DATE: 30.10.2026

1) Consider the following table:

Type of Hydrogen	Source / Primary Production Method
1. Green Hydrogen	Produced via steam methane reforming (SMR) of natural gas with Carbon Capture and Storage (CCS).
2. Pink Hydrogen	Produced via electrolysis of water powered by nuclear energy.
3. Blue Hydrogen	Produced via biomass gasification using agricultural residues and organic waste.
4. Turquoise Hydrogen	Produced via methane pyrolysis, splitting natural gas into hydrogen gas and solid carbon.
5. Grey Hydrogen	Produced via steam methane reforming (SMR) of natural gas without any carbon capture and storage (CCS).

How many of the above pairs are ***incorrectly*** matched? ?
(a) Only two pairs
(b) Only three pairs
(c) Only four pairs
(d) All five pairs

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2) With reference to investments, consider the following:
   1. Bonds
   2. Hedge Funds
   3. Fund of Funds
   4. Venture Capital

How many of the above are treated as Alternative Investment Funds?
(a) Only one
(b) Only two
(c) Only three
(d) All the four

3) With reference to Census 2027, consider the following statements:
   1. It is conducted under the Ministry of Home Affairs.
   2. It uses GPS tagging and Census Management and Monitoring System.
   3. It will include nationwide caste enumeration beyond Scheduled Castes and Scheduled Tribes.

Which of the statements given above are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only

(d) 1, 2 and 3

4) With reference to the collegium system and National Judicial Appointments Commission (NJAC), consider the following statements:
   1. NJAC was introduced through the 99th Constitutional Amendment Act, 2014.
   2. NJAC was intended to replace the collegium system.
   3. The Supreme court collegium consists of the Chief Justice of India and four senior-most judges of the Supreme Court whereas the High Court collegium consists of the Chief Justice of the concerned High Court and its four senior-most judges.
   4. The Supreme Court struck down both the 99th Amendment and the NJAC Act as unconstitutional, restoring the Collegium system.

   How many of the statements given above is/are correct?
   (a) Only one
   (b) Only two
   (c) Only three
   (d) All four

5) With reference to the Index of Services Production (ISP) in India, consider the following statements:
   1. It is a monthly high-frequency volume indicator compiled and released by the National Statistical Office (NSO) under the Ministry of Statistics and Programme Implementation (MoSPI).
   2. It captures the unorganised and informal segments of the service sector through primary sample surveys to complement the formal sector data collected via GST networks.
   3. It acts as a direct replacement for the Index of Industrial Production (IIP), subsuming industrial output to provide a single composite production index for India.

   Which of the statements given above is/are correct?
   (a) 1 only
   (b) 1 and 2 only
   (c) 2 and 3 only
   (d) 1, 2 and 3

Explanation

1) Answer: (A)

- **Pair 1 is incorrectly matched: Green Hydrogen** is produced through the **electrolysis** of water using **renewable energy** sources (such as solar or wind power). The process described—*steam methane reforming (SMR) of natural gas with Carbon Capture and Storage (CCS)*—corresponds to **Blue Hydrogen**.
- **Pair 2 is correctly matched: Pink Hydrogen** is generated through the electrolysis of water powered by electricity from **nuclear energy**.
- **Pair 3 is incorrectly matched: Blue Hydrogen** is produced via steam methane reforming (SMR) of natural gas with **Carbon Capture and Storage (CCS)**. Producing hydrogen from agricultural residues and organic waste through gasification yields **Bio-hydrogen** (or Green/Carbon-Neutral Hydrogen).

- **Pair 4 is correctly matched: Turquoise Hydrogen** is produced via **methane pyrolysis**, which breaks down natural gas (CH_4) into hydrogen gas (H_2) and solid carbon (carbon black), avoiding direct gaseous CO_2 emissions.
- **Pair 5 is correctly matched: Grey Hydrogen** is produced via steam methane reforming (SMR) of natural gas **without capturing or storing the released carbon dioxide (CO_2).**
- **Therefore,Option A is the correct answer.**

2) Answer: (C)

- An Alternative Investment Fund is a privately pooled investment which collects money from investors and invests it in non-traditional asset classes such as Bonds, Stocks, etc.
- AIFs invest in private equity, venture capital, real estate, hedge funds, debt funds, fund of funds, etc.
- **Therefore, option C is the correct answer.**

3) Answer: (D)

- **Statement 1 is Correct:** The decennial Census in India is conducted by the Office of the Registrar General and Census Commissioner of India (ORGI), which operates under the **Ministry of Home Affairs (MHA)**.
- **Statement 2 is Correct:** Census 2027 is India's first fully digital census. It incorporates modern technological tools, including **GPS tagging** / geo-referencing of structures for accurate spatial mapping, as well as the **Census Management and Monitoring System (CMMS)** , a centralized real-time dashboard used to track enumeration progress and field activities across districts.
- **Statement 3 is Correct:** Moving beyond post-independence practice (which only enumerated Scheduled Castes and Scheduled Tribes), Census 2027 incorporates a **nationwide caste enumeration** covering all communities across the country for the first time since 1931.
- **Therefore, option D is the correct answer.**

4) Answer: (C)

- **Statement 1 is CORRECT:** The **99th Constitutional Amendment Act, 2014**, alongside the National Judicial Appointments Commission Act, 2014, was enacted to set up the NJAC to regulate the appointment and transfer of judges to the higher judiciary.
- **Statement 2 is CORRECT:** The NJAC was specifically designed to **replace the judge-led Collegium system** with a more diverse body comprising the Chief Justice of India, senior SC judges, the Union Law Minister, and two eminent persons.
- **Statement 3 is INCORRECT:** While the Supreme Court Collegium consists of the Chief Justice of India and the **four** senior-most judges of the Supreme Court, a High Court Collegium consists of the Chief Justice of the concerned High Court and **two** (not four) senior-most judges of that High Court.
- **Statement 4 is CORRECT:** In October 2015, a 5-judge Constitution Bench of the Supreme Court in the *Fourth Judges Case* (Supreme Court Advocates-on-Record Association v. Union of India) struck down both the 99th Constitutional

Amendment and the NJAC Act as unconstitutional for violating the "basic structure" (specifically, judicial independence), thereby restoring the Collegium system.

- Therefore, **option C** is the correct answer.

5) Answer: (A)

- **Statement 1 is Correct:** The **Index of Services Production (ISP)** is a high-frequency monthly macroeconomic volume indicator developed, compiled, and published by the **National Statistical Office (NSO)** under the **Ministry of Statistics and Programme Implementation (MoSPI)**. Methodologically, it employs a fixed-weight Laspeyres volume index formula using Gross Value Added (GVA)-based weights to measure short-term real output changes in the service economy.
- **Statement 2 is Incorrect:** The ISP is strictly **restricted to the formal/organised services sector**. It explicitly **excludes the informal sector**, unorganised enterprises, personal household services, and non-market government activities due to severe data collection constraints and the lack of real-time high-frequency data for unorganised segments.
- **Statement 3 is Incorrect:** The ISP does **not replace or subsume** the Index of Industrial Production (IIP). Instead, it acts as a **complementary counterpart** to the IIP while the IIP tracks output movements in the secondary sector (Manufacturing, Mining, and Electricity), the ISP measures real volume growth in the tertiary (services) sector to provide comprehensive short-term coverage across India's economy.
- **Therefore, option A is the correct answer.**