Daily Current Affairs Prelims Quiz 23-07-2021 - (Online Prelims Test)

1) *Bhartiya Prakritik Krishi Padhati (BPKP)* is a sub scheme of which of the following?

a. Paramparagat Krishi Vikas Yojana
b. Pradhan Mantri Kisan Samman Nidhi
c. Pradhan Mantri Bhartiya Janaushadhi Pariyojana
d. Pradhan Mantri Annadata Aay Sanraks Han Abhiyan

Answer : a

- *Government is implementing Bhartiya Prakritik Krishi Padhati (BPKP) as a sub scheme of Paramparagat Krishi Vikas Yojana (PKVY) since 2020-21.*
- It aims for the promotion of traditional indigenous practices.
- The scheme mainly emphasizes on exclusion of all synthetic chemical inputs and promotes on-farm biomass recycling with major stress on:

1. biomass mulching
2. use of cow dung-urine formulations
3. plant-based preparations
4. time to time working of soil for aeration

- Under BPKP, financial assistance of Rs 12200/ha for 3 years is provided for cluster formation, capacity building and continuous handholding by trained personnel, certification and residue analysis.

2) Consider the following statements with respect to *Protection of Plant Varieties and Farmers' Rights Authority (PPVFRA)*

1. It is a statutory body established through an Act of Parliament.
2. It is affiliated with the Ministry of Agriculture and Farmers Welfare.
3. It does not accommodate protection of a pant variety through patenting of a plant or its components or parts.

Which of the statements given above are correct?

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

Answer : a

- *Union Minister of Agriculture and Farmers Welfare Shri Narendra Singh Tomar had recently laid the foundation stone of the Plant Authority building at Pusa, New Delhi.*

Protection of Plant Varieties and Farmers' Rights Authority (PPVFRA)

- It is a statutory body established through Protection of Plant Varieties and Farmers' Rights

Act, 2001.

- To implement the provisions of the Act the Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture and Farmers Welfare established the Protection of Plant Varieties and Farmers' Rights Authority in 2005.
- The Plant Authority protects the rights of farmers.
- With this, the farmers can get rights over their traditional varieties and the seeds of any other variety produced by them.
- It also ensures that the farmers are not exploited by infringement of intellectual property rights.

3) Researchers at IIT Madras have recently developed an AI tool called *NB Driver (Neighbourhood Driver)* for use in the analysis of?

a. Public Driverless Cars

b. Cancer causing Mutations

c. Usage of forged documents

d. Inflation and Unemployment

Answer : b

- *Researchers at IIT Madras have recently developed an AI tool called NB Driver (neighbourhood driver) for use in analysing cancer-causing mutations in cells.*
- By looking at the neighbourhood, or context, of a mutation in the genome, it can look at harmful “driver” mutations and distinguish them from neutral “passenger” mutations.
- This technique of looking at the genomic neighbourhood to make out the nature of the mutation is a novel and largely unexplored one.
- The major challenge faced by cancer researchers involves the differentiation between driver and Passenger mutations.

Driver & Passenger Mutations

- Driver mutations are relatively in smaller number than passenger mutations.
- Driver Mutations enable the cancer cells to grow but Passenger Mutations does not have any effect on the progression of the disease.
- This AI tool explains that the nature of mutation depends on the neighbourhood and there is a line between driver and passenger mutations.

4) Consider the following statements with respect to *Chrysilla Volupe Spiders*

1. It is a rare jumping spider believed to be exists only in the North Eastern parts of India.
2. It is an extinct species in India and was first discovered in Pariej Lake in Gujarat in 1868.

Which of the statement(s) given above is/are correct?

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : d

- *A pair of Chrysilla volupe spiders, a rare species, was recently spotted at Puttenahalli lake, Karnataka.*
- The Chrysilla volupe was believed to be extinct for 150 years, until it was discovered at the Wayanad Wildlife Sanctuary (WWS) in 2018.
- A species that is not seen for more than 100 years is considered extinct.

Description

- The spider belongs to the family of jumping spiders (Salticidae) and scientifically named Chrysilla volupe.
- There are iridescent bluish scales present in the top of head region of female and orange bands on both sides of the head.
- Dorsal surface of abdomen is shiny bluish black.
- There are black annulations on the yellowish legs.
- Eight black eyes are arranged in the front and sides of head region.
- Compared to the female, the male is lean.
- There are two transverse bands in the dorsal side of orange coloured head region.
- Abdomen is interspersed by orange and blue colours.
- Legs are characterized by glossy blue appearance.
- This spider makes retreats in between green leafs of small plants and female usually lays five to six eggs.

5) *Assertion (A):* Mercury has a big-sized core relative to its mantle.
Reason (R): Hit-and-run collisions with other bodies during the formation of our solar system resulted in much of Mercury's rocky mantle being removed.
Select the correct answer using the codes given below:

a. Both A and R are true and R is the correct explanation of A

b. Both A and R are true but R is not the correct explanation of A

c. A is true but R is false

d. R is true but A is false

Answer : c

- *A study by researchers from the University of Maryland disputes the prevailing hypothesis on why Mercury has a big-sized core relative to its mantle (the layer between its core and crust).*
- Scientists had argued that hit-and-run collisions with other bodies during the formation of our solar system resulted in much of Mercury's rocky mantle being removed, leaving behind the big, dense, metal core inside.
- But new research reveals that the Sun's magnetism is the reason for this and not the collisions.
- The researchers developed a model showing that the density, mass and iron content of a rocky planet's core is influenced by its distance from the Sun's magnetic field.
- There is a gradient in which the metal content in the core drops off as the four inner planets of our solar system get further from the Sun.
- The current work explains this by showing that the distribution of raw materials in the early forming solar system was controlled by the Sun's magnetic field.
- The new model shows that during the early formation of our solar system, when the young Sun was surrounded by a swirling cloud of dust and gas, grains of iron were drawn toward the centre by the Sun's magnetic field.
- When the planets began to form from clumps of that dust and gas, planets closer to the sun incorporated more iron into their cores than those further away.