

## UPSC CURRENT AFFAIRS MCQS 18-01-2024

### 1. Question

#### Consider the following statements about Diodes

1. A diode is an electronic component which has two points of contact called its anode and cathode.
2. A diode's primary purpose is to allow current to flow in only one direction.
3. An LED is a semiconductor device which emits light when electric current flows through it.

#### How many of the statements given above are correct?

- a) Only one
- b) Only two
- c) All three
- d) None of the above

#### Solution (c)

A diode is an electronic component which has two points of contact, or terminals, called its anode and cathode.

#### Advantages of LED

**Energy Efficiency:** It requires far less electricity to produce the same light as incandescent bulbs. LEDs use approximately 75-80% less energy than traditional incandescent bulbs

**Durability:** LED bulbs are highly durable and resistant to shocks, vibrations, and temperature fluctuations.

**Instant Illumination:** It provides instant illumination without the warm-up period required by incandescent bulbs.

**Heat Generation:** LED bulbs generate very little heat, making them safer to handle and more efficient in terms of energy utilization.

**Environmental Impact:** LEDs have a significantly lower environmental impact compared to incandescent. The energy efficiency and longer lifespan result in reduced greenhouse gas emissions and less waste



A diode's primary purpose is to allow current to flow in only one direction.

An LED is a semiconductor device which emits light when electric current flows through it.

It can produce all three primary colours – red, green, and blue – different LEDs can be combined on a display board to produce a large variety of colours. LEDs have several applications in industry, consumer electronics, and household appliances: from smartphones to TV screens, from signboards to 'feeding' plants light in greenhouses, from barcode scanners to monitoring air quality.

Context: Light-emitting diodes (LEDs) succeed the incandescent bulbs and fluorescent lamps of previous centuries as the world's light-source of choice.

## 2. Question

### Consider the following statements about MPLAD Scheme

1. The Scheme is fully funded by the Government of India in which funds are released in the form of grants-in-aid directly to the district authorities.
2. The funds released under the Scheme are lapsable.
3. Nominated Members of the Parliament can recommend works for implementation, anywhere in the country.

**How many of the statements given above are correct?**

- a) Only one
- b) Only two
- c) All three
- d) None of the above

### **Solution (b)**

It was first introduced in 1993.

Initially, the Ministry of Rural Development was the Nodal Ministry for this scheme. In October, 1994 this scheme was transferred to the Ministry of Statistics and Programme Implementation.

The Scheme is fully funded by the Government of India under which funds are released in the form of grants-in-aid directly to the district authorities.

The funds released under the Scheme are non-lapsable, i.e., the entitlement of funds not released in a particular year is carried forward to the subsequent years, subject to eligibility.



At present, the annual entitlement per MP/ constituency is 5 crore rupees.

The role of the Members of Parliament is limited to recommend works. Thereafter, it is the responsibility of the district authority to sanction, execute and complete the works recommended within the stipulated time period.

The elected Lok Sabha Members can recommend works in their respective constituencies.

The elected members of the Rajya Sabha can recommend works anywhere in the state from which they are elected.

Nominated Members of the Parliament can recommend works for implementation, anywhere in the country.

MPLADS works can be implemented in areas affected by natural calamities like floods, cyclone, hailstorm, avalanche, cloudburst, pest attack, landslides, tornado, earthquake, drought, tsunami, fire and biological, chemical, radiological hazards, etc.

In order to accord special attention to the development of areas inhabited by Scheduled Castes (SCs) and Scheduled Tribes (STs), 15 per cent of MPLADS funds are to be utilized for areas inhabited by SC population and 7.5 per cent for areas inhabited by ST population.

Context: Recently, the Minister of State (Independent Charge) of the Ministry of Statistics and Programme Implementation (MoSPI) launched the MPLADS e-SAKSHI Mobile Application.

### 3. Question

**Consider the following statements about Kolam Tribes**

1. They are listed as Particularly Vulnerable Tribal Group (PVTG) in the state of Maharashtra and Andhra Pradesh.
2. Their society is matrilineal, that the line of descent is traced through the females.

**Choose the correct statements:**

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

### **Solution (a)**

Kolam tribes, also known as Kolamboli, Kulme and Kolmi, occupy a major portion of Madhya Pradesh.

The main concentration of this tribe is on the plains and in the mountainous region.

These tribal groups are reckoned as scheduled tribes and apart from Madhya Pradesh they reside in some parts of Maharashtra and Andhra Pradesh.

They are listed as Particularly Vulnerable Tribal Group (PVTG) in the state of Maharashtra and Andhra Pradesh.

### **History:**

Around the twelfth century, **the Kolam served as priests for the Gond**, representing some of their important gods.

It is generally accepted that the Kolam descended from the original population in the area.

Since they now live near the Gond, they have adopted much of the Gond lifestyle.

The Kolam people are divided into different clans, like Chal Deve, Pach Deve, Saha Deve, and Sat Deve.

Marriages between the same clans are not permissible.

The Kolams use the name of their clans as their surnames.

Their society is patrilineal, meaning that the line of descent is traced through the males.

The Kolam are mainly farmers and forest workers. In times past, they used shifting cultivation on the hill slopes. Today, they primarily live as settled farmers and use plow cultivation.

They speak a Dravidian language called Kolami, and nearly all of the adults also speak Marathi, Telugu, or Gondi.

They also speak other languages like Marathi, Telugu or Gondi.

For writing, this Kolma tribal community uses the famous Devnagari script.

Context: The Central government will extend basic facilities to the endangered Kolam tribe under the Jan Jati Adivasi Nyay Maha Abhiyan, with a focus on health and education.

#### 4. Question

**Consider the following statements about Rossby Waves**

1. These waves are a natural phenomenon in rotating fluids such as Earth's ocean and atmosphere, resulting from the planet's rotation.
2. These waves are also associated with the jet stream and pressure systems.

**Choose the correct statements:**

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

**Solution (c)**

Rossby Waves are massive meanders in the atmosphere, also referred to as planetary waves, which significantly impact the weather.

Rossby waves are initial types of oscillations that are seen in rotating fluids in their natural state.

These waves are named after Carl-Gustaf Rossby, who identified them in 1939.

These waves are a natural phenomenon in rotating fluids such as Earth's ocean and atmosphere, resulting from the planet's rotation.

Shear in the spinning fluid causes the Coriolis force to vary along the sheared coordinate, leading to Rossby waves' development.

The Coriolis effect varies with latitude, which causes the Rossby wave to emerge in the planet's atmosphere and oceans.

These waves are also associated with the jet stream and pressure systems.

#### 5. Question

**Defence Technology Council, sometimes seen in the news, is a recommendation of which of the following committee?**

- a) B Neeraja Prabhakar Committee
- b) T K Vishwanathan Committee
- c) Rekhi Committee



d) Vijay Raghavan Committee

**Solution (d)**

Defence Technology Council is a top body chaired by the Prime Minister, with the Defence Minister and the National Security Advisor as its Vice Presidents.

The Defence Technology Council is a proposed top body to have an executive committee chaired by the Chief of Defence Staff.

It will include representation from academia and industry, with two members from each sector.

The committee believes the Defence Technology Council headed by the Prime Minister would play a pivotal role in identifying the right players for specific defence technologies.

The 9 member **Vijay Raghavan** panel was set up by the government last year to review the functioning of the Defence Research and Development Organisation (DRDO) and it has submitted its report recently.

Context: The committee spearheaded by the former principal scientific advisor, Prof K Vijay Raghavan recently submitted the final report on **Defence Technology Council**.