



## Daily Current Affairs Prelims Quiz 02-09-2024 & 01-09-2024 (Online Prelims Test)

1) Drp1, sometimes seen in the news recently, is associated with?

- Nearest nebula to the Milky Way galaxy.
- A newly-developed needle-free Covid vaccine by Indian Immunologicals Ltd (IIL).
- A key protein that controls mitochondrial dynamics.
- An indigenously developed Automatic Train Protection (ATP) system.

Answer : c

### Drp1

- Drp1 or dynamin-related protein 1, is a key protein that controls mitochondrial dynamics.
- It is **naturally abundant in cells** and plays a *crucial role in the division of mitochondria* into smaller sizes.
- When Drp1 activity is **excessive**, it can *lead to fragmented mitochondria with impaired function*.
- This fragmentation can contribute to neuronal dysfunction and cell death, which are hallmarks of neurodegenerative diseases like Parkinson's.
- Imbalances in mitochondrial dynamics have been linked to neurodegenerative diseases like Parkinson's.
- Parkinson's disease is a neurodegenerative disorder that affects about 1 million Americans and more than 10 million people worldwide.
- It is the result of dying brain cells that control movement.
- Certain disease-related factors disrupt the harmony of mitochondrial fusion and division.
- To know more about Parkinson Disease [click here](#) .

2) Consider the following statements with respect to Hydrogels

1. Any polymer that readily absorbs water is a hydrogel.
2. They are three-dimensional networks composed of hydrophobic polymers synthesized by crosslinking water-soluble polymers.

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

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer : c

### Hydrogels

- Hydrogels are materials that can absorb and retain large amounts of water.

- They are three-dimensional networks composed of hydrophobic polymers synthesized by crosslinking water-soluble polymers.
- They can retain a large quantity of water within their network **without disturbing their original structure**.
- This imparts **flexibility and swelling properties** to the hydrogel structures.
- **Common examples of hydrogels include:**
- **Ointments and lotions** - These are used to moisturize the skin.
- **Contact lenses** - These are made from soft hydrogels that are comfortable to wear.
- **Diapers** - These absorb urine and contain superabsorbent hydrogels.
- **Medical dressings** - These can be used to absorb wounds and promote healing.

3) Consider the following statements:

1. The Indian wolf is a subspecies of Grey wolf and hunt during the night.
2. Indian wolf is protected under schedule I of the Wildlife Protection Act, 1972.
3. Arabian wolf does not have sweat glands.

How many of the statements given above are correct?

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

Answer : c

## Indian Wolf

- The Indian wolf (*Canis lupus pallipes*) is a subspecies of Grey wolf.
- They are also relatively less vocal and have rarely been known to howl.
- Indian wolves are territorial and *hunt during the night*.
- One wolf usually is acting as a decoy while the other attacks from behind.
- **Range** - Found in India, Pakistan, Afghanistan, Nepal, Bhutan, Israel, Turkey, Iran, and Syria.
- **Population** - There are approximately 400-1,100 wolves living in the Himalayan Region and 4,000-6,000 wolves in the Peninsular Region.
- Wolves in the Himalayan Region prefer colder, steeper habitats while those in the Peninsular Region are mostly found in agro-pastoral areas that have less forest density (approximately 280,400km<sup>2</sup>).
- Indian wolves are carnivores and prey mainly on antelopes, rodents, hares, and raccoons.
- Indian wolves are **monogamous** and mate for life.
- The gestation period usually lasts around 62-75 days.
- Indian wolf is **protected under Schedule I** of the Wildlife Protection Act of 1972.
- It is listed as **endangered** under the International Union for Conservation of Nature (IUCN) Red List.
- **Main threats** to Indian wolves include habitat loss, unregulated hunting, and loss of prey.

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## Arabian wolf

- The Arabian wolf (*Canis lupus arabs*) is a subspecies of grey wolf native to the Arabian Peninsula, the Negev Desert, the Sinai Peninsula and Jordan.
- It is omnivorous, eating small to medium-sized prey.
- Similar to other canines, the **Arabian wolf does not have sweat glands** and so it must

control its body temperature by rapid panting, which causes evaporation from the lungs.

- They do not usually live in large packs, and instead hunt in pairs or in groups of about three or four animals.
- Along with the Indian wolf, it is probably smaller than other wolves to help it adapt to life in a hot and dry climate.
- **Range** – Egypt, Iraq, Israel, Jordan, Oman, Palestine, Saudi Arabia, Syria, United Arab Emirates, Yemen.

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4) Consider the following statements with respect to the Copyright Act, 1957

1. Artistic work under the act includes a painting, a sculpture, a drawing, an engraving or a photograph that must possess artistic quality.
2. 'Nationalisation' of copyrights allows anyone to freely copy, modify, distribute and use the works, even for commercial purposes without needing permission.
3. Upon the death of the author, the ownership of the copyright falls to her legal heirs.

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

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

Answer : a



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### Copyright Act, 1957

*The Tamil Nadu government has recently decided to nationalise Karunanidhi's works under the Copyright Act, 1957.*

- Under the Copyright Act, 1957, an author has exclusive rights over their work, including the right to reproduce, distribute, perform, and adapt their work.
- These **rights last for 60 years** after the author's death.
- **Artistic work under the act include:**
  - A painting, a sculpture, a drawing (including a diagram, map, chart or plan), an engraving or a photograph and **it is not necessary possess any such work possesses artistic quality.**
  - Work of architecture and
  - Any other work of artistic craftsmanship.
- After the author's death, the **copyright ownership transfers to their legal heirs.**
- The heirs can then decide how the work is used, including assigning the copyright to others.
- The Tamil Nadu government has a scheme through the Tamil Virtual Academy to collaborate with legal heirs and have them assign the copyrights of specific works to the state government.
- This "nationalisation" of copyrights means the works will be released into the public domain under a Creative Commons CC0 license.
- **Nationalisation allows anyone to freely copy, modify, distribute and use the works, even for commercial purposes, without needing permission.**
- The Tamil Nadu government has already nationalised the works of 179 Tamil scholars this way, **paying royalties** to the heirs.
- This is similar to how the Maharashtra government has made the works of Dr. B.R. Ambedkar

freely available in the public domain.

- The goal is to make these important literary and intellectual works freely accessible to the public, rather than restricted by private copyright ownership.
- This expands public access and use of these culturally significant works.

5) Consider the following statements:

**Statement-I:** Polymer Fume Fever is caused by inhaling toxic fumes released from overheated Teflon-coated cookware.

**Statement-II:** Polymer Fume Fever can also be prevented by using wooden or silicon ladles to stop the coating from wearing off the coating.

Select the correct answer using the codes given below:

- a. Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- b. Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
- c. Statement-I is correct but Statement-II is incorrect
- d. Statement-I is incorrect but Statement-II is correct

Answer : a

## Polymer Fume Fever

*In the recent times, the Teflon flu is on the rise in the United States.*

- Polymer Fume Fever is also called as Teflon flu which is caused by the by inhaling toxic fumes released from overheated Teflon-coated cookware.
- **Teflon** - Is a synthetic chemical that contains carbon and fluorine called polytetrafluoroethylene.
- It provides a nonreactive, non-stick and frictionless surface.
- The non-stick surface makes cooking convenient for people.
- Teflon cookware can release huge toxic fumes and harmful chemicals into food when cooked at a high temperature.
- **Symptoms** - Include chills, cough, chest tightness, difficulty breathing, headache, dizziness, fatigue, malaise, nausea, vomiting, and muscle and joint aches.
- **Impacts** - The flu can also affect the patient's taste buds and cause bad or unpleasant taste.
- **Alternate options** - Like mud pots can also be used.
- Indian Council of Medical Research in their "Dietary Guidelines for Indians", called mud pots as one of the "safest" cookware.
- **Diagnosis** - Is typically based on symptom history and assessment of whether the patient had used Teflon-coated cookware at high temperatures.
- Most cases are mild and self-limiting, but people with chronic lung conditions should be careful.