Daily Current Affairs Prelims Quiz 10-09-2025 (Online Prelims Test)

1) Which of the following institutes is primarily responsible for astronomical and astrophysical research in India?

a. Indian Space Research Organisation (ISRO)
b. Indian Institute of Astrophysics (IIA)
c. National Physical Laboratory (NPL)
d. Indian Institute of Science (IISc)

Answer : b

Explanation:

- IIA (HQ: Bengaluru) is an autonomous institute under the **Department of Science & Technology**, conducting research in astronomy, astrophysics, and related fields.

Indian Institute of Astrophysics (IIA)

- **Type:** Autonomous research institute.
- **Funding:** Wholly funded by the **Department of Science and Technology (DST), Government of India**.
- **Headquarters: Bengaluru, Karnataka**.
- **Core Research Areas:** Astronomy, Astrophysics, and related fields.
- **Observatory Network:**
  - Kodaikanal Observatory (Tamil Nadu)
  - Vainu Bappu Observatory, Kavalur (Tamil Nadu)
  - Gauribidanur Radio Observatory (Karnataka)
  - Indian Astronomical Observatory, Hanle (Ladakh)
  - Hosakote (Karnataka)

2) Which of the following modes are provided under the Rules for certification of Environment Auditors?

a. Recognition of Prior Learning (RPL) only
b. National Certification Examination (NCE) only
c. Both Recognition of Prior Learning (RPL) and National Certification Examination (NCE)
d. Through State Pollution Control Boards only

Answer : c

Explanation

- The **Rules for Certification of Environment Auditors**, notified by the Ministry of Environment, Forest and Climate Change (MoEFCC), were framed to standardize the process of certifying environmental auditors who assess compliance of industries/projects with environmental regulations.

- Under these Rules, **two primary pathways** have been provided for certification:

1. Recognition of Prior Learning (RPL)

- This mode acknowledges **existing experience and competence** of professionals who are already working in the field of environmental auditing, assessment, or compliance.
- It helps in fast-tracking certification for those with significant **work experience, qualifications, and proven track record**.
- RPL avoids redundancy by not forcing experienced professionals to start from scratch.

2. National Certification Examination (NCE)

- This is an **open exam-based pathway** for fresh candidates who want to become certified environmental auditors.
- The NCE tests candidates' knowledge in environmental laws, compliance monitoring, pollution control technologies, EIA procedures, and auditing methodologies.
- Successful candidates are granted certification after clearing the exam.

3) Consider the following statements regarding the SAAnA Reactor:

1. It is a patented technology developed by IIT Delhi for faster conversion of plastic waste into biofuel.
2. It combines aerobic and anaerobic processes to treat organic waste more efficiently.
3. It reduces treatment time from about 60 days to around 23 days.

Which of the above statements is/are correct?

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

Answer : b

Statement 1: is Incorrect.

"It is a patented technology developed by IIT Delhi for faster conversion of plastic waste into biofuel."

- **Incorrect**
- The **SAAnA Reactor** (Simultaneous Aerobic and Anaerobic Reactor) is **not related to plastic waste or biofuel production**.
- It has been developed by **IIT Delhi** as a **novel patented technology for treating organic waste** (such as food waste, biodegradable municipal waste, etc.).
- Its main aim is **faster composting and biomethanation of organic waste**, not conversion of plastics.
- So, this statement is factually wrong.

Statement 2: is correct

"It combines aerobic and anaerobic processes to treat organic waste more efficiently."

- Traditionally, organic waste is treated either by:
  - **Aerobic process** (composting), or

    - **Anaerobic process** (biogas/biomethane generation).
- The SAAnA reactor **integrates both processes in a single system**.
- This simultaneous operation helps in **faster degradation of organic matter**, higher efficiency, and more resource recovery (both compost + biogas).

Statement 3: correct.

"It reduces treatment time from about 60 days to around 23 days."

- Conventional composting or anaerobic digestion of organic waste usually takes **50–60 days** for complete stabilization.
- SAAnA technology cuts this down drastically to about **23 days**, making it **time-efficient**.
- This is one of its biggest advantages for urban waste management.

4) Which of the following schemes has been converged with Angikaar 2025 Campaign?

a. PM Ujjwala Yojana

b. PM Surya Ghar: Muft Bijli Yojana

c. PM Garib Kalyan Yojana

d. Jal Jeevan Mission

Answer : b

Detailed Explanation

1. **About Angikaar Campaign (2025 Update):**
    - Initially launched in **2019** by the Ministry of Housing and Urban Affairs (MoHUA), Angikaar was meant to support **PMAY (Urban) beneficiaries** by creating awareness on social issues like water conservation, waste management, health, sanitation, and energy efficiency.
    - In **2025**, it has been **revamped as Angikaar 2.0** to not only create awareness but also **converge other flagship schemes** with **PMAY-U 2.0** (Pradhan Mantri Awas Yojana – Urban Phase II).
2. **Convergence with PM Surya Ghar: Muft Bijli Yojana:**
    - Under this integration, **beneficiaries of PMAY-U 2.0 houses** will also be encouraged to adopt **rooftop solar panels** under the **PM Surya Ghar: Muft Bijli Yojana (2024)**.
    - The Surya Ghar Yojana provides households with **up to 300 units of free electricity per month** through rooftop solar installation.
    - By converging with Angikaar, it ensures that **newly built urban affordable housing** is energy-efficient, sustainable, and **reduces electricity bills** for low-income households.

5) Which of the following health issues are mainly linked to airborne pathogens as per recent studies?

1. Respiratory infections
2. Gastro-intestinal tract infections
3. Oral infections
4. Skin infections

Choose correct answer using the codegiven below:

a. 1, 2, 3

b. 2, 3, 4

c. 1, 2, 4

d. 1, 2, 3 and 4

Answer : d

Detailed Explanation

Airborne pathogens are disease-causing microorganisms (bacteria, viruses, fungi) that spread through tiny particles or droplets suspended in the air. Traditionally, they were linked mostly with respiratory diseases. However, **recent research has expanded the scope**, showing their links with other systemic infections as well.

1. Respiratory Infections is Correct

- **Most common and direct link.**
- Airborne pathogens like *Mycobacterium tuberculosis* (TB), influenza virus, SARS-CoV-2, measles virus, etc., spread when an infected person coughs, sneezes, or even talks.
- They enter through nasal passages and lungs, causing diseases such as pneumonia, COVID-19, bronchitis, TB.
- WHO and CDC repeatedly highlight airborne transmission as a primary route for global respiratory disease burden.

2. Gastro-intestinal Tract (GIT) Infections is correct

- Traditionally considered to spread via contaminated food/water (fecal-oral route), but **new studies show aerosolized pathogens can also cause GIT infections.**
- Example:
  - *Norovirus* outbreaks in closed spaces (e.g., cruise ships, schools) have been linked to airborne spread.
  - Some strains of *E. coli* and *Clostridium difficile* spores have been detected in hospital air, showing possibility of inhalation and swallowing, leading to GIT infections.

3. Oral Infections is correct.

- Oral cavity can be a **direct entry site** for airborne microbes.
- Inhaled droplets often settle in mouth and throat → leading to oral mucosal infections or aggravating existing dental issues.
- Example: *Streptococcus mutans* and other bacteria contributing to oral infections can spread via aerosols generated during coughing, sneezing, or even dental procedures.

4. Skin Infections is correct.

- Airborne fungi and bacteria can deposit on skin and cause infection, especially in **immunocompromised individuals.**
- Examples:
  - *Aspergillus* spores (fungal airborne pathogens) can cause skin lesions.
  - *Staphylococcus aureus* and *Streptococcus pyogenes* are known to spread in healthcare settings via air, leading to boils, abscesses, and

wound infections.

- Skin contact after airborne deposition explains their inclusion in new findings.