

## Weekly Quiz Answers (11<sup>th</sup>-17<sup>th</sup> Sept)

Ans1. A

### Explanation:

#### Coffee Cultivation

In May 2023, the Statista site stated that India is the sixth largest producer of coffee in the world, after Brazil (largest producer of coffee), Vietnam, Colombia, Indonesia, Ethiopia and Honduras.

#### Coffee Plantation Practices in India:

Predominantly grown under thick natural shade. Ecologically sensitive regions of the Western and Eastern Ghats.

#### Biodiversity Hotspots:

Coffee plantations located in these regions are recognized as biodiversity hotspots. Contribute significantly to India's unique biodiversity

#### Export and Domestic Consumption:

Approximately 65% to 70% of the coffee produced in India is exported and remaining coffee is consumed domestically.

#### Climate Conditions:

Hot and humid climate, Temperature 15°C to 28°C, and Rainfall 150 to 250 cm.

**Harmful Conditions:** Frost, Snowfall, High temperatures above 30°C, and Strong sunlight.

**Ideal Soil Conditions:** Well-drained loamy soils, Presence of humus and minerals (iron, calcium), Fertile volcanic red earth, and Deep sandy loam soils.

**Less Suitable Soil Conditions:** Heavy clay soils, Sandy soils.

**Coffee Plantation Locations in India:** Karnataka, Kerala, Tamil Nadu, Andhra Pradesh (Araku Valley), Odisha, Manipur, Mizoram, and Other northeastern states.

**Major Coffee Producer:** Karnataka accounts for approximately 70% of India's total coffee production.

Ans2. B

### Explanation:

#### Section 69, Bharatiya Nyaya Sanhita (BNS), 2023

Chapter 5 of the Bill, titled "Offences against woman and children" describes 'sexual intercourse by employing deceitful means etc.'

- Section 69 creates two violations: one by deceitful means, and one by a 'false promise to marry.'
  - Deceitful means will include the "false promise of employment or promotion, inducement or marrying after suppressing identity."
  - The false promise to marry will be attracted only when a man makes a promise to marry a woman, with the intention of breaking it, for the purpose of getting her consent and sexually exploiting her.
  - Both offences will extract a penalty of up to ten years of imprisonment.

Ans3. D

## Explanation:

The new Post Office Bill (2023) introduced in the Rajya Sabha, is to replace the Indian Post Office Act (1898) in the light of the changing role of post offices where its “network has become a vehicle for delivery of a variety of citizen centric services”.

## Key Highlights

- While the 1898 Act had focused only on mail services, the new Bill authorises the Director General of Postal Services to make regulations related to activities necessary for providing various such other services as the central government may prescribe, and to fix charges of them.
  - This provision is important as parliamentary approval will not be a prerequisite for revision of charges for any service offered by post offices, including traditional mail services.
  - This aspect in the new Bill gives the postal department the requisite flexibility in deciding the prices of its services in a fiercely competitive industry and help in responding quickly to market demands.
- Also, various initiatives of India Post to dispense citizen-centric services will now be based on a strong legal framework.
- The new Bill authorises the central government which “may, by notification, empower any officer to cause any item in course of transmission by the Post Office to be intercepted, opened or detained in the interest of the security of the State, friendly relations with foreign states, public order, emergency, or public safety or upon the occurrence of any contravention of any of the provisions of this Act...”.
  - Even in the existing Act (1898), there was provision for the Postal Department to open and destroy any postal article containing “explosive dangerous, filthy, noxious or deleterious substance” (Section 19, 19A, 23(3)(a) refer).
  - The provision contained in the new Bill is more generic in nature and will arrest possibilities of smuggling and unlawful transmission of drugs and other contraband goods through postal parcels. There is no similar legislation for courier firms.
- India Post has a share of less than 15% of the market in the courier/ express/parcels (CEP) industry, and so the effectiveness of the provision to intercept, open or detain any item in the course of postal transmission on the grounds of national security and public service has its limitations.
- The new Bill provides the central government “standards for addressing on the items, address identifiers and usage of post codes”.
  - This provision will have a far-reaching impact as the physical address may be replaced by a digital code using geo-spatial coordinates to identify a specific premise.
  - Digital addressing, though a futuristic concept, may ease the process of sorting and facilitate accurate delivery of mails and parcels.
  - This provision may even facilitate the delivery of parcels by drone, as is being experimented in some countries. However, there is a long way to go.
- The most important aspect of the Bill is to drop the hitherto existing provision in clause 4 of the 1898 Act: “Central Government shall have the exclusive privilege of conveying by post, from one place to another, all letters ... and shall also have the exclusive privilege of performing all the incidental services of receiving, collecting, sending, despatching and delivering all letters....”.
  - This provision lost its relevance ever since couriers were allowed to operate in India since the 1980s.

- This happened because the definition of ‘letter’ was not spelt out anywhere in the Act or in subsequent Indian Post Office Rules, 1933.
- There is a huge grey area overlapping the concepts of ‘letter’ and ‘document’.
- In the eyes of law, what the couriers hitherto delivered were ‘documents’ and ‘parcels’, not the ‘letters’.
- Once the new Bill becomes an Act, all these legal debates as to what constituted a letter and what did not, will die down automatically.

Ans4. A

### Explanation:

#### Gresham’s Law

Gresham’s law refers to the dictum that “bad money drives out good.”

- Gresham’s law comes into play when the exchange rate between two moneys or currencies is fixed by the government at a certain ratio that is different from the market exchange rate.
- Such price fixing causes the undervalued currency — that is, the currency whose price is fixed at a level below the market rate — to go out of circulation.
- The overvalued currency, on the other hand, remains in circulation but it does not find enough buyers.
- It applies not just to paper currencies but also to commodity currencies and other goods.
- In fact, whenever the price of any commodity — whether it is used as money or not — is fixed arbitrarily such that it becomes undervalued when compared to the market exchange rate, this causes the commodity to disappear from the formal market.
- The only way to get hold of an undervalued commodity in such cases would be through the black market.
- Sometimes, countries can even witness the outflow of certain goods through their borders when they are forcibly undervalued by governments.

Gresham’s law can be seen at play whenever a government fixes the exchange rate (or price) of a commodity money (such as gold and silver coins) far below than the market price of the commodity backing them.

- In such cases, people who hold the commodity money would stop offering the money at the price fixed by the government.
- They may even melt such commodity money to derive pure gold and silver that they can sell at the market price, which is higher than the rate fixed by the government.

Gresham’s law, however, holds true only when the exchange rate between currencies is fixed under law by the government and the law is implemented effectively by authorities.

- In the absence of any government decree fixing the exchange rate between currencies, it is good money that eventually drives bad money out of the market and not the other way round.
- When the exchange rate between currencies is not fixed and people have the choice to freely choose between currencies, people gradually stop using currencies that they consider to be of poor quality and adopt currencies that are found to be of better quality.
- This phenomenon wherein “good money drives out bad” is called **Thiers’ law** (named after French politician Adolphe Thiers) and it is seen as a complement to Gresham’s law.
- The rise of private cryptocurrencies in recent years has been cited by many analysts as an example of good money issued by private money producers driving out bad money issued by governments.

Ans5. B

**Explanation:**

African leaders welcomed the unanimous decision by the G-20 countries to admit the African Union (AU) as its 21st member.

- “Honoured to welcome the African Union as a permanent member of the G-20 Family. This will strengthen the G-20 and also strengthen the voice of the Global South,” Prime Minister Narendra Modi said.
- It is a major step towards increasing the representation of developing countries in the forum.

Ans6. B

**Explanation:**

- The campaign, initiated by the Health Ministry, is aimed at providing a comprehensive nationwide healthcare initiative to saturate coverage of healthcare services, reaching every village and town.
- The Ministry will also launch **Ayushman Apke Dwar 3.0 programme**, which will allow eligible beneficiaries enrolled under the PM-JAY scheme to download their health card on their own.
- “This historic launch of the campaign and the portal marked a significant leap towards achieving **Universal Health Coverage (UHC)** and ensuring healthcare for all as it strives to further consolidate the accessibility and affordability of healthcare services particularly for the underserved,” the President said.
- The **multi-ministerial approach** adopted by the Ayushman Bhav campaign is to achieve the ambitious goal of **delivering healthcare services to the last mile of India**.
- Underscoring the **philosophy of antyodaya**, which means good health for all and leaving no one behind, Ms. Murmu praised the **involvement and support of local governance** in this endeavour and stated that gram panchayats who successfully achieved their goals would be declared as **Ayushman gram panchayats**.
- Highlighting the role of the government and its commitment to achieve the set sustainable development goals in due time, Ms. Murmu also commended the **Seva Pakhwada initiative**, which will run from September 17 to October 2, and which strives to ensure that every individual receives essential health services.
- The President also applauded the goals of Ayushman Bhav to further facilitate access of Ayushman cards, generate ABHA IDs, and raise awareness of health schemes and disease conditions, such as non-communicable diseases, tuberculosis, and sickle cell disease.

### How Does Ayushman Bhava Transform India's Healthcare Landscape?

#### Ayushman Sabhas

- Ayushman Sabha is a community-level assembly, led by the Village Health and Sanitation Committee (VHSNC) in rural areas or the Ward Committee/Municipal Advisory Committee (MAS) in urban wards.
- Its primary mission is to ensure comprehensive health coverage and optimal healthcare service delivery.

#### Ayushman Gram Panchayats

- Gram Panchayats that successfully meet their healthcare objectives will attain the status of Ayushman Gram Panchayats.
- This encourages local participation and dedication.

## Universal Health Coverage (UHC) Goal

- The campaign adopts a collaborative, multi-ministerial approach.
- Ayushman Bhava aligns with the motto of "Sabka Saath Sabka Vikas" (Together with All, Development for All).
- This philosophy underscores inclusivity, leaving no one behind in healthcare access.

## Three Key Components of Ayushman Bhava

- Ayushman - Apke Dwar (AAD) 3.0: AAD 3.0 will enable eligible beneficiaries to create Ayushman cards for himself/herself/any of the family members.
- This streamlines healthcare access and benefits.

## Ayushman Melas at HWCs and CHCs

- Health Melas and Medical Camps are established weekly at Health and Wellness Centres (HWCs) and Community Health Clinics (CHCs).
- They prioritize the delivery of super-specialty healthcare services, including non-communicable disease screenings, tele-consultations, free medicines, and diagnostics.

Ans7. C

### Explanation:

Indian Institute of Science (IISc) scientists have developed a new approach to potentially detect and kill cancer cells, especially those which form a solid tumour mass.

- The scientists have created hybrid nanoparticles made of gold and copper sulphide, which can kill cancer cells using heat, and enable their detection using sound waves.

### Key Highlights

Early detection and treatment are key in the battle against cancer.

- Copper sulphide nanoparticles have previously received attention for their application in cancer diagnosis, while gold nanoparticles, which can be chemically modified to target cancer cells, have shown anticancer effects.
- These particles have photothermal, oxidative stress, and photoacoustic properties.
- When light is shined on these hybrid nanoparticles, they absorb the light and generate heat, which can kill cancer cells.
- These nanoparticles also produce singlet oxygen atoms that are toxic for the cells.
- The researchers said that the nanoparticles can also help diagnose certain cancers.
- Existing methods such as standalone CT and MRI scans require trained radiology professionals to decipher the images.
  - The photoacoustic property of the nanoparticles allows them to absorb light and generate ultrasound waves, which can be used to detect cancer cells with high contrast once the particles reach them.
  - The ultrasound waves generated from the particles allow for a more accurate image resolution as sound waves scatter less when they pass through tissues compared to light.
  - Scans created from the generated ultrasound waves can also provide better clarity and can be used to measure the oxygen saturation in the tumour, boosting their detection.
  - You can integrate this with existing systems of detection or treatment.

- For example, the nanoparticles can be triggered to produce heat by shining a light on them using an endoscope that is typically used for cancer screening.

Ans8. B

**Explanation:**

**World Suicide Prevention Day**

- The day is observed annually to highlight several ways by which suicide can be prevented.
- It was first marked on September 10, 2003, as an initiative by the International Association for Suicide Prevention (IASP) in collaboration with the World Health Organization (WHO).
- IASP and WHO collaborated to create this day to spread an important message that “suicides are preventable”.
- Following the first successful year, WHO formally agreed in 2004 to co-sponsor the event again and made it an annually recognized day.
- In 2011, around 40 countries organised the awareness events to mark this occasion.
- IASP organizes several events or programs across 60 countries to mark this day.

Ans9. D

**Explanation:**

	Limit	Implication of Crossing the limit
<b>Climate Change</b>	CO2 concentration in the atmosphere <350 ppm and/or a maximum change of +1 W m <sup>-2</sup> in radiative forcing	<ul style="list-style-type: none"> <li>• Loss of polar ice sheets. Regional climate disruptions.</li> <li>• Loss of glacial freshwater supplies.</li> <li>• Weakening of carbon sinks.</li> </ul>

Ans10. B

**Explanation:**

Earth is exceeding its “safe operating space for humanity” in six of nine key measurements of its health, and two of the remaining three are headed in the wrong direction, a new study said.

- Earth’s climate, biodiversity, land, freshwater, nutrient pollution and “novel” chemicals (human-made compounds like microplastics and nuclear waste) are all out of whack, a group of international scientists said.
- Only the acidity of the oceans, the health of the air and the ozone layer are within the boundaries considered safe, and both ocean and air pollution are heading in the wrong direction, the study said.

Ans11. D

**Explanation:**

Marking a major revamp of its transport fleet, the Indian Air Force received the first C-295MW transport aircraft from Airbus. The 56 C-295 aircraft will replace the ageing Avro aircraft.

- Under the contract, 16 aircraft will come in fly-away condition from Seville while 40 will be manufactured by Airbus jointly with Tata Advanced Systems Ltd. (TASL).
- Work is under way to set up the final assembly line (FAL) at Vadodara in Gujarat and the first aircraft manufactured in India will be delivered in September 2026.
- Indigenous radar warning receiver and missile approach warning systems made by Bharat Electronics Ltd. (BEL) and counter measure dispensing system made by Bharat Dynamics Ltd. (BDL) have been certified and installed on the first aircraft.

### Significance of Acquisition

The acquisition of the aircraft is significant for two reasons:

- First, it will replace the legacy Avro fleet of the IAF, which was acquired in the 1960s, and thus provide a fillip to the IAF's air transport duties in carrying troops and material to different parts of the country.
  - The IAF also operates the C-130J Super Hercules planes in the medium category and the giant C-17 Globemaster III for medium and heavier loads, which it had acquired from the United States.
- Secondly, the acquisition sets into motion India's first-ever 'Make in India' Aerospace programme in the private sector, under which the aircraft will be manufactured. So far, the state-owned Hindustan Aeronautics Limited (HAL) has had a monopoly over the manufacture of military aircraft in India.
  - This will boost India's aerospace sector with 15,000 high-skilled jobs and 10,000 indirect jobs in the next 10 years.

### Multi-pronged features

- The C-295, with a carrying capacity of nine tonnes, can carry up to 71 troops or 50 paratroopers, air-drop cargo, be used for medical evacuation and take off and land on short and unpaved runways, according to Airbus.
- Adding to its flexibility is the capability of being equipped for the air-to-air refueling of fixed-wing aircraft and helicopters.
- It is a Medium Tactical Transport Aircraft. Beyond its use as a tactical transporter, the C-295 is capable of performing a wide variety of missions effectively. These included parachute and cargo dropping, electronic signals intelligence (ELINT), medical evacuation (MEDEVAC), and maritime patrol.

Ans12. D

### Explanation:

#### How has the IPC dealt with cases of 'false promise to marry'?

Previously, these cases were dealt with through a joint reading of Sections 375 and 90 of the IPC.

- **Section 375**, which defines rape, further defines consent as "an unequivocal voluntary agreement when the woman by words, gestures or any form of verbal or non-verbal communication, communicates a willingness to participate in the specific sexual act."
  - Explanation 2 of Section 375 also lists seven types of consent which would amount to rape if violated; these include if a man has sexual intercourse with a woman "without her consent," or consent taken through fear of death, hurt or intoxication.
  - In 2021, the Supreme Court reiterated that under Section 375, a woman's consent "must involve an active and reasoned deliberation towards the proposed act".

- **Section 90** says consent, given under “fear of injury” or “misconception of fact,” cannot be considered as consent.
  - Cases of false promise to marry are dealt with under the latter, where a ‘misconception’ is used to assess the validity of consent.
- Legal scholars have questioned the use of Section 90 to interpret consent, given that Section 375 already lays out a definition.

Ans13. D

**Explanation:**

- Hindi Day, also known as "Hindi Diwas" in Hindi, is celebrated annually on September 14th in India. This day holds special significance in the country's history as it commemorates the adoption of Hindi as one of India's official languages.
- The Constituent Assembly of India, on September 14, 1949, formally recognized Hindi, written in the Devanagari script, as the official language of India for central government and Union purposes. This decision was enshrined in Article 343 of the Constitution of India.
- Hindi Day is celebrated to honour this pivotal moment in India's linguistic and administrative history. It serves as a reminder of the role Hindi plays in unifying the nation's diverse linguistic and cultural landscape.
- On Hindi Day, various literary and cultural events are organized across the country. These events include poetry recitations, literary discussions, seminars, essay competitions, and cultural performances that showcase the richness of the Hindi language and its contributions to Indian culture.
- Hindi Day is also an opportunity to promote and encourage the use of Hindi in government institutions, education, and everyday life. It emphasizes the importance of preserving and nurturing the Hindi language for future generations.

Ans14. A

**Explanation:**

It should be noted that the market exchange rate is essentially an equilibrium price at which the supply of a currency is equal to the demand for the currency.

- Also, the supply of a currency in the market rises as its price rises and falls as its price falls; while, on the other hand, the demand for a currency falls as its price rises and rises as its price falls.
- So, when the price of a currency is fixed by the government at a level below the market exchange rate, the currency's supply drops while demand for the currency rises.
- Thus a price cap can lead to a currency shortage with demand for the currency outpacing supply.

Ans15. C

**Explanation:**

**African Union (AU)**

- The African Union (AU) stands as an intergovernmental organization comprising 55 member states located on the African continent.
- The headquarters of the AU's secretariat, known as the African Union Commission, is situated in Addis Ababa.



- Its official launch was on July 9, 2002, marking it as the successor to the Organisation of African Unity (OAU), which was initially established in 1963.
  - The AU's precursor, the OAU, was founded with the aim of fostering unity among African nations and addressing common issues through collective action.
  - However, its primary focus lay in supporting the liberation of colonized countries on the African continent.
  - To achieve this goal, the OAU provided diplomatic backing and logistical assistance to liberation movements across Africa.
  - While the OAU played a pivotal role in helping numerous African nations gain independence from their European colonizers, it struggled to promote political and economic integration among its member countries.
  - Consequently, reforms were initiated in the mid-1990s, ultimately leading to the establishment of the AU.

## Objectives of the AU

