalar'.

Statement 2 is incorrect. A ploughman was referred to as 'Uzhavar'.

Statement 3 is correct. Slaves were referred to as 'Adimai'.

Statement 4 is correct. 'Kammakaras' refers to the landless agricultural labourers.

Source) NCERT Class 6th Our Past

Q.40) The Colombo Declaration, recently in the news, is related to

- a) Sustainable Solid Waste Management
- b) Sustainable Agriculture Practices
- c) Sustainable Carbon Sequestration
- d) Sustainable Nitrogen Management

Ans) d

Exp) UN Environment Programme (UNEP) member states recently adopted the "Colombo Declaration" which calls for tackling global nitrogen challenge.

The aim is to halve nitrogen waste by 2030.

Q.41) Consider the following statements.

1. Jizya, a revenue tax on non - Muslims was imposed by Aurangzeb.
2. Sikh Guru, Guru Arjan Dev was executed during Shahjahan's reign.
3. Din-e-ilahi was religious belief which was propagated by Akbar.

Which of the statements given above is/are **incorrect**?

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

Ans) a

Exp) Statement 1 is incorrect : Jizya was a **military tax** imposed on non-muslims who were not fighting for the Mughal Empire in his second decade of ruling in the year 1679.

Statement 2 is incorrect : Guru Arjan dev was executed during Jahangir's reign

Statement 3 is correct: Din-e-ilahi was religious belief which was propagated by Akbar. It combined multiple beliefs across religions and was aimed at bridging religious divide among citizens.

KB) Din-e-Ilahi believed in one God. It had all the good points of every religion.

- Its foundation was balanced. It didn't endorse any philosophy.
- It was aimed at bridging the gap that separated different religions.
- Akbar did not compel anyone to join his new religion.

○ Only a few like Birbal, Abul Fazi and Faizi at the court accepted Akbar's spiritual guidance. The religion, also known as Tauheed-e-Ilahi, virtually died with him.

Q.42) Which of the following is **not** indicative of India possessing a federal structure in her polity?

- Comptroller and Auditor General of India
- Seventh Schedule
- State governments are not subordinate to Central government
- Supremacy of the constitution.

Ans) a

Exp) The **Comptroller and Auditor-General of India** audits the accounts of not only the Central government but also those of the states. But, his appointment and removal is done by the president without consulting the states. Hence, it is a **unitary feature** of Indian political system.

Seventh Schedule provides for union, state and concurrent lists which divide legislative powers between the centre and states. The clear division of powers is a feature of **federal structure**.

Supremacy of the constitution ensures continued existence of state governments and that their powers are not encroached upon by the centre. Hence it is a **federal feature**.

State governments are not subordinate to Central government is the basic **federal feature**.

Q.43) Which of the following is/are a global indicator for land degradation neutrality (LDN)?

- Land Cover
- Land Productivity
- Carbon Stocks
- All of the above

Ans) d

Exp) Land degradation neutrality, as defined by the United Nations Convention to Combat Desertification is "A state whereby the amount and quality of land resources, necessary to support ecosystem functions and services and enhance food security, remains stable or increases within specified temporal and spatial scales and ecosystems."

In simple words, it means that the amount of degraded land should be reduced and further degradation of land must be prevented.

- The three Global indicators used by UNCCD for LDN are:
 - Land Cover
 - Land Productivity
 - Carbon Stocks

Q.44) Consider the following statements.

- A bill providing for the amendment of the Constitution can be tabled in either house of Parliament.
- A Constitutional Amendment Bill does not require prior approval of the President for introduction.

Which of the above statements is/are correct?

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

Ans) c

Exp) The procedure for the amendment of the Constitution is laid down in Article 368. An amendment of the Constitution can be initiated only by the introduction of a bill for the purpose in either House of Parliament and not in the state legislatures. Hence, **statement 1 is correct.**

The bill can be introduced either by a minister or by a private member and does not require prior permission of the president. Hence, the **second statement is also correct.**

The bill must be passed in each House by a special majority, that is, a majority (that is, more than 50 per cent) of the total membership of the House and a majority of two-thirds of the members of the House present and voting.

Q.45) The term 'IndAIR', recently seen in the news, is related to

- a) Air quality
- b) Civil Aviation
- c) Radio Communication
- d) Military Aviation

Ans) a

Exp) The Council of Scientific and Industrial Research-National Environmental Engineering Research Institute (CSIR-NEERI) has launched the country's first interactive online repository called **Indian Air quality Interactive Repository (IndAIR).**

- The IndAIR aims to make air quality research and studies in an easily accessible web format for the public, media, researchers and academics.
- The repository has archived scanned materials from pre-internet era, research articles, reports and case studies to provide the history of air pollution research and legislation in the country.
- It is the first comprehensive effort to enlist existing Indian research and analysis on air pollution, its causes and effects.
- The repository reveals that air pollution was recognised as a subject in India even in 1905 when a study was carried out for Bengal Smoking Nuisance Act.

Q.46) He was an Indian educationist and politician and became president of the Indian National Congress as many as four times. He is best known for founding the Banaras Hindu University in 1916. He was posthumously conferred with Bharat Ratna in 2014. He was

- a) Lala Lajpat Rai
- b) Madan Mohan Malaviya
- c) C. Rajagopalachari
- d) C.R Das

Ans) b

Exp) Madan Mohan Malvia

- He was an **Indian educationist and politician** notable for his role in the Indian independence movement and **became president of the Indian National Congress as many as four times.**
- He was respectfully addressed as Pandit Madan Mohan Malaviya and also addressed as 'Mahamana'.
- Among Malaviya's many achievements, the most monumental was **the establishment of the Banaras Hindu University or Kashi Hindu Vishvavidyalaya.** In the course of his lifetime Banaras Hindu University came to be known as the Capital of Knowledge acknowledged across India and the World.
- He was one of the founders of Scouting in India
- He also founded a highly influential, English-newspaper, The Leader published from Allahabad in 1909
- **He was posthumously conferred with Bharat Ratna**, India's highest civilian award, on 24 December 2014, a day before his 153rd Birth Anniversary

Q.47) With reference to Bhakti Tradition in India, consider the following statements.

1. Proponents of Bhakti traditions in Maharashtra were known as Varkaris.
2. Vachana sahitya composed by Basavanna is a bhakti literature that developed in Kannada region.

Which of the statements given above is/are correct?

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

Ans) c

Statement 1 is correct: Warkari (meaning 'the one who performs the Wari') is a religious sect within the bhakti spiritual tradition of Vaishnavite Hinduism. The Warkari movement emerged in Maharashtra in 13th century CE. Warkaris worship Vitthal (also known as Vithoba), the presiding deity of Pandharpur, regarded as a form of Krishna. Saints and gurus of the bhakti movement associated with the Warkaris include Dnyaneshwar, Namdev, Chokhamela, Eknath, and Tukaram, Gadge Maharaj all of whom are accorded the title of Sant.

Statement 2 is correct: Vachana sahitya is a form of rhythmic writing in Kannada that evolved in the 11th century CE and flourished in the 12th century. It was written as a part of bhakti movement in Karnataka in Sharana and Lingayata tradition.

Q.48) Consider the following statements.

1. The Kanpur Conspiracy of 1912 was related to the assassination attempt on the then Viceroy of India, Lord Hardinge.
2. The Delhi Conspiracy case of 1924 was instituted by the British government due to fear of the rise of Communism in India.

Which of the statements given above is/are correct?

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

Ans) d

Exp) Statement 1 is incorrect. Delhi Conspiracy Case of 1912 was also called the **Delhi-Lahore Conspiracy**. It was organised by the Indian revolutionary underground in Bengal and Punjab and headed by **Rashbehari Bose** to assassinate the then Viceroy of India, Lord Hardinge. Basant Kumar Biswas, Amir Chand and Avadh Behari were convicted and executed in the trial of this Delhi Conspiracy Case. Rash Behari Bose was identified as the person who threw the bomb.

Statement 2 is incorrect. Kanpur Bolshevik Conspiracy Case of 1924. On 17 March 1924, M.N. Roy, S.A. Dange, Muzaffar Ahmed, Nalini Gupta, Shaukat Usmani, Singaravelu Chettiar, Ghulam Hussain and others were charged that they as communists were seeking "to deprive the King Emperor of his sovereignty of British India, by complete separation of India from imperialist Britain by a violent revolution.", in what was called the Cawnpore (now spelt Kanpur) Bolshevik Conspiracy case.

The case attracted the interest of the people towards Comintern plan to bring about violent revolution in India. The pages of newspapers daily splashed sensational communist plans and people for the first time learned at such a large scale about communism and its doctrines and the aims of the Communist International in India.

Q.49) With reference to Global Environment Facility (GEF), consider the following statements:

1. It was established at the 1992 Rio Earth summit.
2. It implements the Small Grants Programme of the United Nations Development Programme.
3. It serves as the financial mechanism for the Minamata Convention.

Which of the statements given above is/are correct?

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

Ans) d

Statement 1 is correct: GEF was established at the 1992 Rio Earth Summit to help tackle impending environmental problems.

Statement 2 is correct: It implements the Small Grants Programme of the United Nations Development Programme. Through this programme, the GEF has supported over 14,500 community-based projects in over 125 countries.

Statement 3 is correct: The GEF serves as financial mechanism for the following conventions:

- CBD Convention on Biological Diversity
- United Nations Framework Convention on Climate Change (UNFCCC)
- UN Convention to Combat Desertification (UNCCD)
- Stockholm Convention on Persistent Organic Pollutants (POPs)
- Minamata Convention on Mercury

Q.50) Which of the following statements is/ are correct regarding Edge Computing Technology.

1. Edge computing allows data from Internet of Things to be analysed at the edge of the network before being sent to a data centre (cloud).

2. In Edge computing the data is analysed locally, closer to where it is stored, in real-time without latency.
3. Cloud computing is faster than Edge computing in terms of data processing and content delivery.

Select the correct answer using the code given below.

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

Ans) b

Exp) Option 3 is incorrect: Edge computing has advantage over Cloud computing because of its ability to increase network performance by reducing latency (ability to process very high volumes of data with minimal delay). It allows for quicker data processing and content delivery.

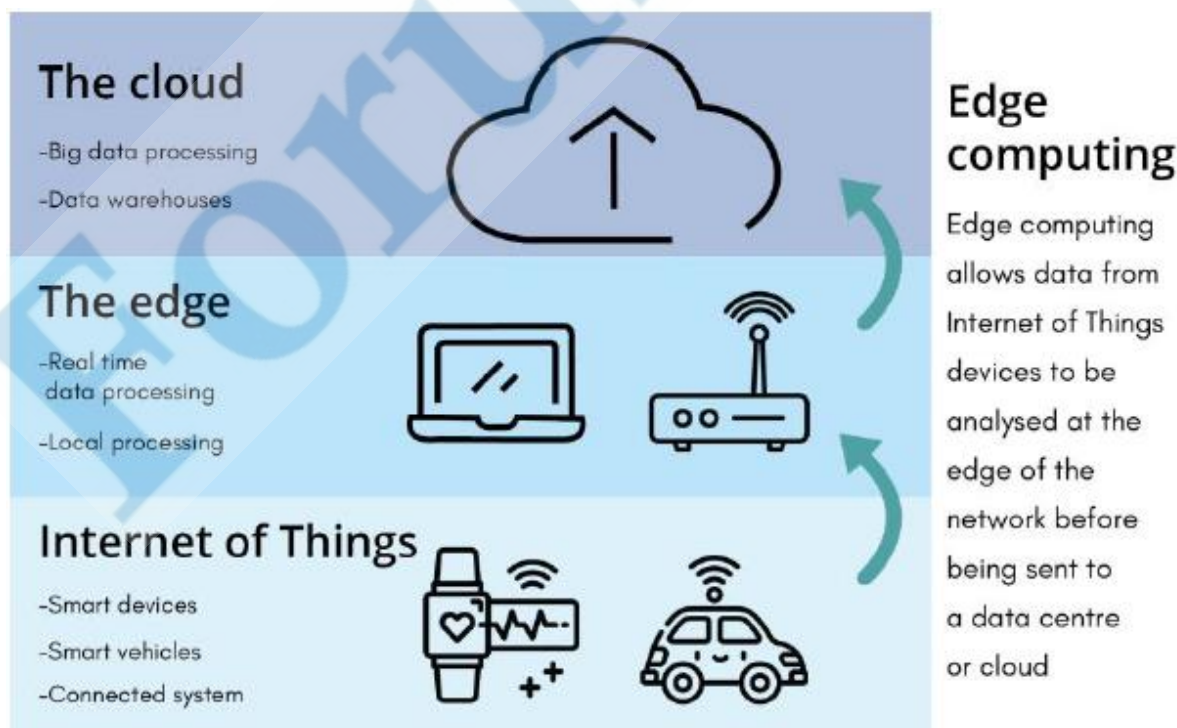
KB) Edge computing enables data to be analysed, processed, and transferred at the edge of a network. Meaning, the data is analysed locally, closer to where it is stored, in real-time without latency.

Cloud computing means storing and accessing data and programs over the Internet instead of your computer's hard drive.

Currently, the existing Internet of Things (IoT) systems perform all of their computations in the cloud using data centres.

Edge computing, on the other hand, manages the massive amounts of data generated by IoT devices by storing and processing data locally.

Hence, Edge computing is an extension of Cloud computing. The only basic difference between the two is at the place where data is processed. Edge computing, since, stores data locally enhances the data processing and content delivery.



Q.51) Which of the following was/were the proposed provisions of the Hunter Education Commission?

1. Emphasis on improvement of primary education.
2. Establishment of a University Grants Commission.
3. The medium of instruction would be English at all levels.

Select the correct answer using the code given below:

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

Ans) c

Exp) Option 1 is correct. Hunter Education Commission known as the “Magna Carta of Education”. The commission emphasized on improvement of Primary education

Option 2 is incorrect. Establishment of UGC was on recommendation of Sargeant commission and not Hunter commission.

Option 3 is incorrect. Medium of instruction to be in local languages at primary level and English at higher level of education.

KB) Following recommendations of Hunter commission:

1. Encouragement to Primary Education in local languages.
2. Grants in aid for Indigenous schools
3. There should be literary and vocational training in secondary education.
4. The commission brought out inadequate facilities available for the female education in the country.

Q.52) Which of the following statements regarding species richness is/are correct?

1. Gamma Diversity: It refers to the diversity within a particular area or ecosystem usually expressed by the number of species.
2. Beta Diversity: It is a comparison of diversity between ecosystems, usually measured as change in amount of species.
3. Alpha Diversity: It is a measure of the overall diversity for different ecosystems within a region.

Select the correct answer using the code given below.

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

Ans) a

Exp) Option 1 is incorrect. Gamma Diversity: It is a measure of the overall diversity for different ecosystems within a region.

Option 2 is correct. Beta Diversity: It is a comparison of diversity between ecosystems, usually measured as change in amount of species.

Option 3 is incorrect. Alpha Diversity: It refers to the diversity within a particular area or ecosystem usually expressed by the number of species.

KB) Biodiversity is measured by two major components: species richness and species evenness.

Species richness: It is a measure of the number of species found in a community. Three types of measurement of species richness are: Alpha diversity, Beta diversity and Gamma diversity.

Species evenness: Species evenness is a measure of the relative abundance of the different species making up the richness of an area. Low evenness indicates that a few species dominate the site.

Q.53) 'QUAD' is sometimes mentioned in the news in the context of the affairs of which of the following countries?

- a) USA, Russia, Pakistan, Afghanistan
- b) USA, UK, Canada, Russia
- c) India, USA, Japan, Australia
- d) India, USA, Japan, South Korea

Ans) c

Exp) The Quadrilateral Security Dialogue (QUAD) is currently an informal strategic dialogue between the United States, Japan, Australia and India.

KB) Recently in August 2019, the dialogue between the US, Japan, India and Australia for a free and open Indo-Pacific was held at the foreign minister's level for the first time on the side-lines of the UN General Assembly

Q.54) With reference to Dashavatara Temple, what does the term Sheshashayana refer to?

- a) A form of Lord Vishnu reclining on the serpent.
- b) A form of Lord Shiva performing the tandava.
- c) A form of Lord Hanuman picking up a mountain.
- d) A form of Lord Vishnu portrayed as an elephant.

Ans) a

Exp) Sheshashayana: A form of Lord Vishnu reclining on the serpent

KB) Dashavatara temple located in Deogarh. Following facts about the temple:

1. It's a classic example of the late Gupta period temple architecture. (North India). Nagara Style Architecture.
2. Depicts Vishnu in various forms. 3 main Vishnu reliefs on the temple walls: Sheshashayana on the south; Nara-Narayan on the east; and Gajendramoksha on the west.
3. Sheshashayana is a form of Lord Vishnu reclining on the serpent

Q.55) Which of the following statements regarding the Harappan culture is/are correct?

1. Harappans were well informed about dried bricks and spoked wheels.
2. The Harappans did have weapons made of both copper and iron.
3. The Great Bath at Mohenjo-Daro is believed to have been used for ritual bathing.

Select the correct answer using the code given below.

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

Ans) b

Exp) Option 1 is incorrect. Harappans were well informed about baked bricks and not dried bricks. IVC used wheels without spokes.

Option 2 is incorrect. Harappans were aware about copper but not iron. They also did not possess any type of weapons tool made of copper.

Option 3 is correct. Great Bath at Mohenjodaro were used for ritual bathing. The great bath structure is only present in Mohenjodaro, IVC sites.

KB) Mesopotamian were aware about dried bricks. Harappan about baked bricks. Spoked wheels were not used till the advent of Aryan community.

Copper in IVC were brought from Rajasthan region (Khetri mines). Aryan community for the first time get acquainted with Iron metal.

Q.56) Which of the following is/ are the provision(s) of recently amended Prevention of Scheduled caste and Scheduled Tribes act 2018?

1. It provides that a preliminary enquiry will be required for the registration of a First Information Report against a person accused under the Act.
2. The Act states that persons accused of committing an offence under the Act can apply for anticipatory bail.
3. The Act establishes special courts for the trial of such offences and the rehabilitation of victims.

Select the correct answer using the code given below:

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

Ans) c

Exp) Option 1 is incorrect. No preliminary enquiry is required for the registration of FIR in the recently amended act 2018.

Option 2 is incorrect. The person acquitted under this act will not have anticipatory bail rights.

Option 3 is correct.

KB) Subhash Mahajan case v/s State of MH 2018: SC held that

1. preliminary enquiry is must before registering FIR
2. the acquitted can apply for anticipatory bail

Following the uproar by SC and ST community on SC verdict, Central government amended SC and ST act 1989 and made SC decisions under Subhash Mahajan case ineffective as the verdict diluted the SC and ST act provisions.

Government amended legislation:

1. No preliminary enquiry is required for the registration of FIR
2. The person acquitted under this act will not have anticipatory bail rights.

Recently, SC has upheld the amendment.

Q.57) Amazon rainforest spans across which of the following countries?

- a) Brazil, Argentina, Bolivia, Cameroon
- b) Uruguay, Bolivia, Suriname, Venezuela
- c) Brazil, Bolivia, Peru, Columbia
- d) Peru, Chile, Argentina and Uruguay

Ans) c

Exp) Amazon rainforest spans across countries of Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela.

KB) Amazon rainforest are large tropical rainforest occupying the drainage basin of the Amazon River and its tributaries in northern South America and covering an area of 6,000,000 square km.

Comprising about 40% of Brazil's total area, it is bounded by the Guiana Highlands to the north, the Andes Mountains to the west, the Brazilian central plateau to the south, and the Atlantic Ocean to the east.

Q.58) With reference to Diagnostic Imaging techniques (DIT), which of the following is **incorrectly** stated?

- MRI does not include radiation while both X-ray and CT Scan use radiation to produce images of the internal organs.
- All three MRI, CT Scan and X-ray are painless imaging techniques.
- CT Scan is more expensive than X-ray and is not available at small and rural hospitals.
- Like X-ray imaging, there is radiation exposure associated with Ultrasound imaging.

Ans) d

Exp) Option D is wrong statement. Ultrasound Imaging works on high frequency sound waves and not on electromagnetic radiation. X rays works on electromagnetic radiation.

KB) X-rays use radiation to produce images of the body. When the rays pass through the body, dense objects—such as bones—appear white on the film. X-rays are typically used to view and diagnose bone disease, degeneration, fractures, dislocations, infections and tumors. During an X-ray, the part of the body that is being looked at will be placed between an X-ray machine and photographic film. The machine then sends electromagnetic waves (radiation) through the body, reflecting the patient's internal structures on the exposed film.

A computed tomography scan, or CT scan, is similar to an MRI in that it produces detailed, high-quality images of the body. The CT scan is a more sophisticated and powerful X-ray that takes a 360-degree image of internal organs, the spine and vertebrae.

A CT scan is more expensive than an X-ray and is not always available at small or rural hospitals.

Magnetic resonance imaging, or MRI, uses a powerful magnet and radio waves to create detailed, high-resolution cross-section images of bones and soft structures inside the body. MRI does not include radiation, as X-rays and CT scans do, and is generally used to diagnose bone and joint problems as well as torn ligaments and cartilage and herniated discs.

Like an X-ray or CT scan, the MRI is painless, but the machine does produce a loud noise. Because the MRI uses large magnets, be sure to notify your doctor if you have metal clips, implants or other metal objects in the body.

Source) [https://www.northcentralsurgical.com/blog/whats-the-difference-between-an-x-ray-ct-scan-and-mri-](https://www.northcentralsurgical.com/blog/whats-the-difference-between-an-x-ray-ct-scan-and-mri-140.html#:~:targetText=A%20computed%20tomography%20scan%2C%20or,organs%2C%20the%20spine%20and%20vertebrae.&targetText=A%20CT%20scanner%20looks%20like,a%20tunnel%20in%20the%20center.)

140.html#:~:targetText=A%20computed%20tomography%20scan%2C%20or,organs%2C%20the%20spine%20and%20vertebrae.&targetText=A%20CT%20scanner%20looks%20like,a%20tunnel%20in%20the%20center.

Q.59) Consider the following statements

1. The Legislature of a state may adopt any of the 8th scheduled language as an official language.
2. Governor of a state can direct that a language spoken by a substantial portion of the population shall be officially recognized in the state.
3. Legislature of a state can authorize the use of Hindi or any other official language of the state in a proceeding in the high court of the state.

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

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

Ans) d

Exp) Option 1 is incorrect.

Option 2 is incorrect. Its legislature of state and not Governor.

Option 3 is incorrect. The Governor of state can do and not Legislature of State.

KB) Governor of a state, with the previous consent of the president, can authorise the use of Hindi or any other official language of the state, in the proceedings in the high court of the state.

Q.60) With reference to Public Accounts Committee, which of the following statements is/are correct?

1. It comprises members from both Lok Sabha and the Rajya Sabha.
2. Its chairman is appointed by the speaker of the Lok Sabha.
3. It acts as a guide, friend and philosopher of the Comptroller and Auditor General.

Select the correct answer using the code given below.

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

Ans) a

Exp) Option 1 is correct. Public Account Committee (PAC) have members from both Lok Sabha and Rajya Sabha.

Option 2 is correct. Chairman of committee appointed by the speaker of Lok Sabha.

Option 3 is incorrect. Comptroller and Auditor General acts as a guide, friend and philosopher of PAC

KB) Public Accounts Committee:

1. It was set up first in 1921 under the provisions of the Government of India Act of 1919. and has since been in existence.
2. It consists of 22 members (15 from the Lok Sabha and 7 from the RajyaSabha). Hence, the first statement is correct.
3. The members are elected by the Parliament every year from amongst its members according to the principle of proportional representation by means of the single transferable vote.
4. A minister cannot be elected as a member of the committee.

5. The chairman of the committee is appointed from amongst its members by the Speaker.

Functions:

1. The function of the committee is to examine the annual audit reports of the Comptroller and Auditor General of India (CAG), which are laid before the Parliament by the President.
2. The committee is assisted by the CAG in the fulfillment of its functions. In fact, the CAG acts as a guide, friend and philosopher of the committee.

Source: Indian Polity: M Laxmikanth

Q.61) Consider the following statements regarding Speaker Pro-Tem:

1. Generally, the most elderly person is selected as the speaker Pro-tem.
2. The office of speaker Pro-tem is not permanent.

Which of the statement(s) given above is/ are correct?

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

Ans) b

Exp) Option 1 is incorrect. Senior most member of the House are elected as Pro tem speaker and not most elderly person.

Option 2 is correct. Pro tem speaker is temporary office. Pro tem itself means 'for the time being'.

KB) Pro tem speaker:

1. Pro-tem is a Latin phrase which translates to 'for the time being' in English
2. Pro-tem speaker is the temporary speaker who presides over the first meeting of lower House of Parliament after the general elections besides presiding over the sitting in which the Speaker and Deputy Speaker are elected if it is a newly constituted House.
3. A pro-tem speaker is chosen with the agreement of the members of the Lok Sabha and legislative assembly. Usually, the senior-most member of the house is selected for the post, who then carries on the activities until the permanent speaker is chosen.

Q.62) With reference to Pradhan Mantri Kisan Samman Nidhi Yojana, which of the following statements is/are correct?

1. It is a kind of Minimum Basic Income scheme.
2. It uses landholding as a criterion to identify beneficiaries.

Select the correct answer using the code given below.

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

Ans) c

Exp) Option 1 is correct.

Option 2 is correct.

KB) Pradhan Mantri Kisan Samman Nidhi Yojana Features:

1. Under this programme, vulnerable landholding farmer families, having cultivable land upto 2 hectares, will be provided direct income support at the rate of Rs. 6,000 per year.
2. This income support will be transferred directly into the bank accounts of beneficiary farmers, in three equal installments of Rs. 2,000 each.
3. The complete expenditure of Rs 75000 crore for the scheme will be borne by the Union Government in 2019-20.

Q.63) With reference to Quantum Computing, which of the following statements is correct?

- a) Google's Quantum Computer Bristlecone has achieved Quantum Supremacy.
- b) Quantum Computers work on bits while classical computers work on qubits.
- c) Quantum computers can develop the ability to break current security encryption codes.
- d) India is among the countries leading the race in quantum computing.

Ans) c

Exp) Option (A) is NOT correct- the Quantum Computer of Google which has achieved Quantum Supremacy is 'Sycamore'. 'Bristlecone' is another quantum computer with Google.
Option (B) is NOT correct - Quantum Computers work on Qubits and Classical Computers work on 'Bits'.

Option (C) is correct.

Option (D) is NOT correct. There are no quantum computers in India yet.

KB) Google's quantum computer Sycamore claimed 'supremacy' because it reportedly did a task in 200 seconds that would have apparently taken a supercomputer 10,000 years to complete.

Quantum Computing and Online Banking - At present, encryption systems used in banking and security applications are premised on computers (classical computers) being unable to handle mathematical problems that are computationally demanding beyond a limit. Quantum computers, in theory, can surpass those limits. But breaking banking grade encryption is yet to be achieved by the Quantum Computers developed so far.

India and Quantum Computing - In 2018, the Department of Science & Technology unveiled a programme called Quantum-Enabled Science & Technology (QuEST) to accelerate research. India plans to build a quantum computer within the next decade. Phase-1 of the problem involves hiring research experts and establishing teams with the know-how to physically build such systems.

Source) <https://www.thehindu.com/sci-tech/technology/what-is-quantum-supremacy/article29543857.ece>

Q.64) Consider the following statements:

1. India is a member of both East Asia Summit as well as the Shanghai Cooperation Organisation.
 2. India and Malaysia are members of both BIMSTEC and Indian Ocean Rim Association.
- Which of the statements given above is/are correct?

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

Ans) a

Exp) Malaysia is not a member of both BIMSTEC and Indian ocean rim association.

KB) The East Asia Summit (EAS) is the Indo-Pacific's premier forum for strategic dialogue. EAS has 18 members. India is a member.

India and Pakistan become member of the Shanghai Cooperation Organisation on 9 June 2017 at Astana summit.

BIMSTEC comprises of 7 members- Bangladesh, India, Myanmar, Sri Lanka, Thailand, Nepal and Bhutan.

The Indian Ocean Rim Association (IORA), formerly known as the Indian Ocean Rim Initiative and Indian Ocean Rim Association for Regional Cooperation (IOR-ARC), is an international organisation consisting of 22 coastal states bordering the Indian Ocean

Q.65) Which of the following forms part of the Capital receipts of the Government:

1. Borrowings by Government from Reserve Bank.
2. Interest income received from foreign Governments
3. Disinvestment receipts
4. Loans and advances granted by Central Government to State Governments.

Select the correct answer using the code given below:

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

Ans) b

Exp) Loans and Advances granted by central government to state governments are part of capital payments (expenditure) of government.

Interest income received from foreign government - part of revenue receipt of Government

KB) Capital receipts:

- loans raised by the Government from the general public.
- loans received from foreign Governments and bodies
- disinvestment receipts
- recoveries of loans from State and Union Territory Governments and other parties

Q.66) With reference to ocean currents, which of the following statements is/are correct?

1. Indian Ocean is the only ocean to see a reversal in the direction of ocean currents.
2. Gulf Stream moderates otherwise extremely cold climate of western European countries.

Select the correct answer using the code given below.

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

Ans) c

Exp) Gulf stream is a warm current which moderates the cold climate of western European countries. It also provides fishing grounds when Gulf Stream mix with Labrador current near Newfoundland.

Q.67) Consider the following statement:

- 1 The OECD has maintained a 'blacklist' of countries it considers "uncooperative tax havens" in the drive for transparency of tax affairs and the effective exchange of information.
- 2 The OECD blacklist is issued by the Financial Action Task Force (FATF).

Which of the statements given above is/are correct?

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

Ans) c

Exp) The FATF blacklist was the common shorthand description for the Financial Action Task Force list of "Non-Cooperative Countries or Territories" (NCCTs). The FATF blacklist or OECD blacklist has been issued by the FATF since 2000 and lists countries which it judges to be non-cooperative in the global fight against money laundering and terrorist. Although its main focus is on tax crime, the OECD is also concerned with money laundering and has complemented the work carried out by the FATF.

Q.68) Consider the following sets of pair:

Freedom Fighter	Contribution
1. Usha Mehta	First woman to be the President of INC
2. Annie Besant	Organised Underground Radio Station
3. Sarojini Naidu	Established Central Hindu College

Which of the sets of pair given above is/are correctly matched?

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

Ans) d

Exp) Usha Mehta was a Gandhian and freedom fighter of India. She is also remembered for organizing the Congress Radio, also called the Secret Congress Radio, an underground radio station, which functioned for a few months during the Quit India Movement of 1942.

Annie Besant was first woman to be the President of INC in 1917. She Established Central Hindu College in 1898.

Sarojini Naidu was First Indian woman to be the President of INC in 1925 session in Kanpur. Naidu's work as a poet earned her the sobriquet of **Nightingale of India**.

Q.69) Mangrove forests has/have which of the following adaptations:

1. Viviparous germination
2. Pneumatophore roots
3. CAM mechanism photosynthesis

Select the correct answer using the code given below

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

Ans) b

Exp) Statement 1 is correct: Mangroves have viviparous germination meaning their seeds germinate while still attached to the parent tree. Once germinated, the seedling grows either within the fruit or out through the fruit

Statement 2 is correct: pneumatophores are specialised root-like structures which stick up out of the soil like straws for breathing

Statement 3 is incorrect: CAM mechanism is found in xerophytic plants in desert regions and enables storage of CO₂ for photosynthesis in night time.

Q.70) Which of the following statement(s) is/ are correct about Tropical and Temperate cyclones?

1. Tropical cyclones have thermal origin whereas Temperate cyclones have both thermal and dynamic origin.
2. Tropical cyclones can form only in sea whereas Temperate cyclones can form both on land and sea
3. Tropical cyclone forms during late-summers mostly whereas Temperate cyclone forms mostly in summers.

Select the correct answer using the code given below:

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

Ans) b

Exp) Option 1 is incorrect. Temperate cyclones have dynamic origin only not both
Option 2 is correct.

Option 3 is incorrect. Tropical cyclone forms during late-summers mostly whereas Temperate cyclone forms mostly in winters.

KB)

	Tropical cyclone	Temperate cyclone
Origin	Thermal Origin	Dynamic Origin – Coriolis Force, Movement of air masses.
Latitude	Confined to 10 – 30 N and S of equator.	Confined to 350 – 650 N and S of equator. More pronounced in Northern hemisphere due to greater temperature contrast.
Frontal system	Absent	The very cyclone formation is due to frontogenesis. [Occluded Front]
Formation	They form only on seas with temperature more than 26-27 C. They dissipate on reaching the land.	Can form both on land as well as seas

Season	Seasonal: Late summers (Aug – Oct)	Irregular. But few in summers and more in winters.
Rainfall	Heavy but does not last beyond a few hours. If the cyclone stays at a place, the rainfall may continue for many days.	In a temperate cyclone, rainfall is slow and continues for many days, sometimes even weeks.
Calm region	The center of a tropical cyclone is known as the eye. The wind is calm at the center with no rainfall.	In a temperate cyclone, there is not a single place where winds and rains are inactive.
Size	Limited to small area. Typical size: 100 – 500 kms in diameter. Varies with the strength of the cyclone.	They cover a larger area. Typical size: 300 – 2000 kms in diameter. Varies from region to region.

Q.71) With reference to the recently amended Coastal Regulation Zone Rules in 2018, Which of the following statements is/are correct?

1. Coastal Regulation Zone Rules derives its power from Biodiversity protection Act 2002.
2. CRZ cannot be amended through Central Government Notifications, it requires an amendment passed by the Parliament.
3. The CRZ 2018 amendment has diluted many stringent restrictions of CRZ 2011.

Select the correct answer using the code given below

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

Ans) b

Exp) Option 1 is incorrect. Coastal Regulation Zone Rules derives its power from Environmental protection act 1986 and not BDA 2002.

Option 2 is incorrect. CRZ can be amended just by central government notification. There is no need to pass it through Parliament because there is no specific legislation on coastal regulations.

Option 3 is correct. Recently, Government has amended the rules and diluted the stringent restrictions under CRZ 2011.

KB) To conserve and protect the coastal environment, and to promote sustainable development based on scientific principles Ministry of Environment and Forest and Climate Change (MoEFCC), under the Environment (Protection) Act, 1986, notified the CRZ Notification in 1991, subsequently revised in 2011

In June 2014, **Shailesh Nayak Committee** was constituted by the MoEFCC to review the CRZ Notification, 2011.

Recent notification changes includes:

1. Easing FSI norms

2. No development zone (NDZ) reduced for densely populated areas
 3. Tourism infrastructure for basic amenities to be promoted
 4. CRZ Clearances streamlined
 5. Defence and strategic projects have been accorded necessary dispensation.
- The changes have diluted the stringent provisions of CRZ 2011.

Q.72) Which of the following fall under the 'Climate Smart Agriculture'?

1. Herding of indigenous animal breeds
2. Promotion of Genetically Modified Crops (GMOs)
3. Adoption of Zero Budget Natural Farming
4. Encouraging Urban and peri-urban agriculture
5. Increasing the supply of agrometeorological information

Select the correct answer using the code given below

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

Ans) c

Exp) Option 2 is incorrect.

Climate smart agriculture (CSA) includes practices which makes agriculture practices more climate disasters resilient. CSA has become important because of increasing frequency of floods and droughts (effect of Climate change).

Genetically modified seeds provide protection to plants because of pest and insects. GMO is a technology. whereas climate smart agriculture talks about agricultural practices.

KB) Various features of Climate smart agriculture are:

1. It considers adaptation and mitigation together in the context of building agricultural systems for food security.
2. promotion of indigenous breeds.
3. multicropping
4. climate based cropping. For ex: millets can be grown in dry-land agriculture. Rice can only be grown in the region where there is abundant supply of water
5. sustainable agricultural practices - Zero Budget natural farming
6. Providing meteorological information at block level so that farmers can take decisions about which crop to grow.

Q.73) Which of the following are applications of Nanotechnology in agriculture?

1. Water resource management
2. Nutraceuticals
3. Agrochemical
4. Breeding of farm animals

Select the correct answer using the code given below:

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

Ans) d

Exp) All are correct.

KB) Nanotechnology in Agrochemicals:

- Insect pests management through the formulations of nanomaterials- based pesticides and insecticides.
- For controlling pests state of art nanotechnology has evolved to hassle- free gel- based carriers for pheromones called nanogels.

Nanotechnology in Water resource management

- enhancement of agricultural productivity using bio-conjugated nanoparticles for slow release of nutrients and water.

Nanotechnology in Nutraceuticals

- Anti-bacterial products such as nano silver.

Nanotechnology in Breeding of Animals

- **Nanotechnology** has the potential to solve many mysteries related to **animal** health, production, reproduction, good hygienic practices during **rearing** and maintaining of food **animals**. The technology application is usable especially with **livestock**

Q.74) With reference to the difference between the Nagara and Dravidian style of temple architecture, which of the following statements is/are correct?

1. Nagara temple has elaborate boundary walls whereas the Dravidian temple doesn't have them.
2. Nagara temple has images of Mithunas and the river goddesses, Ganga and Yamuna whereas Dravidian temple has sculptures of doorkeepers guarding the temple.
3. Nagara style of temples had multiple shikharas rising together as a cluster whereas the Dravidian temples did not exhibit the same.

Select the correct answer using the code given below.

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

Ans) c

Exp) Option 1 is incorrect. The boundaries are absent in Nagara Style whereas there is elaborate boundary walls in Dravida style.

KB)

<i>Nagara Temple architecture</i>	<i>Dravida Temple Architecture</i>
In this style, boundary is less emphasised.	In this style, temples have elaborated boundary.
In this style, Ganga and Yamuna rivers are depicted in personified form at the entrance of Garbhagriha or sanctum sanctorum.	In this style, Dwarpalas are there on the entrance.
In this style, there are multiple towers. For example- Khajuraho temple.	In this style, there is always a single tower.

It is characterized by a beehive shaped curvilinear tower (called a Shikhara, in northern terminology) made up of layer upon layer of architectural elements and a cruciform ground plan. In this style, there is a multiple Shikharas.	It has pyramidal shaped central tower (called Vimana in Dravida style). In this style, there is only one single Shikhara or Vimana.
In Nagara style, the Shikhara remains the most prominent element of the temple and the gateway is usually modest or even absent.	Gopuram is the most prominent. It is stylized and big in size.

Q.75) Which of the following is a bilateral program between India and the US to develop solutions for sustainable forest land use in India?

- Forest Plus
- REDD+
- Bamako Convention
- Convention on International Trade in Endangered Species (CITES)

Ans) a

Exp)

Forest Plus was a five-year initiative started from 2012 to 2017. This is a bilateral program between India and the US. Forest-PLUS focused on capacity building to help India participate in Reducing Emissions from Deforestation and forest Degradation (REDD+).

KB) Under Forest Plus, various approaches for Indian forest management were developed. Few achievements of the programme are:

- promotion of bio- briquettes in Sikkim
- introduction of solar heating systems in Rampur
- development of an agro-forestry model in Hoshangabad.

Further, in 2018, both the countries have signed for Forest Plus 2.0:

Forest-PLUS 2.0 is five-year programme that focuses on developing tools and techniques to bolster ecosystem management and harnessing ecosystem services in forest landscape management.

Various targets are:

- 1,20,000 hectares of land under improved management.
- New, inclusive economic activity worth \$12 million
- Measurable benefits accrued to 800,000 households
- Three incentive mechanisms (strategy, capacity and support) demonstrated in managing landscapes for ecosystem services.

Q.76) Consider the following statements regarding Network for Certification and Conservation of Forests:

1. It is an intergovernmental organisation set up after the Rio Summit 1992
2. It was formed under the auspices of the United Nations
3. It has a globally aligned forest certification program developed within India.

Which of the statements given above is/are correct?

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

Ans) c

Exp)

Option 1 is incorrect. This is a non-profit organisation came into existence in Jan 2015.

Option 2 is incorrect. This is program specific to India hence not under UN.

Option 3 is correct.

KB) With the objective of controlling depletion of tropical forests and prevention of its illegal logging, Forest Management Certification schemes was introduced in 1990s itself.

The general consensus in the forestry and sustainable development community is that Forest Management Certification has been beneficial towards responsible forest management and therefore should be further promoted.

Also, India is among the world's most forested countries with a growing demand for forest products considering the diversity in the forests, the unsustainable management of forest is a significant challenge for India as a developing country.

Hence, NCCF came into existence in January 2015 with an objective to establish a country specific forest certification scheme and promote responsible forest management in the Country.

Q.77) Which of the following indicates the import cover of an economy?

- a) Size of its GDP
- b) Size of its foreign exchange reserve
- c) Both a and b
- d) None of the above

Ans) b

Exp) Import Cover measures the number of months of imports that can be covered with foreign exchange reserves available with the central bank of the country. Hence, it indicates the size of foreign reserves of the country.

KB) As of January 2019, India's import cover was 9.5 months. It fell from 10.9 in March 2018 because of four reasons chiefly:

- Stagnant forex reserves
- Weakening value of the rupee
- US Fed rates
- Lowering of (Foreign Institutional Investment) FII inflows

Q.78) The longitudinal valley lying between lesser Himalaya and the Shiwalik are known as

- a) Doabs
- b) Duns
- c) Karewas
- d) Molasses Basin

Ans) b

Exp) The longitudinal valley lying between lesser Himalaya and the Shiwaliks are known as Duns. DehraDun, Kotli Dun and Patli Dun are some of the well-known Duns.

Q.79) Which of the following statement regarding the International Court of Justice (ICJ) is **incorrect**?

- The International Court of Justice (ICJ) is one of the principal judicial body of the UN.
- The International Court of Justice is composed of 15 judges elected to nine-year terms of office by the United Nations General Assembly and the Security Council.
- In order to ensure a measure of continuity, one third of the Court is elected every three years and Judges are eligible for re-election.
- The ICJ is headquartered in New York, USA

Ans) d

Exp) The ICJ is located in the Peace Palace, The Hague, Netherland.

KB) Following facts about ICJ.

- The ICJ was established in 1945 at Hague, Netherlands. It is composed of 15 judges elected to nine-year terms of office by the United Nations General Assembly and the Security Council.
- Its objective is to settle legal disputes submitted to it by (a) states (b) duly authorized international branches and (c) UN General Assembly.
- ICJ is different from International criminal court.
 - ICC is not under UN unlike ICJ
 - ICC deals with the cases of genocides, crimes against humanity, war crimes etc. Whereas ICJ deals with cases of inter-state disputes.
- India is a member of ICJ. and India is not a member of ICC.

Q.80) The "doldrums" is a popular nautical term that refers to the belt around the Earth near the equator where sailing ships sometimes get stuck on windless waters. The windless waters are associated with

- Intense solar heating near the equator
- Presence of Coriolis force at the equator.
- The relative absence of landmass at the equator compared to the Northern hemisphere
- Thermohaline Circulation

Ans) a

Exp) Doldrum is a region of intense low pressure (extremely calm air movement). This is because of the intense solar heating. The region of doldrum varies with the apparent movement of the sun.

KB) Equatorial low-pressure belt or Doldrum:

- lies between 10° N to 10° S
- lies in the region where trade winds converge
- As this region lies along the equator, it receives the highest amount of insolation.
- Due to intense heating, air gets warmed up and rises over the equatorial region (convection).

5. extremely calm air movement because:

- a. of the absence of Surface winds since winds approaching this belt begin to rise (because of intense heating) near its margin. Thus, only vertical currents are found.

Q.81) With reference to 'Giffen goods', consider the following statements:

- 1.They are goods for which demand increases as the price increases.
- 2.They do not have readily available substitutes.

Which of the statements given above is/are correct?

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

Ans) c

Exp) Statement 1 is correct. A Giffen good is a product for which demand increases as the price increases and falls when the price decreases. A Giffen good has an upward-sloping demand curve, which is contrary to the fundamental law of demand, which states that the quantity demanded for a product falls as the price increases, resulting in a downward slope for the demand curve.

Statement 2 is correct. Generally speaking, Giffen goods are typically inferior products that do not have readily available substitutes.

Examples of Giffen goods are - bread, rice, and wheat. These goods are commonly essentials with few near-dimensional substitutes at the same price levels.

Source) <https://www.investopedia.com/terms/g/giffen-good.asp>

Q.82) Consider the following statements.

1. The Constitution of India does not define the word 'minority'.
2. The right of linguistic minorities to establish educational institutions is not absolute.

Which of the statements given above is/are correct?

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

Ans) c

Exp) Articles 29 and 30 of the Indian Constitution provide for the cultural and educational rights of minorities. The term 'minority' has not been defined anywhere in the Constitution. Hence, the first statement is correct.

Article 30 grants the religious and linguistic minorities the right to establish and administer educational institutions of their choice. The right under Article 30 also includes the right of a minority to impart education to its children in its own language. However, right of linguistic as well as religious minorities to establish educational institutions is not absolute. They can be regulated by the State to ensure efficiency and welfare, and academic needs of the institution.

Source) Indian Polity: M Laxmikanth

Q.83) The different Zonal Councils in India have their statutory backing from which of the following statute?

- Zonal Council Act
- Art 262 of Indian Constitution
- State Reorganisation Act
- Art 263 of Indian Constitution

Ans) c

Exp) Zonal councils are statutory bodies under the States Reorganisation Act 1956.

KB) Zonal councils have been established by the Parliament to promote interstate cooperation and coordination. They are statutory bodies established under the States Reorganisation Act 1956. The main objectives of setting up of Zonal Councils are as under:

- Bringing out national integration;
- Arresting the growth of acute State consciousness, regionalism, linguism and particularistic tendencies;
- Enabling the Centre and the States to co-operate and exchange ideas and experiences;
- Establishing a climate of co-operation amongst the States for successful and speedy execution of development projects.

Source) Indian Polity: M Laxmikanth

Q.84) The term “Chapparal” is a name given to forests of

- Mediterranean type
- Tropical evergreen type
- Boreal evergreen type
- Tropical Deciduous type

Ans) a

Exp) Mediterranean vegetation in California is named with Chaparral.

KB) Mediterranean Shrublands or Chaparral biome is found along the coasts of the Mediterranean Sea, California, Central Chile, south-western part of South Africa and south-western parts of Australia. Mediterranean type of climate witness rainfall in winters and there are drought in summers. The dominant shrubs that occupy these regions are stunted; they have the ability to withstand hot summer drought. Mediterranean vegetation is known by different names in different regions: Mallee in Australia, Matorral in Chile, and Chaparral in California.

Source) Candid ICSE Biology, Class IX

Q.85) Socialist ideology can be found in which of the following parts of the constitution

- Part IV A
- Part IV
- Par III
- Part IXB

Select the correct answer using the code given below

- 1, 2 and 4 only
- 1, 2 and 3 only

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

Ans) d

Exp) Option 1 talks about socialist ideology.

Part IV A talks about Fundamental Duties (FD). FD States that “To abide by the constitution and respect its ideals and institutions”. The ideals of the constitution is reflected from Preamble. Preamble contains the term socialist. (added in 42nd amendment).

Option 2 talks about socialist ideology.

Part IV talks about Directive Principles of State policy (DPSP). DPSP contains socialistic features:

1. To promote the welfare of the people by securing a social order permeated by justice—social, economic and political—and to minimise inequalities in income, status, facilities and opportunities. (Article 38)
2. To promote equal justice and to provide free legal aid to the poor (Article 39 A)
3. To secure the right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement (Article 41).
4. To make provision for just and humane conditions of work and maternity relief (Article 42).
5. To secure a living wage, a decent standard of life and social and cultural opportunities for all workers (Article 43).

Option 3 talks about socialiaist ideology.

Part III is fundamental rights. Article 14 (equal protection of laws), Article 15 (4)- (to provide special provisions for socially and economically backward section). Article 16 (4)- to provide special provisions for women and children.

Option 4 is also socialist ideology.

Part IX- B is Cooperative society, hence socialistic.

Q.86) Which of the following developments may not likely reduce the fiscal deficit?

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

Select the correct answer using the code given below:

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

Ans) b

Exp) Option 1 may reduce fiscal deficit. Foreign Direct Investment will bring foreign investment. FDI lowers down the requirement of public investment. Further, FDI will generate investments and which will fuel growth in the economy. More tax collection and lower fiscal deficit.

Option 2 may not reduce fiscal deficit. When government provides budgetary support to public sector enterprises, this increases the expenditure of government. Also, expenditure may not give return to government if PSU's does not perform well.

Option 3 may not reduce fiscal deficit. Waiving off farm loans is a burden on expenditure of government. Also waiving off farm loans may not improve the conditions of agriculture in the long run.

Option 4 may reduce fiscal deficit. Through Austerity measures government cut down expenditure in the economy. This brings down the fiscal deficit.

Q.87) Consider the following statements:

1. Technologies like Artificial Intelligence (AI) and Internet of Things (IoT) give rise to Structural type of unemployment.
2. Workers being temporarily out of work due to change of jobs contributes to Frictional type of unemployment.
3. In the last 3 years, the Rural Unemployment rate in India has been more than the Urban unemployment rate.

Which of the statements given above is/are correct?

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

Ans) a

Exp) Option 1 is correct.

Option 2 is correct.

Option 3 is incorrect. Urban unemployment rate stood at 8.89% whereas the rural unemployment rate was at 6.82% during the month of November 2019.

KB) Artificial intelligence and IoT technology is set to bring loss in manual jobs. This technology will bring structural changes in the nature of work. Hence, this will bring structural type of unemployment in the economy.

Frictional Unemployment is referred as unemployment which exists in any economy due to people being in the process of moving from one job to another.

Q.88) Consider the following sets of pair:

Region in News	Country
1. Anatolia	Turkey
2. Caracas	Chile
3. Santiago	Venezuela
4. Najaf	Iraq
5. Beirut	Lebanon

Which of the sets of pair given above is/are correctly matched?

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

Ans) b

Exp) Caracas is the capital city of Venezuela.

Santiago is the capital city of Chile.

KB) Chile was recently in the news, because of mass protest by its citizens. Protest is on the ground of growing inequalities in the economy.

Venezuela, was in the news because of the economic crisis- High inflation

Najaf, in the news, Iranian consulate in Najaf (Iraq) was attacked. This reflected the anti-Iranian sentiments among Iraq people.

Q.89) Minerva Mills case brings about a harmonious construction between Fundamental Rights (FR) and Directive Principles of State Policy (DPSP). Which of the following statements is/ are correct regarding FR and DPSP.

1. FR ensures political and economic rights while DPSP ensures social and economic rights.
2. FR is borrowed from the Constitution of the United States whereas DPSP is borrowed from Russian Constitution.
3. FR constrains the action of state against citizens whereas DPSP directs state to frame policies.

Select the correct answer using the code given below

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

Ans) c

Exp) Option 1 is incorrect. Fundamental rights ensures civil and political rights whereas DPSP ensures social and economic rights.

Option 2 is incorrect. FR is borrowed from the Constitution of the United States whereas DPSP is borrowed from the constitution of Ireland.

Option 3 is correct.

KB) Minerva Mills case brings about a harmonious construction between Fundamental rights and DPSP. Both together ensures complete democracy to its citizens i.e. political, social and economic democracy.

FR finds place in Part III of Indian constitution and DPSP is in Part IV of Indian constitution.

FR constrain the action of state against citizens whereas DPSP directs state to frame policies.

Q.90) Which of the following leads to the situation of a "Liquidity Trap" in the economy?

- a) When every economic agent expects the interest rate to rise in the future.
- b) When there is high interest rate prevailing in the economy.
- c) When speculative demand for money is very low.
- d) When there is a high demand to buy bonds.

Ans) a

Exp) **Liquidity trap** is a situation of very low rate of interest in the economy where every economic agent expects the interest rate to rise in the future and consequently bond prices continue to fall, causing capital loss. This inhibit buyers from buying bonds since the prices are going to fall in future. This results in a situation where everyone tries to hold assets in the form of liquid money.

In this manner, the central bank keeps lowering the interest rate so that people start buying bonds. But consumers still keep preferring savings in the form of cash over bonds. This makes monetary policy ineffective.

This is a situation where no matter how much interest rate is lowered by the central bank, there will be no increase in money supply in the market (because people are not investing in bonds)

Source) Chapter 3, 12th Macroeconomics NCERT

- Q.91)** A Bill if referred to a joint sitting of both the Houses needs to be passed by
- A special majority of the Parliament and both Houses present and voting
 - An absolute majority of both Houses of the Parliament
 - A simple majority of the members of both the Houses present and voting
 - A three-fourth majority of the effective strength of both the Houses of the Parliament

Ans) c

Exp) The bill in joint sitting is passed with simple majority of the members of both the houses present and voting. Joint sitting provides greater say to Lok Sabha over Rajya Sabha as Lok Sabha is numerically greater than Rajya Sabha.

KB):

In the case of Bills **other than Money Bills and Constitution Amendment Bills**, if a disagreement between the two Houses arises due to the following

- when a Bill passed by one House is rejected by the other House;
- the Houses have finally disagreed as to the amendments to be made in the Bill;
- more than six months have elapsed from the date of receipt of the Bill by the other House without the Bill being passed by it;

a joint sitting of both Houses can be convened by the President for this purpose as per Article 108 of Indian Constitution.

Source) Indian Polity: M Laxmikanth

<http://164.100.47.194/loksabha/FAQ.aspx>

Q.92) Optical fibre, works on the principle of

- Refraction
- Scattering
- Interference
- Total Internal Reflection

Ans) d

Exp) Total internal reflection

When light travels from an optically denser medium to a rarer medium hits their boundary at a steep angle (larger than the critical angle for the boundary), the light gets completely reflected back. This is called total internal reflection. This effect is used in optical fibers to confine light within the core.

KB) Optical Fibre Cable:

- Optical Fibre Cable is made of glass fibre material. The cable wire is made up of concentric circles of this glass fibre. The inside layer is called core and outside layer is called cladding.
- The glass fibre core and cladding each have different refractive indices which bends the incoming light at a certain angle. This continuous refraction from different concentric circles helps reach the critical angle beyond which Total internal reflection of light takes place at cladding.
- This total internal reflection helps in confining light to the core region.

Application :

Fiber optics are also commonly used in telecommunication services such as internet, television and telephones

Source) Science NCERT

Q.93) Uttaramerur inscription throws light on which of the following dynasties of the early medieval period?

- Vakatakas
- Chalukyas
- Cholas
- Eastern Ganga dynasty

Ans) c

Exp) Uttaramerur inscription talks about the administration of the village assembly during Chola period.

KB) Uttaramerur inscription contains the following details on village administration:

1. The village had highly refined electoral system and also a written constitution prescribing the mode of elections.
2. The inscription provides greater details about the constitution of wards, qualification of candidates contesting election, disqualification norms, mode of election, constitution of committee and their functioning etc.
3. Villagers even had the right to recall the elected representatives
4. Various committees for the maintenance of irrigation tanks, roads, to provide relief during drought, to test gold etc. were set up.
5. Village was divided into 30 wards. Each having an elected representatives.
6. The qualification criteria for contesting elections were:
 - a. Age limit (from 35 yrs to 70 yrs)
 - b. possession of immovable property
 - c. minimum educational qualification
7. The disqualification criteria of elected candidates were:
 - a. on accepting bribes
 - b. misappropriation of other's property
 - c. action against public interest.

Q.94) With reference to Kigali Agreement, consider the following statements.

1. It aims to help reduce the production and consumption of Hydrofluorocarbon (HFCs)
2. Kigali Amendment to the Montreal Protocol is legally binding.

3. The Agreement upholds the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR & RC)

Which of the statements given above is/are correct?

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

Ans) d

Exp) All options are correct.

Kigali agreement amends Montreal protocol 1987. It aims at phasing out Hydrofluorocarbons (HFCs) by 2040s.

KB) Significance of Kigali agreement are:

1. It amends Montreal protocol, which earlier aimed at countering ozone hole depletion. After amendment, protocol also includes phasing out HFCs which is a potent greenhouse gas. Hence, apart from tackling ozone depletion, now it will also prevent rise of 0.5 in global temperature.
2. The agreement is binding on countries from 2019. It contains penalties for non-compliance.
3. The agreement works on principle of CBDR (Common but differentiated responsibility). The developed countries have agreed to provide finances to developing countries.

Q.95) Gene Editing has revolutionised the field of Biotechnology. Which of the following statements is/are correct about Gene Editing Techniques.

1. Recombinant DNA technique is more advanced than CRISPR technique of gene editing
2. Cas-9 protein enzyme acts as a scissor enzyme in Recombinant DNA technique while Restriction endonucleases acts as a scissor enzyme in CRISPR technique.
3. Recombinant DNA overcomes the challenge of inclusion and multiplication of undesirable genes which takes place in Traditional hybridisation techniques.

Select the correct answer using the code given below

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

Ans) c

Exp)

Option 1 is incorrect. CRISPR (Clustered, regularly interspaced, short palindromic repeats) is more advanced techniques than Recombinant DNA. This technique is simpler and faster than Recombinant DNA.

Option 2 is incorrect. Cas 9 protein enzyme acts as a scissor in CRISPR Technique. Restriction endonucleases enzyme act as a scissor enzyme in Recombinant DNA Technique.

Option 3 is correct. Traditional hybridisation of genes technique faced challenge of inclusion and multiplication of undesirable genes. Recombinant DNA is more advanced than Traditional hybridisation and solve the problem of inclusion and multiplication of undesirable genes.

KB) Three types of Gene Editing Techniques:

1. Traditional hybridisation
2. Recombinant DNA technique
3. CRISPR technique

Application of Recombinant and CRISPR includes correcting genetic defects, treating and preventing the spread of diseases and improving crops. However, its promise also raises ethical concerns.

Recombinant DNA technology is the joining together of DNA molecules from two different species. The recombined DNA molecule is inserted into a host organism to produce new genetic combinations that are of value to science, medicine, agriculture, and industry.

Three basic steps in genetically modifying an organism –

1. Identification of DNA with desirable genes
2. Introduction of the identified DNA into the host
3. Maintenance of introduced DNA in the host and transfer of DNA to its progeny.

Similarly, CRISPR-Cas9 technology behaves like a cut-and-paste mechanism on DNA strands that contain genetic information.

The specific location of the genetic codes that need to be changed, or “edited”, is identified on the DNA strand, and then, using the Cas9 protein, which acts like a pair of scissors, that location is cut off from the strand.

Four stage process of CRISPR technology are

- The Cas9 protein forms a complex with guide RNA in a cell.
- This complex attaches to a matching genomic DNA sequence adjacent to a spacer.
- The Cas 9- RNA complex cuts the double strands of the DNA.
- Programmed DNA may be inserted at the cut.

Q.96) The idea of Constituent Assembly of India was first put forward by

- a) B N Rau
- b) B R Ambedkar
- c) M N Roy
- d) Jawahar Lal Nehru

Ans) c

Exp) The idea of constituent assembly was first put forward by MN Roy.

KB) A constituent assembly is a body of representatives which is composed for drafting a constitution. The idea of Constituent Assembly of India was first put forward by Manabendra Nath Roy or MN Roy in 1934. In 1935, it became the official demand of IN C. It was accepted in August 1940 in the August Offer however, constituted under the Under-Cabinet Mission plan 1946.

Q.97) Consider the following statements regarding Geochemical Baseline Atlas of India

1. It has been released by Indian Meteorological Department (IMD)
2. It aims to document the concentration and distribution of the chemical elements in the soils of India.

Which of the statements given above is/are correct?

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

Ans) b

Exp) Option 1 is incorrect. Geochemical Baseline Atlas of India, for the first time, developed by CSIR-National Geophysical Research Institute (NGRI) for use by policymakers to assess environmental damage.

Option 2 is correct.

KB) Geochemical Baseline Atlas of India

- The atlas consisting 45 maps of metals, oxides and elements present in top and bottom soils across India.
- It will serve as a reference against which future generations of the country would be able to assess the chemical compositional changes on Earth's surface.
- These maps help in finding out future contamination caused by industries or other bodies which cause pollution.

Applications are:

- Earlier, there was no way to prove if polluters denied causing damage to the environment. Now, the baseline maps atlas helps show evidence of it.
- With a glance at it, policymakers will get to know regions with high and low concentrations of metal.

Q.98) The term circular economy, sometimes seen in the news, is

- a) an economic system aimed at minimising waste and making the most of resources.
- b) an economic system aimed at reducing import and utilising goods available domestically.
- c) an economic system aimed at increasing import and export from bordering countries.
- d) an economic system aimed at reducing both import and export and focus on utilising goods available domestically.

Ans) a

Exp) Circular economy is an economic system aimed at minimising waste and making the most of resources. This works on 3R's principle- Reduce, Reuse and Recycle.

KB) A circular economy is an alternative to a traditional linear economy (make, use, dispose). It is the economy in which people keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life.

CE is fundamentally a prescription for creation of a **highly resource efficient economy** where **carbon footprint will get automatically reduced**.

Q.99) Consider the following statements regarding "justice" as mentioned in the Preamble

1. The justice highlighted in the Preamble embraces three different forms- Social, Political and Economic.
2. A combination of Social and Economic justice, is known as "Distributive Justice"
3. The ideal of justice- Social, Political and Economic has been taken from the Russian Revolution.

Which of the above statements is/are correct?

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

Ans) d

Exp) Option 1 is correct. Preamble sets the goal for the country. To ensure justice: social, political and economic.

Option 2 is correct. Distributive justice is about social and economic justice.

Option 3 is correct. The idea of justice is taken from Russian revolution.

KB)

The term 'justice' in the Preamble embraces three distinct forms—social, economic and political, secured through various provisions of Fundamental Rights and Directive Principles.

1. **Social justice** denotes the equal treatment of all citizens without any social distinction based on caste, colour, race, religion, sex and so on. It means absence of privileges being extended to any particular section of the society, and improvement in the conditions of backward classes (SCs, STs and OBCs) and women.
2. **Economic justice** denotes the non-discrimination between people on the basis of economic factors. It involves the elimination of glaring inequalities in wealth, income and property. A **combination of social justice and economic justice** denotes what is known as '**distributive justice**'.
3. **Political justice** implies that all citizens should have equal political rights, equal access to all political offices and equal voice in the government.

Q.100) Which one of the following committees is exclusive to the Lok Sabha?

- a) Business Advisory Committee
- b) Committee on Private Member's Bills and Resolutions
- c) Committee on Government Assurances
- d) Committee on Empowerment of Women

Ans) b

Exp) Committee on Private Member's Bills and Resolutions is not in Rajya Sabha. Business advisory committee of the house does the work on allocating time for private member's bills and resolutions.

KB) Business Advisory Committee recommends allocation of time for items of Government and other business to be brought before the Houses. This committee is in both the house.

Committee on Private Members' Bills and Resolutions of the Lok Sabha classifies and allocates time to Bills introduced by private members, recommends allocation of time for discussion on private members' resolutions and examines Constitution amendment bills before their introduction by private members in the Lok Sabha.

The **Rajya Sabha does not have such a committee**. It is the **Business Advisory Committee** of that House which **recommends allocation of time for discussion on stage or stages of private members' bills and resolutions**.