

10 PM Current Affairs Quiz Compilation

14th to 19th February, 2022

*THIS IS A MONTHLY DOCUMENT CONTAINING ALL MCQS ASKED IN 10 PM
CURRENT AFFAIRS QUIZ BY FORUM IAS.*

PRELIMS

Q.1) Consider the following:

1. Alternative wetting and drying in rice fields
2. Increasing soil compaction through Geotechnical engineering

Which of the above will help in achieving the goal of sustainable agriculture?

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

Answer-a

Alternate Wetting and Drying (AWD) is a water-saving technology that farmers can apply to reduce their irrigation water consumption in rice fields without decreasing its yield.

Soil compaction is usually a combination of both engineering compaction and consolidation, so may occur due to a lack of water in the soil, the applied stress being internal suction due to water evaporation as well as due to passage of animal feet. Affected soils become less able to absorb rainfall, thus increasing run off and erosion. Plants have difficulty in compacted soil because the mineral grains are pressed together, leaving little space for air and water, which are essential for root growth.

Source- [Article](#)

Q.2) Consider the following:

1. Capital expenditure
2. Salaries of employees
3. Borrowings by PSUs

Which of the above will increase the liability of central Government?

- a) 1 and 3 only
- b) 1 and 2 only
- c) 3 only
- d) All of the above

Answer-c

Borrowings by PSUs would increase the liabilities of the government. Capital expenditure creates assets for the government and causes reduction in liabilities for the government.

Unlike capital expenditure, revenue expenditure is one that neither creates assets nor reduces any liability of the government. Salaries of employees, interest payment on past debt, subsidies, pension, etc, fall under the category of revenue expenditure.

Source- [Article](#)

Q.3) With reference to the GST compensation cess, consider the following statements:

- 1.If a GST compensation cess is levied on any product, GST(Goods and services tax) is not levied on it to prevent cascading of prices.
2. The proceeds of the compensation cess will be credited to the Consolidated fund 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

Answer-d

In order to mobilise resources for compensation, a cess is being levied on such goods, as recommended by the Goods and Services Tax Council, over and above the GST on that item. It is called compensation cess. As on date, compensation cess is levied on products such as pan masala, tobacco, aerated waters and motor cars apart from coal.

The proceeds of the compensation cess will be credited to a non-lapsable fund known as the Goods and Services Tax Compensation Fund in the public account.

Source- [Article](#)

Q.4) With reference to the semiconductors, consider the following statements:

- 1.They are the materials which have a conductivity between conductors and insulators.
2. They are the basic building blocks of all modern electronics.

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

Answer-c

Semiconductors are materials which have a conductivity between conductors and insulators. They are the basic building blocks of the modern electronics and information and communications technology products.

Source- [Article](#)

Q.5) Consider the following:

1. Uniform civil code(UCC) cover areas like Marriage, divorce, maintenance, inheritance, adoption and succession of the property.
4. It is laid down in the Directive principles of state policy(DPSP) of the Constitution that the state shall endeavour to secure a UCC for the citizens throughout the territory of India.

Select the correct option from below

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

Answer: C

A Uniform Civil Code means that all sections of the society irrespective of their religion shall be treated equally according to a national civil code, which shall be applicable to all uniformly.

They cover areas like- Marriage, divorce, maintenance, inheritance, adoption and succession of the property. Article 44(DPSP) of the Constitution lays down that the state shall endeavour to secure a UCC for the citizens throughout the territory of India.

Source- [Article](#)

Q.6) Consider the following:

1. All grassland ecosystems have the same species composition.
2. Ecosystem biodiversity refers to the number of different individuals contained within a single population of organisms.

Select the correct option from below

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

Answer-d

Similar looking ecosystems can have very different species makeups. Although two ecosystems may have the same name, this does not mean that the species in those ecosystems are exactly the same.

Ecosystem biodiversity refers to the variation between ecosystems within a geographical location.

Source- [Article](#)

Q.7) Consider the following statements:

1. Preventive detention means detention of a person without trial and conviction by a court.
2. The reason for detention cannot be conveyed to the Individual under preventive detention.

Select the correct option from below

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

Answer-a

Preventive Detention can be understood as imprisonment of a person without trial, an act that is supposedly justified for non-punitive ends and is often described as a preventive measure rather than a punitive one. Preventive detention is when a person is held in police custody only on the basis of a suspicion that they would conduct a criminal act or cause harm to society. The police have the authority to hold anyone they suspect of committing a criminal offence. The police have the ability to make arrests without a warrant or a magistrate's authorization in certain cases.

Clause 5 of Article 22 specifies that the reason for detention shall be conveyed to the individual as quickly as possible by any official when detaining any individual under preventive detention.

Source- [Article](#)

SCIENCE AND TECHNOLOGY

Q.8) With reference to RISAT series of satellites launched by India, consider the following statements:

1. Radar Imaging is unaffected by weather, cloud or fog.
2. In India radar imaging is also used for crop estimation.

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

Answer: c

Both statements are correct.

- **Statement 1 is correct:** One big advantage that radar imaging has over optical instruments is that it is unaffected by weather, cloud or fog, or the lack of sunlight. It can produce high-quality images in all conditions and at all times, making it suitable for surveillance.
- **Statement 2 is correct:** In India radar imaging are used for crop estimation because our main crop growing season of kharif is in May-September when it rains and gets cloudy.

Source: [Article](#)

Schemes and Programs

Q.9) River Devika project was recently seen in the news. The project is located in which of the following state/Union Territory?

- a) Goa
- b) Tamil Nadu
- c) Jammu and Kashmir
- d) Karnataka

Answer: C

River Devika project will be complete by this year in Udhampur, Jammu and Kashmir. The project is North India's first river rejuvenation project. It will offer a unique destination both for pilgrim tourists as well as recreation tourists.

Source: [PIB](#)

SCIENCE AND TECHNOLOGY

Q.10) With reference to banning drone imports, consider the following advantages:

1. With an import ban, the Indian manufacturer will have control of the IP, design and software.
2. The ban will reduce the cost burden on Indian companies immediately.

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

Answer: A

Statement 1 is correct: With an import ban, the Indian manufacturer will have control of the IP, design and software. Hence, the ban will address the data security concerns associated with drones.

Statement 2 is incorrect: It will increase the cost burden on companies, as imported drones are cheaper than locally assembled ones.

Source: [Article](#)

PRELIMS

Q.1) Consider the following:

- 1.Subsidies
- 2.Taxes
- 3.Regulation
- 4.Public goods

Which of the above instruments can the government use to intervene in markets to address inefficiency?

- a) 1, 2 and 4 only
- b) 2 and 4
- c) 1, 3 and 4 only
- d) All of the above

Answer-d

Governments intervene in markets to address inefficiency. The government tries to combat these inequities through regulation, taxation, and subsidies.

In an unregulated inefficient market, cartels and other types of organizations can wield monopolistic power, raising entry costs and limiting the development of infrastructure. Without regulation, businesses can produce negative externalities without consequence. This all leads to diminished resources, stifled innovation, and minimized trade and its corresponding benefits. Government intervention through regulation can directly address these issues.

Another example of intervention to promote social welfare involves public goods. Certain depletable goods, like public parks, aren't owned by an individual. This means that no price is assigned to the use of that good and everyone can use it. As a result, it is very easy for these assets to be depleted. Governments intervene to ensure those resources are not depleted.

Governments also intervene to minimize the damage caused by naturally occurring economic events. Recessions and inflation are part of the natural business cycle but can have a devastating effect on citizens. In these cases, governments intervene through subsidies and manipulation of the money supply to minimize the harsh impact of economic forces on its constituents.

Governments may also intervene in markets to promote general economic fairness. Government often try, through taxation and welfare programs, to reallocate financial resources from the wealthy to those that are most in need.

Source- [Article](#)

Q.2) With reference to Zoonotic diseases, consider the following statements:

- 1.They can spread to humans through direct contact but not through food, water or the environment.
2. HIV (human immunodeficiency virus), Rabies, Ebola are all example of Zoonotic diseases.

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

Answer-b

A zoonosis is an infectious disease that has jumped from a non-human animal to humans. Zoonotic pathogens may be bacterial, viral or parasitic, or may involve unconventional agents and can spread to humans through direct contact or through food, water or the environment. Some diseases, such as HIV, begin as a zoonosis but later mutate into human-only strains. Other zoonoses can cause recurring disease outbreaks, such as Ebola virus disease and salmonellosis. Still others, such as the novel coronavirus that causes COVID-19, have the potential to cause global pandemics.

Source- [Article](#)

Q.3) With reference to the Preferential trade arrangements (PTA), consider the following statements:

1. Under this a country may offer lower or zero tariff to other countries unilaterally.
2. Generalised system of Preferences is an example of PTA

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

Answer-c

Preferential trade arrangement is the term used in the WTO for trade preferences, such as lower or zero tariffs, which a member may offer to a trade partner unilaterally. These include generalised system of preferences schemes, under which developed countries grant preferential tariffs to imports from developing countries.

Source- [Article](#)

Q4) With reference to the Pradhan Mantri Fasal Bima Yojana, consider the following statements:

1. Comprehensive risk insurance is provided to cover yield losses due to non-preventable risks, such as Natural Fire and Lightning and also certain local problems.
2. One of its objective is to encourage farmers to adopt innovative and modern agricultural practices.

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

Answer-c

OBJECTIVES of the scheme- To provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests & diseases.

- To stabilise the income of farmers to ensure their continuance in farming.
- To encourage farmers to adopt innovative and modern agricultural practices.
- To ensure flow of credit to the agriculture sector.

Risks covered under the scheme-Yield Losses (standing crops, on notified area basis). Comprehensive risk insurance is provided to cover yield losses due to non-preventable risks, such as Natural Fire and Lightning, Storm, Hailstorm, Cyclone, Typhoon, Tempest, Hurricane,

Tornado. Risks due to Flood, Inundation and Landslide, Drought, Dry spells, Pests/ Diseases also will be covered.

For certain localized problems, Loss / damage resulting from occurrence of identified localized risks like hailstorm, landslide, and Inundation affecting isolated farms in the notified area would also be covered.

Source- [Article](#)

Q.5) With reference to Society for Worldwide Interbank Financial Telecommunication (SWIFT), consider the following statements:

1. It provides a network that enables financial institutions worldwide to send and receive information about financial transactions.
2. Instrument in Support of Trade Exchanges (INSTEX), a European special-purpose vehicle provides an alternative to SWIFT
3. It holds funds in US dollars to facilitate external client accounts.

Which of the statements given above is/are incorrect?

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

Answer-c

Society for Worldwide Interbank Financial Telecommunication (SWIFT) is a secure financial message carrier.

SWIFT neither holds funds on its own nor manages external client accounts.

Instex was launched as a “SWIFT alternative” to bypass U.S. sanctions on Iran.

Source- [Article](#)

Q.6) Consider the following:

1. Composite Water Management Index
2. Sustainable Development Goals Index
3. Financial Inclusion Index
4. India Innovation Index

Which of the above Indices are released by the NITI Aayog?

- a) 1, 2 and 4 only
- b) 2 and 4
- c) 1, 3 and 4 only
- d) All of the above

Answer-a

Some of the indices launched by NITI Aayog are School Education Quality Index, State Health Index, Composite Water Management Index, Sustainable Development Goals Index, India Innovation Index and Export Competitiveness Index.

Financial Inclusion Index is released by the Reserve Bank of India.

Source- [Article](#)

Q.7) Consider the following:

1. Urban Planning
2. Disaster management
3. Mineral Prospecting
4. Rural development

In which of the above areas does earth observation satellite has an application?

- a) 1, 2 and 4 only
- b) 2 and 4
- c) 1, 3 and 4 only
- d) All of the above

Answer-d

ISRO has launched many operational remote sensing satellites. Today, India has one of the largest constellations of remote sensing satellites in operation.

The data from these satellites are used for several applications covering agriculture, water resources, urban planning, rural development, mineral prospecting, environment, forestry, ocean resources and disaster management.

Source- [Article](#)

Q.8) With reference to international payment systems, consider the following statements:

1. Both India and China are on the governance board of Society for Worldwide Interbank Financial Telecommunications (SWIFT).
2. System for Transfer of Financial Messages (SPFS) is payment system launched by Russia.

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

Answer: c

Both statements are correct.

- SWIFT has 3,500 shareholders who elect a 25-member governance board. Russia and China are represented on the governance board, but India is not.
- In 2014, during the time when Russia annexed Crimea and was threatened of SWIFT sanctions, it launched a messaging system, the System for Transfer of Financial Messages (SPFS).

Source: [Article](#)

Q.9) With reference to the Inter State Council in India, consider the following statements:

1. Sarkaria Commission recommended the establishment of Inter State Council in India.
2. Governor of a state under President's rule can also be a member of the council.

Which of the statements given above is/are incorrect?

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

Answer: d

- **Statement 1 is correct:** One of the important recommendations of Sarkaria Commission was for establishing a permanent Inter-State Council as an independent national forum for consultation with a mandate well defined in accordance with Article 263 of the Constitution of India. Pursuant to the recommendation, The Inter-State-Council was set up under Article 263 of the Constitution of India.
- **Statement 2 is correct:** Governors of States under President's Rule are members of the council.

Source: [Article](#)

Q.10) Consider the following statements:

1. He built impregnable Lohagarh Fort, which the British could not penetrate even after attacking 13 times.
2. He played a key role in the Third Battle of Panipat.
3. He was described as "the Plato of the Jat people".

Which of the following personality is described in the statements above?

- a) Maharana Jagat Singh
- b) Raja Mahendra Pratap Singh
- c) Maharaja Surajmal
- d) Chaudhary Devi Lal

Answer: C

Surajmal had built the impregnable Lohagarh Fort, which the British could not penetrate even after attacking 13 times. This is the only fort in the country, which has always been impenetrable.

He was described as "the Plato of the Jat people" and by a modern writer as the "Jat Odysseus", because of his political sense, steady intellect and clear vision.

He took care of the historical monuments built by the kings of other religions and employed people according to their abilities in higher posts, irrespective of their races.

He visualized "India as one nation" and believed humanity is the only religion of man.

Source: [PIB](#)

PRELIMS

Q.1) With reference to the De- Notified tribes, consider the following statements:

1. They are Homogenous nomadic communities
2. They are primarily matriarchal groups.
3. After being denotification in 1952, they were included in Scheduled Tribe (ST), Scheduled Caste (SC) and Other Backward Caste lists.

Which of the statements given above is/are incorrect?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) All of the above

Answer-b

The term 'De-notified Tribes' stands for all those communities which were once notified under the Criminal Tribes Acts, enforced by the British Raj between 1871 and 1947. These Acts were repealed by the Independent Indian Government in 1952, and these communities were "De-Notified". A few of these communities which were listed as de-notified were also nomadic.

After denotification in 1952, about 200 communities were included in Scheduled Tribe (ST), Scheduled Caste (SC) and Other Backward Caste lists because they come from diverse social backgrounds. While they mainly come from nomadic communities, these communities are not homogeneous. The De-notified and Nomadic communities **have diverse ideological patterns, culture, political and social lifestyle, customs and traditions.**

Given the historically embedded diversities between the NTs and DNTs, it is **difficult to treat them as a homogeneous social group** or an analytical category.

As is the case with most of the communities in India, large majority of De-notified and nomadic communities are **primarily patriarchal.**

Source- [Article](#)

Q.2) Education is a necessary Public good central to the task of nation building. Which of the following statements are associated with the term 'Public good'

1. Individuals cannot be effectively excluded from using these goods
2. Use by one individual does not reduce the good's availability to others

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

Answer-c

Public goods are non-excludable and non-rival. Individuals cannot be effectively excluded from using them, and use by one individual does not reduce the good's availability to others. Examples of public goods include the air we breathe, public parks, and street lights.

Source- [Article](#)

Q.3) With reference to the Socio economic caste census(SECC), consider the following statements:

4. All data under census is considered confidential, whereas all the personal information given in the SECC is open for use by Government departments to grant and/or restrict benefits to households.

5. Both Urban and rural households have been covered under it

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

Answer-c

SECC 2011 is a study of socio economic status of rural and urban households and allows ranking of households based on predefined parameters.

Since the Census falls under the Census Act of 1948, all data are considered confidential, whereas all the personal information given in the SECC is open for use by Government departments to grant and/or restrict benefits to households.

Source- [Article](#)

Q.4) Which of the following Policies will lead to increase in potential output in the long run?

1. Increase in Taxes on business investment

2. Policies that encourage more saving for retirement

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

Answer-b

Taxing investment discourages investment in capital, which decreases potential output.

Policies that increase savings increase the supply for loanable fund, which lowers the real interest rate. This may encourage firms to increase the stock of capital which increases potential output on the long run.

Source- [Article](#)

Q.5) To Which of the below mentioned areas is the SWAMITVA scheme related?

- a) (a) Education of Children in the age group of 6-17
- b) (b) Primary Healthcare facilities
- c) (c) Documentation of residential property
- d) (d) Women safety and security at workplace

Answer-c

SVAMITVA (Survey of villages and mapping with improvised technology in village areas) scheme is a new initiative of the Ministry of Panchayati Raj. It aims to provide rural people with the right to document their residential properties so that they can use their property for economic purposes.

The scheme is for surveying the land parcels in rural inhabited area using Drone technology.

Source- [Article](#)

Q.6) With reference to Various cyber security threats, consider the following statements:

1. Malware can only be sent to a device if it is connected to the Internet,
2. Malware is designed to intentionally inflict damage on a computer While a software bug is an accident.

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

Answer-d

Malware is software; the term malware comes from "malicious software".

Both malware and a software bug may damage a computer or compromise user data, but the difference is that malware is intentionally designed to do so.

Source- [Article](#)

Q.7) Which of the following Indian states share border with Myanmar?

1. Nagaland
2. Mizoram
3. Arunachal Pradesh

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) All of the above

Answer-d

Four Northeast Indian states share the border with Myanmar: **Arunachal Pradesh, Nagaland, Mizoram, and Manipur.**

Source- [Article](#)

ECONOMY

Q.8) With reference to Initial Public Offering (IPO), consider the following statements:

1. Public Sector Undertakings (PSUs) can also issue their IPOs.
2. Pension funds are not allowed to invest in an IPO.

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

Answer: a

- **Statement 1 is correct:** An IPO or initial public offering is the process by which a privately held company, or a company owned by the government such as LIC, raises funds by offering shares to the public or to new investors. Following the IPO, the company is listed on the stock exchange.
- **Statement 2 is incorrect:** There are various categories of investors who can invest in an IPO. For instance: Qualified institutional buyers (QIBs) is a category of investors that includes foreign portfolio investors (FPIs), mutual funds, commercial banks, insurance companies, pension funds, etc.

Source: [Article](#)

Q.9) Which of the following statements correctly defines Engel's law?

- a) As a household's income increases, the percentage of income spent on food decreases while the proportion spent on other goods (such as luxury goods) increases.
- b) As an economy develops, market forces first increase and then decrease economic inequality.
- c) There is an optimum tax rate which maximises total tax revenue.
- d) With economic growth comes inflation, which in turn should lead to more jobs and less unemployment

Answer: a

- Engel's Law states that as household income rises, the percentage of income spent on food declines.

SCIENCE AND TECHNOLOGY

Q.10) With reference to Lassa Fever, consider the following statements:

1. The death rate associated with this disease is low, at around 1%.
2. The virus spreads through Mosquitoes.
3. It can spread through person-to-person transmission

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 only

Answer: c

Statement 1 is correct: The death rate associated with this disease is low, at around 1%. But the death rate is higher for certain individuals such as pregnant women among others.

Statement 2 is incorrect: The virus spreads by rats.

Statement 3 is correct: It can also be spread if a person comes in contact with a sick person's infected bodily fluids or through mucous membranes such as the eyes, nose or the mouth.

Source: [Explained: What is Lassa fever, and what are its symptoms?](#)

PRELIMS

Q.1) With reference to Satellite Internet, consider the following statements:

1. Satellite Internet is a viable option for rural areas where internet infrastructure is underdeveloped.
2. Their services are not affected by natural events like heavy rain or storms

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

Answer-a

Satellite Internet, which works similarly to satellite TV, is a wireless connection spread across satellite dishes located both in space and on the Earth.

Not all places on the Earth are able to establish various types of land-based internet connections like broadband, fiber optics, cable internet, etc. In fact, satellite Internet remains the only option if you live in a rural part of the country where internet infrastructure is underdeveloped.

Satellite internet is reliable most of the time. Heavy rain can interfere with satellite signals so satellite internet sometimes goes out during storms.

Source- [Article](#)

Q.2 With reference to Solar Power, consider the following statements:

1. Solar panels contain heavy metals and also some valuable materials like silver
2. In India the total installed capacity of coal fired power plants is lower than that of Hydro, wind and solar energy combined.

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

Answer-a

Some governments classify solar panels as hazardous waste due to the small amounts of heavy metals (cadmium, lead, etc.) in them.

While panels contain small amounts of valuable materials such as silver, they are mostly made of glass, an extremely low-value material. This also disincentivizes recycling efforts in the sector.

Installed capacity for the Electricity generated from coal is 2,03,190 MW (51.9%) of the total while that for Wind, hydro and solar combined is 1,50,000 MW approx.(38.4%) of the total.

Source- [Article](#)

Q.3 With reference to Population Pyramid, consider the following statements:

- 1.They show the distribution of the population across both the variables of age and sex.
- 2.They are useful for studying the future of a region as well as examining historical and current population trends

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

Answer-c

A population pyramid is a way to visualize two variables: age and sex. They are used by demographers, who study populations. A population pyramid is a graph that shows the distribution of ages across a population divided down the center between male and female members of the population. The graphic starts from youngest at the bottom to oldest at the top.

Population pyramids are useful for studying the future of a region as well as examining historical and current population trends. If part of the population has been affected by sudden changes, such as casualties from armed conflict, high female mortality in childbirth, or the migration of young workers out of poorer regions, the graph will offer a way to visualize how the future population will be affected.

Source-[Article](#)

Q.4) Which of the following process enabled the formation of inner rocky planets, including our planet Earth?

- a) Supernova
- b) Accretion
- c) Big bang event
- d) Collision

Answer-b

The rocky planets were formed when materials violently smashed into one another in space. These materials spun together in orbit, eventually **accreting** to form larger chunks of material over millions of years – our rocky planets.

The Big Bang is a theory about the creation of the Universe. It is not the process that describes the process by which rocky planets were formed.

Collisions were a part of this process, but a collision alone does not form a planet.

A supernova is a massive stellar explosion. Supernovas do not form planets, but they do create many of the complex elements that planets are made from.

Source- [Article](#)

Q.5) With reference to TERI(The energy and resources Institute), consider the following statements:

- 1.It is an intergovernmental collaboration that works in the fields of energy, environment and sustainable development.
2. World Sustainable Development Summit is the flagship event of The Energy and Resources Institute (TERI) that is held once in four 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

Answer-d

TERI is a non-profit research institution that conducts research work in the fields of energy, environment and sustainable development.

The World Sustainable Development Summit is the annual flagship event of The Energy and Resources Institute (TERI).

Source- [Article](#)

Q.6) Consider the following statements:

1. Most electric vehicles currently run on Lithium-ion batteries.
2. Nickel- Cadmium(Ni-Cad) batteries are more advanced than Lithium ion batteries as Ni-Cad have a no self-discharge property.

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

Answer-c

Lithium-ion batteries are currently used in most electric vehicles because of their high energy per unit mass relative to other electrical energy storage systems.

Typically, Lithium-ion batteries are smaller and lighter than a NiCad battery. Lithium-ion also two to three times more expensive than NiCad. On the other hand, Lithium-ion has virtually no self-discharge.

Source- [Article](#)

Q.7) With reference to Corporate social responsibility(CSR), consider the following statements:

- 1.CSR provisions **are** applicable to all companies established in India.
- 2.The CSR provisions in the company act, 2013 encourages companies to spend 20% of their average net profit in the previous three years on CSR activities.

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

Answer-d

Concept of CSR is governed by clause 135 of the Companies Act, 2013.

The CSR provisions within the Act is applicable to companies with an annual turnover of 1,000 crore and more, or a net worth of Rs. 500 crore and more, or a net profit of Rs. 5 crore and more.

The Act encourages companies to spend 2% of their average net profit in the previous three years on CSR activities.

Source-[Article](#)

SCIENCE AND TECHNOLOGY

Q.8) Sputnik Planitia, sometimes seen in news, is associated with which of the following?

- a) Moon
- b) Pluto
- c) Kuiper belt
- d) Saturn

Answer: b

- It is a high-albedo ice-covered basin on Pluto.

Source: [Article](#)

INTERNATIONAL RELATIONS

Q.9 With reference to Energy Compacts, consider the following statements.

1. These are voluntary commitments of action, with specific targets and timelines to drive the progress on access to energy for all.
2. Submission of energy compacts is open to all relevant stakeholders including member states and non-state actors.

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

Answer: C

During the recent “NEW FRONTIERS: A Programme on Renewable Energy” a compilation of all energy compacts submitted from India has been launched.

Energy Compacts are voluntary commitments of action, with specific targets and timelines to drive the progress on the achievement of SDG7, to accelerate action for clean, affordable energy for all.

Submission of energy compacts is open to all relevant stakeholders including member states and non-state actors, such as companies, regional/local governments, NGOs and others.

Twenty two compacts were submitted from India by PSUs, corporates and smart cities in addition to the national compact submitted by the Ministry of New and Renewable Energy, Government of India.

Source: [PIB](#)

ECONOMY

Q.10) Which of the following statements correctly defines Engel's law?

- a) As a household's income increases, the percentage of income spent on food decreases while the proportion spent on other goods (such as luxury goods) increases.
- b) As an economy develops, market forces first increase and then decrease economic inequality.
- c) There is an optimum tax rate which maximises total tax revenue.
- d) With economic growth comes inflation, which in turn should lead to more jobs and less unemployment

Answer: a

- Engel's Law states that as household income rises, the percentage of income spent on food declines.

Source: [Article](#)

PRELIMS

Q.1) With reference to the Neutrinos, consider the following statements:

1. Neutrinos can affect the atoms in living things, so it poses a health risk by damaging tissue and DNA in genes.
2. Scientists are facing an issue to study these particles as there are very few processes which emit them and can occur at standard temperature and pressure.

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

Answer-d

Neutrinos are by far the most abundant particles in the universe. Once produced, these particles almost never interact with other matter. Tens of trillions of neutrinos from the sun stream through your body every second, but you can't feel them.

Neutrinos play a role in many fundamental aspects of our lives; they are produced in nuclear fusion processes that power the sun and stars, they are produced in radioactive decays that provide a source of heat inside our planet, and they are produced in nuclear reactors.

Every time atomic nuclei come together (like in the sun) or break apart (like in a nuclear reactor), they produce neutrinos.

Source- [Article](#)

Q.2) With reference to the Special Economic Zone(SEZ), consider the following statements:

1. SEZ is a geographical region that has economic laws different from a country's typical economic laws.
2. The incentives offered to SEZs are no application of labour laws and single window clearance.

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

Answer-a

Special Economic Zone (SEZ) is a specifically delineated duty-free enclave and shall be deemed to be foreign territory for the purposes of trade operations and duties and tariffs. In order words, SEZ is a geographical region that has economic laws different from a country's typical economic laws.

Normal labour laws are applicable to SEZs, which are enforced by the respective state governments.

Source- [Article](#)

Q.3) With reference to the Online gambling and betting in India, consider the following statements:

1. Subject of gambling falls in the concurrent list.

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.

2. As online betting is still not legal in India , It does not come under GST
3. Legalising sports betting will increase Foreign direct investment(FDI) in the sector.

Which of the statements given above is/are incorrect?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) All of the above

Answer-c

Legalization of sports betting will improve FDI, Jobs in the sports-sector.

Subject of gambling figures in the State List.

GST and income tax are still applicable to these games. Its only a licensing fee which may not be applicable at this point of time. Dream 11 for instance, is paying GST, and the winners will end up paying income tax as well.

Source- [Article](#)

Q.4) Consider the following statements:

1. Around half of the installed renewable energy in India, comes from the states of Gujarat and Madhya Pradesh.
2. In India, Only Small Hydro power projects have renewable energy status.

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

Answer-d

Tamil Nadu , Karnataka and Gujarat are the top three status in terms of installed renewable energy capacity .

Large hydel projects also have 'renewable energy status'.

Source- [Article](#)

Q.5) Consider the following statements:

1. Gondwanaland is an ancient supercontinent that incorporates present-day South America, Africa, Madagascar, India, Antarctica.
2. Western Ghats are older than the Himalayas.

Which of the statements given above is/are correct?

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

Answer-c

Gondwana, also called Gondwanaland, ancient supercontinent that incorporated present-day, South America, Africa, Madagascar, India, Antarctica. Africa, Arabia, Australia.

Western Ghats Older than the Himalaya mountains, the mountain chain of the Western Ghats represents geomorphic features of immense importance with unique biophysical and ecological

processes. The site's high montane forest ecosystems influence the Indian monsoon weather pattern

Source- [Article](#)

Q.6) With reference to the Periyar Tiger reserve, Consider the following statements:

1. The Sabarimala Temple complex is located inside it.
2. It is spread across the states of Kerala and Tamil Nadu.

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

Answer-a

Periyar National Park, also known as Periyar Tiger Reserve, is in the mountainous Western Ghats of Kerala, southern India.

Sabarimala Temple complex is located inside the Periyar Tiger Reserve.

Source- [Article](#)

Q.7) With reference to Ammonia, Consider the following statements:

1. Green Ammonia is produced by using the hydrogen from water electrolysis and nitrogen separated from air.
2. One of the major application of Ammonia is its use in Agriculture as fertilizer.

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

Answer-c

Green ammonia refers to ammonia, which has been produced through a process that is 100% renewable and carbon-free. One way of making Green Ammonia is by using the hydrogen from water electrolysis and nitrogen separated from air.

80% of Ammonia produced in the world is used in Agriculture as fertilizer.

Source- [Article](#)

Q.8) With reference to Inter-Operable Criminal Justice System (ICJS) Project, consider the following statements:

1. The system is being built on the principle of 'one data one entry'.
2. National Crime Records Bureau (NCRB) will be responsible for the implementation of the project
3. It is a Centrally Sponsored Scheme.

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

Answer: a

- **Statement 1 is correct:** The system is being built on the principle of 'one data one entry' whereby data is entered only once in one pillar and the same is then available in all other pillars without the need to re-enter the data in each pillar.
- **Statement 2 is correct:** National Crime Records Bureau (NCRB) will be responsible for the implementation of the project in association with the National Informatics Center (NIC).
- **Statement 3 is incorrect:** It is a central sector scheme.

Source: [Article](#)

Q.9) With reference to Integrated Road Accident Database (IRAD), consider the following statements:

1. Its scope is currently limited to only National Highways.
2. Road users are also able to upload data on road accidents.

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

Answer: b

- **Statement 1 is incorrect:** Its mission is to take necessary corrective measures and control accidents by analyzing the real causes of increasing road accidents across the country.
- **Statement 2 is correct:** Road users can also upload data on road accidents on a separate mobile application.

Source: [Article](#)

Q.10) With reference to President's Fleet review, consider the following statements:

1. The earliest recorded evidence of an Indian Fleet review dates back to the 18th century.
2. A fleet review is usually conducted once during the tenure of the President.

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

Answer: c

Both statements are correct.

- The earliest recorded Indian Fleet Review was in the 18th Century by the powerful Maratha fleet consisting of 'Ghurabs' and 'Gallivats', under the renowned Sarkhel (Grand Admiral) Kanhoji Angre at the coastal fortress of Ratnagiri.
- A fleet review is usually conducted once during the tenure of the President.

Source: [Article](#)

PRELIMS

Q.1) Consider the following statements:

1. India is not party to the 1951 Refugee Convention and does not have a national refugee protection framework.
2. The regulation of refugees and asylum seekers in India is conducted on an ad-hoc basis.

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

Answer-c

India is not party to the 1951 Refugee Convention or its 1967 Protocol and does not have a national refugee protection framework.

The regulation of refugees and asylum seekers in India is conducted on an ad-hoc basis through administrative decision-making. Since there is no official legislative or administrative framework for refugee-status determination, the government has taken to determining the status of different groups of refugees in different ways.

Source- [Article](#)

Q.2) With reference to the National Education Policy, consider the following statements:

1. It aims for 100% Gross Enrolment Ratio in higher education including vocational education by 2035.
2. It envisages that Centre and the States will work together to increase the public investment in Education sector to reach 6% of GDP at the earliest.

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

Answer-b

NEP 2020 aims to increase the Gross Enrolment Ratio in higher education including vocational education from 26.3% (2018) to 50% by 2035.

The Centre and the States will work together to increase the public investment in Education sector to reach 6% of GDP at the earliest.

Source- [Article](#)

Q.3) Which of the following are the reasons that the concept of 'one health' has gained significant relevance in recent years

1. Increased International travel and trade
2. Growing and expanding human population
3. Intensive farming practices

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) All of the above

Answer-d

One Health is an approach that recognizes that the health of people is closely connected to the health of animals and our shared environment. One Health is not new, but it has become more important in recent years. This is because many factors have changed interactions between people, animals, plants, and our environment.

Human populations are growing and expanding into new geographic areas. As a result, more people live in close contact with wild and domestic animals, both livestock and pets. Animals play an important role in our lives, whether for food, fiber, livelihoods, travel, sport, education, or companionship. Close contact with animals and their environments provides more opportunities for diseases to pass between animals and people.

The earth has experienced changes in climate and land use, such as deforestation and intensive farming practices. Disruptions in environmental conditions and habitats can provide new opportunities for diseases to pass to animals.

The movement of people, animals, and animal products has increased from international travel and trade. As a result, diseases can spread quickly across borders and around the globe.

Source- [Article](#)

Q.4) Consider the following statements:

1. The term 'constitutional morality' is not mentioned in the constitution of India.
2. In a Constitutional democracy the authority of the majority is limited by legal and institutional means.

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

Answer-c

Constitutional morality is not mentioned in the Constitution.

The evolution of the doctrine of constitutional morality is not found in the Constitution but in the judgments involving the interpretation of the constitutional provisions.

The basic difference between a democracy and a constitutional democracy is that while democracy can only guarantee that the power is vested with the people (the majority, in fact), the constitution preserves the rights of the minority and prevents them from unwelcome contingencies of the majority will. In a Constitutional democracy the authority of the majority is limited by legal and institutional means so that the rights of individuals and minorities are respected.

Source- [Article](#)

Q.5) Suppose a devastating fire destroys a great deal of a National Park. Although many of the organisms were killed or displaced, existing seeds began to immediately recolonize the park. Which of the following terms defines the incidence most appropriately?

- a) Natural selection
- b) Secondary succession
- c) Climax community
- d) Primary succession

Answer-b

Secondary succession occurs when a previously occupied area is recolonized after a disturbance kills most, or all, of its community.

Primary succession occurs when new land is formed or bare rock is exposed, providing a habitat that can be colonized for the first time. In this case, the habitat was not completely destroyed, allowing secondary succession to take place.

A climax community forms when a community reaches a steady, mature state. The early seedlings in this national park are far from this stage. The above mentioned incident is also not an example of natural selection as Natural selection is a mechanism of evolution.

Source- [Article](#)

Q.6) Consider the following statements:

1. Public key encryption is an asymmetric encryption technique which uses different keys for encryption and decryption, allowing computers over the Internet to securely communicate with each other.
2. Another application of public key encryption is the digital signature which are used for sender authentication.

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

Answer-c

Public key encryption is an asymmetric encryption technique which uses different keys for encryption and decryption, allowing computers over the Internet to securely communicate with each other.

With public-key cryptography, robust authentication is also possible. A sender can combine a message with a private key to create a short digital signature on the message. Anyone with the sender's corresponding public key can combine that message with a claimed digital signature; if the signature matches the message, the origin of the message is verified (i.e., it must have been made by the owner of the corresponding private key)

Source- [Article](#)

Q.7) Consider the following:

- 1.Armenia
- 2.Georgia
- 3.Bulgaria
- 4.Ukraine

Which of the above countries border the black sea?

- a) 1 and 2 only
- b) 1, 2 and 4 only
- c) 2, 3 and 4 only
- d) All of the above

Answer-c

Six countries border with the Black Sea, including Ukraine to the north, Russia and Georgia to the east, Turkey to the south, and Bulgaria and Romania to the west.

Source- [Article](#)

SCIENCE AND TECHNOLOGY

Q.8 With reference to Cryptocurrency and Blockchain networks, consider the following statements:

1. Blockchain is a type of digital ledger technology in which transactions are recorded with an immutable cryptographic signature called a hash.
2. Crypto coins and tokens have their own blockchains.

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

Answer: a

- **Statement 1 is correct:** Blockchain is a type of digital ledger technology in which transactions are recorded with an immutable cryptographic signature called a hash.
- **Statement 2 is incorrect:** Crypto coins have their own blockchains. Tokens are built on already existing blockchains.

Source: [Article](#)

Q.9) With reference to synthetic biology, consider the following statements:

1. It refers to the science of using genetic sequencing, editing, and modification to create organic molecules that can function in living systems.
2. Synthetic biology can help in agriculture to deliver fixed nitrogen to crops.

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

Answer: C

Both the statements are correct.

Synthetic biology refers to the science of using genetic sequencing, editing, and modification to create unnatural organisms or organic molecules that can function in living systems.

Various applications of Synthetic biology includes,

Pharmaceutical industry: Synthetic biology can be used to make natural compounds such as artemisinin used for the treatment of malaria and CAR T cell therapy for cancer treatment.

It can help in **a) Developing synthetic organisms for vaccination, b) Creating natural products in a lab** such as vanillin, extracted from vanilla seeds, can be grown in yeasts with additional plant genomes.

In Agriculture: Companies using synthetic biology to deliver fixed nitrogen to plants instead of using fertilisers, engineering microbes to create food additives or brew proteins.

Source: [Indian Express](#)

POLITY

Q.10) With reference to First Information Report (FIR), consider the following statements.

1. The term FIR is not defined in the Indian Penal Code (IPC), Code of Criminal Procedure (CrPC), 1973, or in any other law.
2. FIR can be filed for both cognizable and non-cognizable offences.

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

Answer: A

Statement 1 is correct: The term FIR is not defined in the Indian Penal Code (IPC), Code of Criminal Procedure (CrPC), 1973, or in any other law. However, in police regulations or rules, information recorded under Section 154 of CrPC is known as First Information Report (FIR).

Statement 2 is incorrect: FIR is a written document prepared by the police when they receive information about the commission of a cognizable offence.

Source: [Indian Express](#)