

25 Apr 2021: UPSC Exam Comprehensive News Analysis

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A. GS 1 Related

Nothing here for today!!!

B. GS 2 Related

Category: INTERNATIONAL RELATIONS

1. ASEAN leaders urge junta to end killings

Context:

- **Emergency leaders summit** between the leaders of the Association of Southeast Asian Nations (ASEAN) grouping and the Myanmar coup leader Min Aung Hlaing, in the Indonesian capital city of Jakarta.

Background:

Violence in Myanmar:

- **Daily shootings by police** and soldiers since the February 1 coup have killed more than 700 mostly peaceful protesters and bystanders, according to several estimates.
- **Aung San Suu Kyi and many other political leaders have been detained.**
- Amnesty International has urged ASEAN states to investigate Min Aung Hlaing over “credible allegations of responsibility for crimes against humanity in Myanmar.”

Details:

- Expressing deep concerns over the violence in Myanmar, Southeast Asian leaders demanded an **immediate end to killings and the release of political detainees in Myanmar.**
- They also called for a dialogue between contending parties in Myanmar, with the aid of the bloc’s envoys. ASEAN has urged the **pursuance of dialogue, reconciliation and the return to normalcy** in accordance with the will and interests of the people of Myanmar.

Unusually blunt stance by ASEAN:

- The messages conveyed by the group was unusually blunt and could be seen as a breach of the **ASEAN’s bedrock principle of non-interference in each other’s domestic affairs.**
- The grouping is known to adopt a **non-confrontational approach** to any issue and employs **consensus based decision making.**

Reasons for the unusual stance:

- The ASEAN leaders have argued that the policy of non-interference should not lead to inaction given that the domestic **situation in Myanmar could jeopardize the peace, security, and stability of ASEAN and the region.**

- There is international **clamour for resolute action against Myanmar**
- There is a tremendous expectation on the part of the international community on how ASEAN is addressing the Myanmar issue.

C. GS 3 Related

Category: ENVIRONMENT AND ECOLOGY

1. Groundwater depletion may reduce winter cropping intensity by 20% in India

Context:

- New study into the problems being faced by **wheat farmers in India** with respect to productivity and sustainability.

Background:

Rabi season in India:

- The **Indian cropping season** is classified into two main seasons-**Kharif and Rabi**.
- Rabi crops are also known as winter crops. **The Rabi crops are sown in late October or early November and harvested in spring.**

Important crops:

- Some of the important winter crops are **wheat, barley, mustard, peas and gram** with wheat being the most important crop of Rabi season.
- **India is the second-largest producer of wheat in the world**, with over 30 million hectares in the country dedicated to producing wheat in India.

Irrigation:

- **Rabi crops require frequent irrigation** because these are grown in dry areas.
- India's three main irrigation types on winter cropped areas include **dug wells, tube wells and canals.**

Concerns:

Sustainability issues with respect to cropping pattern:

- In the green revolution era, policy-supported environment led to a **large increase in rice cultivation in north western India mainly in Punjab and Haryana** which are **ecologically less suitable for rice cultivation** due to predominantly light soils.
- This policy-supported intensive agriculture led to **unsustainable groundwater use** for irrigation and in turn groundwater scarcity.
- There was also **post-harvest residue burning** to make way for the timely sowing of wheat. This has resulted in high levels of air pollution in NCT and adjoining areas which has cropped up as a major health challenge to India.

Water scarcity and impact on agricultural sector:

- The study found that 13% of the villages in which farmers plant a winter crop are located in **critically water-depleted regions**.
- The study notes that these villages may lose 68% of their cropped area in future if access to all groundwater irrigation is lost. The results suggest that these losses will largely occur in **northwest and central India**.
- The study notes that with severe groundwater depletion, **the cropping intensity or the amount of land planted in the winter season may decrease by up to 20% by 2025**.
 - Groundwater depletion has already **reduced yields** and cropped areas in India over the last 20 years.

Unviability of alternative sources:

- The study into using canals as an alternative irrigation source and as an adaptation strategy to falling groundwater tables noted that **switching to canal irrigation has limited adaptation potential at the national scale**.

Possible impact of climate change:

- Climate change is likely to further adversely affect the future availability of groundwater resources given the **dependence of India on Monsoons** for its water resources.

Way forward:

Adaptation strategy:

- The farmers will have to adopt new or additional adaptation strategies like the following:
 - Adoption of **water-saving technologies** like sprinkler, drip irrigation
 - Switching to **less water-intensive crops** to ensure more effective use of the limited groundwater resources. Example- Shifting from crops like Rice and Wheat to crops like millets
 - Growing crops suited to the local resource base and environment.

Promoting agriculture in eastern India:

- There are enough groundwater resources supported with higher monsoon rainfall in eastern Indian states like Bihar. But due to lack of enough irrigation infrastructure, farmers are not able to make use of natural resources there.
- **Better policies in eastern India to expand the irrigation** will not only help provide an impetus to agricultural activity and agriculture productivity in this region but will also release some pressure from north-western Indian states.

Category: DISASTER MANAGEMENT

1. 384 rescued, 10 bodies recovered after avalanche in Uttarakhand

Context:

- Avalanche in Uttarakhand.

Background:

Avalanche:

- An avalanche is a **rapid flow of snow down a slope**, such as a hill or mountain.
- Primarily composed of flowing snow and air, large avalanches have the capability to capture and move ice, rocks, and trees.
- Avalanches can be set off spontaneously, by such factors as **increased precipitation or snowpack weakening**, or by external means such as humans, animals, and earthquakes.

Details:

- Notably, the Joshimath–Malari–Girithidobla–Sumna–Rimkhim axis area had experienced **heavy rain and snow** since the last five days, which is still continuing. This seems to have resulted in the avalanche.
- The avalanche hit a Border Roads Organisation (BRO) detachment and labour camps north of Joshimath.
- Ten bodies were recovered and 384 people rescued in the ongoing search and rescue operations. Eight persons are still unaccounted for.

Category: **ECONOMY**

1. RBI to issue cybersecurity norms for payment services

Context:

- The Reserve Bank of India (RBI) will soon issue **cybersecurity norms for payment service providers (PSPs)**.

Background:

Increasing traction of digital payment system:

- As digitisation increases in any sphere, payments or otherwise, people would be involved in more and more digital transactions.
- Digital transactions are bound to gain further traction over the coming years.

Cyber security concerns:

- There have been a **series of data breaches** faced by operators including **Mobikwik** and **payment aggregator JusPay**.

Governmental efforts:

- Given the increasing risk posed by cyber frauds, **Reserve Bank of India has issued very recently basic guidelines on cyber hygiene and cybersecurity for banks and certain NBFCs**.

Details:

- The RBI would soon also be issuing cybersecurity norms for payment service providers (PSPs).

- While the standards for fintech-driven payment services providers will be similar to cyber hygiene norms issued recently for banks and non-banking finance companies, the RBI is quite clear that firms will have to do more than observe the minimum standards to ensure safety with respect to digital transactions.

Other concern in payment services segment:

Concentration of segment share:

- Experts have also raised concerns about the **domination of two or three players in the fintech-backed retail payments space**.
 - Two apps provide about 70% of third-party services in the UPI system.
- The concentration of two or three third-party providers in this retail payments space could **give rise to competitive weaknesses**.

Counterview:

- Given the fact that the two or big tech companies in the segment are not payment system providers as such, but act as just the front-end of the system and just on board customers and **have no control on the entire UPI itself**, in that sense, there is **not so much a concern on antitrust or monopolistic tendencies**.
- Given the rising popularity of UPI, the government will have to think twice about stepping in and **controlling the market share** of two or three popular apps because that **could actually hurt absorption of this tech in the population**.

Conclusion:

- Over the next decade, the critical challenge for regulators would be to **speed up the absorption of fintech without undermining the financial system's integrity or stability** by addressing the issue of cyber security and monopolistic tendencies.

Category: SCIENCE AND TECHNOLOGY

1. A space for science, experiments and unity

Context:

- Russian space agency Roscosmos's chief has declared that **Russia is ready to build its own space station and launch it by 2030**.
- Further, Russian Deputy Prime minister has also said that **Russia would leave the International Space Station (ISS) by 2025**.

International Space Station (ISS):

International collaboration:

- The International Space Station (ISS) is a landmark of international cooperation in the realm of space

- For over 20 years, it has seen intense collaboration between the **NASA (U.S.), Roscosmos (Russia), ESA (Europe), JAXA (Japan) and CSA (Canada)**, and has played host to people from 19 countries since its launch in 1998.
- Ever since November 2, 2000, the ISS has seen the steady presence of human beings.

Features:

- The ISS, at a **height of about 402 km above the Earth, orbits it 16 times every day, once every 90 minutes**. It has a speed of 28,000 km per hour.

Scientific studies:

- The space station will permit quantum leaps in human **research in science, communications, and in metals and lifesaving medicines** which could be manufactured only in space.
- The following studies have been undertaken so far.

Biological:

- The first experiments on the ISS studied the **dynamics of cells under microgravity**.
- Some of the experiments being conducted by the latest expeditions include a **study of how muscles work under long-term stay under low-gravity conditions**. This experiment observes biochemical properties of muscles under long-term exposure to spaceflight. This can help in developing rehabilitation both on Earth and in Space.

Material:

- An important experiment mimics the way geckos attach themselves to surfaces, using an **adhesive** that has been shown to work in space. This can help devise methods for robots to attach themselves to surfaces and then to detach just the way geckos do.

Physics experiments:

- Some of the early physical sciences experiments related to **crystal growth**.
- Current studies involve research into **Janus particles, or particles that have two 'faces' with distinct properties** — one side is hydrophobic, while the other is hydrophilic. Studying these in microgravity reveals the **fundamental physics behind microparticle self-assembly** and the kinds of colloidal structures that can be fabricated.

D. GS 4 Related

Nothing here for today!!!

E. Editorials

Category: ECONOMY

1. Reforms in the National Pension System

Context:

- Changes proposed by the Pension Fund Regulatory and Development Authority (PFRDA) to the **National Pension System (NPS)**.

Background:

National Pension System:

- The National Pension System (NPS) is a **pension and investment scheme** developed by the Government of India to provide citizens of India with long-term financial security. It offers a long-term saving option for appropriately planning one's retirement through **market-linked returns**.
- The National Pension System (NPS) started out as the **New Pension Scheme for government employees in 2004** under a new regulator called the **Pension Fund Regulatory and Development Authority (PFRDA)**. It has since been opened for individuals from all walks of life to participate.
- The **NPS has been growing in size** and now manages ₹5.78 lakh crore of savings and 4.24 crore accounts in multiple savings schemes.
 - It includes over 3.02 crore accounts as **part of the Atal Pension Yojana (APY)**, a government-backed scheme for workers in the **unorganised sector** that assures a fixed pension payout after retirement.
 - The rest of the corpus constitutes voluntary savings from private sector employees and self-employed individuals.

Changes being proposed to the NPS:

Entry and exit age limit to be modified:

- Individuals between the age group of 18 and 65 can currently enter the NPS. The regulator is planning to hike the limit to 70 years. The proposed exit age of 70 years may be increased to 75 years.
- With the **longevity increasing**, it makes sense to hike the maximum entry and exit age to 70 years and 75 years, respectively.

PFRDA planning to issue minimum assured return:

- While different schemes under the **NPS have given reasonable returns at a low fund-management cost** so far, there has been a clamour for a **guaranteed return product** for large sections of potential investors with a high aversion to risk.
- To lure more subscribers, the PFRDA is working on strategies to launch new retirement benefit options, such as one that has a minimum assured return.
- The moment pension fund managers start giving guarantee on products, it could help **popularize pension schemes**.

Exit option to be hiked:

- **NPS contributors can withdraw 60% of their contribution after retirement, while the remaining 40% must be maintained to purchase annuity.**
- Those who accumulate only up to Rs 2 lakh by the time they reach retirement age, on the other hand, are entitled to withdraw the entire amount.

- The PFRDA is planning to hike the limit to Rs 5 lakh.
- The reason for this change is that if a subscriber has a corpus of Rs 2 lakh or less at the time of retirement, the amount provided as a monthly pension is very low.

Payout options to be flexible:

- Currently subscribers must deposit 40% of their NPS deposits with one of the 12 insurance companies that the NPS has partnered with. The regulator is planning to introduce more flexibility in this regard.
 - **Annuity rates have dropped to ranges between 5% and 6%.** Since annuities are taxable, when one factor in **taxes and inflation**, the investors will end up with a **poor return, in some cases even yielding negative returns to the investors.**
- The regulator has now proposed to give members a choice to retain 40% of their corpus with the NPS fund managers even after retirement. This, the PFRDA chief believes, will allow them to get better returns, and these savings can be paid out to members over 15 years through something like the systematic withdrawal plan offered by mutual funds.
- Separately, the regulator has decided that the annuity purchase stipulation for 40% of members' retirement corpus should be dropped altogether.

Conclusion:

- The changes proposed by the pension regulator would to **make the National Pension Scheme more appealing and help broaden its scope across India.**

Category: HEALTH

1. Chances of infection after COVID-19 vaccination

Context:

- The **Indian Council of Medical Research (ICMR)** has reported that around two to four of 10,000 people given two doses of the COVID-19 vaccine have tested positive for the disease.
 - According to available data, of the 1.7 million people who got a second dose of Covaxin (and thus fully inoculated), 695 tested positive — a rate of 0.04%. Of the 15.7 million who got a second dose of Covishield, 5,014 tested positive, a rate of 0.03%.

Details:

Breakthrough infection:

- These are **infections that occur in people who have been vaccinated.**
- Such cases are not out of the ordinary as the **vaccines that have been approved so far the world over are made to protect against disease and not the transmission of the virus.**

Reasons for breakthrough infections:

- Healthcare and frontline workers were getting infected because of their **constant high exposure to COVID-19 patients.**

- The other reason could be the **highly transmissible new variants**.
 - Studies on the AstraZeneca vaccine show that its efficacy is reduced when faced with the U.K. and the South African variant.

Conclusion:

- Though breakthrough infection has occurred in “a very small number” of people, it does not undermine the effectiveness of vaccination. Vaccination does help protect against disease.
- While **vaccines protect against death and disease, they may not be 100% protective**.

F. Prelims Facts

1. Making oxygen

Context:

- **NASA has extracted oxygen from the carbon dioxide present in the thin Martian atmosphere.**
- The Martian atmosphere is about 95% carbon dioxide

Details:

- The unprecedented extraction of oxygen on Mars, marking the first extraction of a natural resource from the environment of another planet, was achieved by a device called **MOXIE aboard Perseverance rover of NASA**.
- **MOXIE is short for Mars Oxygen In-Situ Resource Utilization Experiment.**
- The device extracted carbon dioxide from the atmosphere on Mars and then **electrochemically split oxygen atoms from carbon dioxide molecules**. The conversion process requires high levels of heat to reach **a temperature of approximately 1,470 degrees Fahrenheit (800 Celsius)**.
- The device was able to produce about 5 grams of oxygen, equivalent to roughly 10 minutes' worth of breathing for an astronaut.

Significance:

- This breakthrough could allow for **longer human stays on future manned missions to mars**.
- It would also enable the space agencies to design **lighter launch vehicles with lower payload capacities** given that future missions could prepare the required oxygen for the return journey in situ on mars.

2. Mini black hole

- Scientists have discovered what may be the **smallest-known black hole in the Milky Way galaxy** and the closest to our solar system.
- Nicknamed '**Unicorn**' the black hole is roughly **three times the mass of the Sun**.
- A luminous red giant star orbits with the black hole in a so-called **binary star system named V723 Mon**.

3. China eyes asteroid defence

- China is considering building a defence system against near-earth asteroids, as part of its efforts towards realising its longer term space ambitions.
- **China** signed a memorandum of understanding in March 2021 with **Russia** to set up an **international lunar research station**.

AIDA:

- The European space agency has signed a deal with NASA for a joint project looking at how to deflect an asteroid heading for earth.
- This combined endeavour is known as the **Asteroid Impact Deflection Assessment, or AIDA** for short. Its purpose is to deflect the orbit of the smaller body of the **double Didymos asteroids between Earth and Mars** through an impact by one spacecraft. Then a second spacecraft will survey the crash site and gather the maximum possible data on the effect of this collision.
 - NASA's contribution to AIDA, the **Double Asteroid Impact Test, or DART spacecraft**, is already under construction for launch in summer 2021, to collide with its target at 6.6 km/s in September 2022. Flying along with DART will be an Italian-made miniature CubeSat called LICIAcube (Light Italian CubeSat for Imaging of Asteroids) to record the moment of impact.
 - Then will come ESA's part of AIDA, a **mission called Hera which will perform a close-up survey of the post-impact asteroid**, acquiring measurements such as the asteroid's mass and detailed crater shape. Hera will also deploy a pair of CubeSats for close-up asteroid surveys and the very first radar probe of an asteroid.

G. Tidbits

1. Justice N.V. Ramana is CJI

- Justice N.V. Ramana was sworn in as the 48th **Chief Justice of India (CJI)** by President Ram Nath Kovind.
- Chief Justice Ramana, in his recent speeches, has focussed on three aspects: **ensuring equal access to justice, upholding of civil liberties against human rights violations by the State** and the setting up of a **National Judicial Infrastructure Corporation** to bring the much-needed "uniformity and standardisation" into the court infrastructure.

2. Jagan presents National Panchayat Awards

Context:

- Andhra Pradesh Chief Minister Y.S. Jagan Mohan Reddy presented the recently held **National Panchayat Awards-2021**.

Details:

- The National Panchayat Awards are conferred by the Union Ministry of Panchayat Raj on the occasion of the National Panchayat Raj Day, 2021.
- **April 24 has been recognised as National Panchayati Raj Day**. The annual celebration is done to commemorate the day on which the 73rd Constitutional Amendment was passed in 1992. The act

came into effect on April 24, 1993. Former Prime Minister Manmohan Singh had declared the first National Panchayati Raj Day on 24 April in the year 2010.

- National Panchayati Raj Day is celebrated to mark the inception of **decentralised power in Indian administration**.

H. UPSC Prelims Practice Questions

Q1. Which of the following is/are In situ bioremediation techniques?

1. Bioventing
2. Biopiles
3. Biosparging
4. Bioreactors
5. Bioaugmentation

Options:

- a. 1, 2, 3 and 4 only
- b. 1, 3 and 5 only
- c. 2, 3 and 4 only
- d. 3, 4 and 5 only

Answer: b

Explanation:

- Biopiles and Bioreactors represent ex situ bioremediation techniques

Q2. With reference to Detritus Food Chain (DFC), which of the following statements is/are correct?

1. It is made up of decomposers which are heterotrophic organisms, mainly fungi and bacteria.
2. In a terrestrial ecosystem, a much larger fraction of energy flows through the detritus food chain than through the Grazing Food Chain (GFC)

Options:

- a. 1 only
- b. 2 only
- c. Both
- d. None

Answer: c

Explanation:

- Detritus food chain is the type of food chain that starts with dead organic materials. The dead organic substances are decomposed by microorganisms. The organisms that feed on dead organic matter or detritus, are known as detritivores or decomposers. These detritivores are later eaten by predators. In the detritus food chain, the excreted products by one organism is utilized by another organism.
- The detritus food chain helps in solving inorganic nutrients.
- Compared to other kinds of food chains, the detritus food chain has much larger energy flow in a terrestrial ecosystem.

Q3. Consider the following statements with respect to Eutrophication:

1. As the lake's fertility increases, plant and animal life burgeons
2. As silt and organic debris pile up, there is reduction in lake's temperature

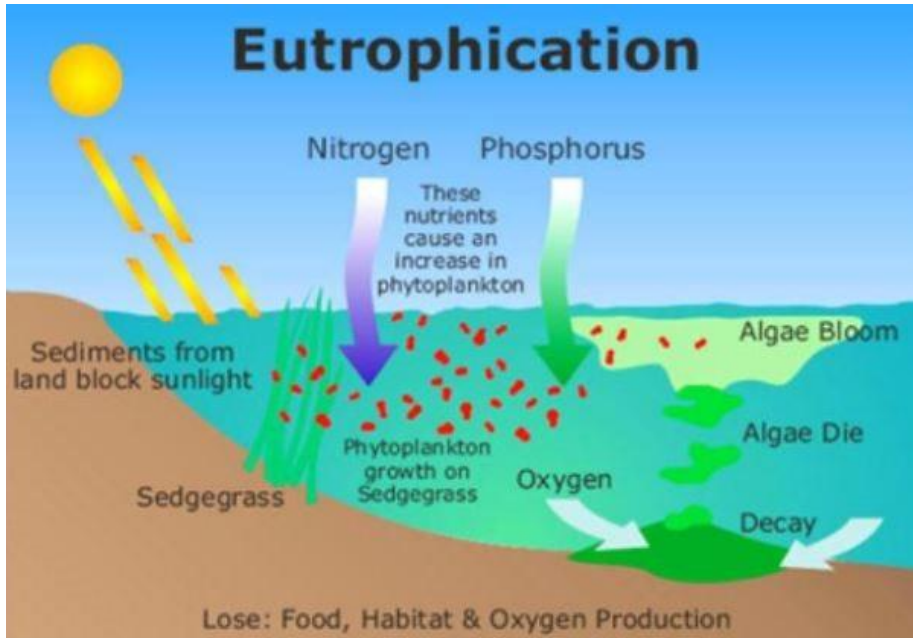
Which of the above statements is/are correct?

- a. 1 only
- b. 2 only
- c. Both
- d. None

Answer: a

Explanation:

- Eutrophication is the process in which a water body becomes overly enriched with nutrients, leading to plentiful growth of simple plant life. The excessive growth (or bloom) of algae and plankton in a water body are indicators of this process.
- As silt and organic debris pile up, there is increased warming observed in the lake.
- As silt and organic debris pile up, the lake grows shallower and warmer, with warm-water organisms supplanting those that thrive in a cold environment



Q4. 'Evil Quartet' is related to

- a. Ozone layer depletion
- b. Industrial revolution and its impact on environment
- c. Loss of biodiversity
- d. Oil exploration risks for the marine life

Answer: c

Explanation:

The four major causes of loss of biodiversity are

- Habitat Loss and Fragmentation
- Over Exploitation
- Alien species invasions
- Co-extinctions

Q5. With reference to Ecological Succession, which of the following statements is/are correct?

1. Primary succession is faster than secondary succession.
2. At any time during primary or secondary succession, a particular seral stage of succession cannot be converted to an earlier stage.
3. Lichens, fungus are examples of Pioneer species

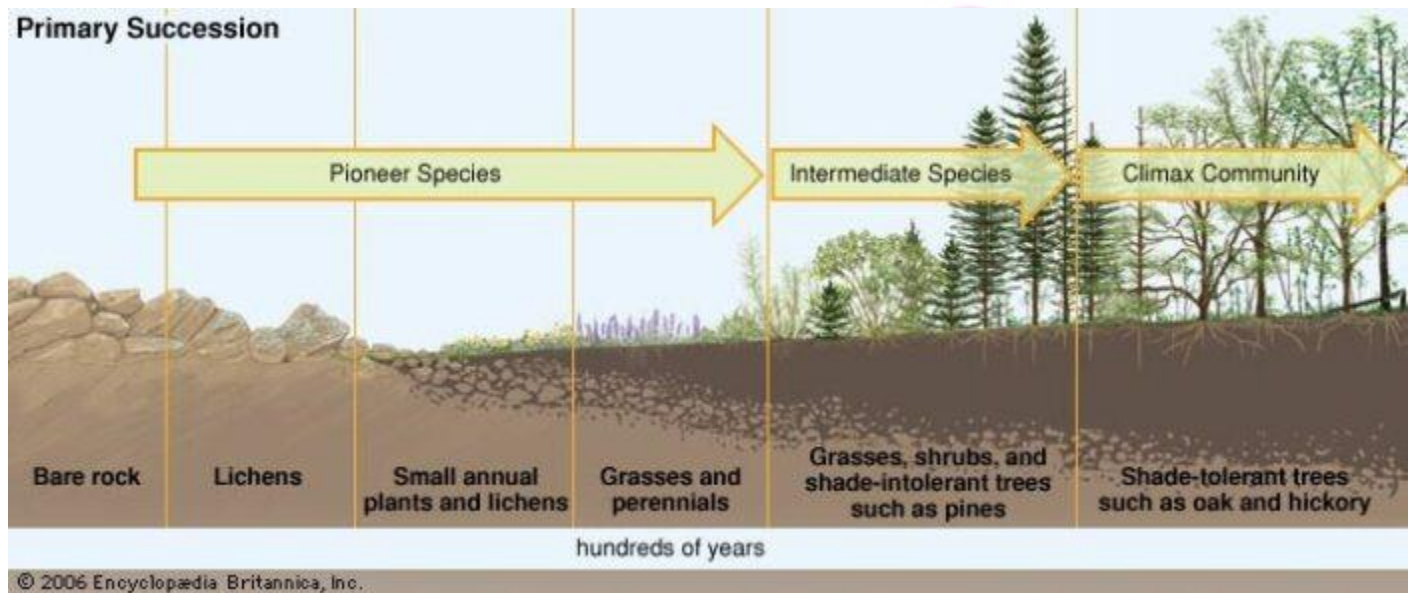
Options:

- a. 1 and 2 only
- b. 3 only
- c. 2 and 3 only
- d. None

Answer: b

Explanation:

- Secondary succession is faster than primary succession.
- A particular seral stage of succession can be converted to an earlier stage, either naturally or by human intervention.



Q6. Which of the following statements is/are correct?

1. National parks are given a greater degree of protection, with human activity greatly restricted as compared to wildlife sanctuaries
2. National Park can be created for a particular species, whereas the Wildlife sanctuary is not primarily focused on a particular species

Options:

- a. 1 only
- b. 2 only
- c. Both
- d. None

Answer: a

Explanation:

- Wildlife Sanctuaries can be created for a particular species, whereas the National Parks are not primarily focused on a particular species

Q7. Special Report on the Ocean and Cryosphere in a Changing Climate is released by

- a. World Economic Forum (WEF)
- b. Climate Action Network (CAN)
- c. Germanwatch
- d. Intergovernmental Panel on Climate Change (IPCC)

Answer: d

Explanation:

- The United Nations' Intergovernmental Panel on Climate Change's Special Report on the Ocean and Cryosphere in a Changing Climate was approved at the IPCC's 51st Session in September 2019 in Monaco.
- This report assessed the latest scientific knowledge about the physical science basis and impacts of climate change on ocean, coastal, polar and mountain ecosystems, and the human communities that depend on them. It also evaluated their vulnerabilities and adaptation capacity and determined that the ocean and cryosphere play a critical role in sustaining life.
- In particular, it shows that the ocean has taken up more than 90% of the heat generated by greenhouse gas emissions and is reducing warming on land. Ocean warming, together with ocean acidification (from carbon dioxide uptake), loss of oxygen, and changes in nutrient supplies is affecting the distribution and abundance of marine life in coastal areas, including in the open ocean and at the seafloor.
- Glaciers and ice sheets all around the world are losing mass at an increasing rate.
- This shows that climate change is rapidly changing these two systems which has larger implications for humanity if remains unchecked.

Q8. Consider the following pairs:

Disease

1. Itai-itai
2. Minamata
3. Pneumoconiosis

Pollutant

- cadmium
Mercury
Coal

Which of the above pairs is/are correctly matched?

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

Answer: d

Explanation:

Self-Explanatory

Q9. Which of the following statements is/are correct?

1. Grasslands rarely receive enough rain to support trees. They do not possess soil nutrients to feed large, grassy expanses.
2. Taiga is a region of subarctic forest south of the Arctic Circle.
3. Tundra is the treeless environment of the Arctic Circle.

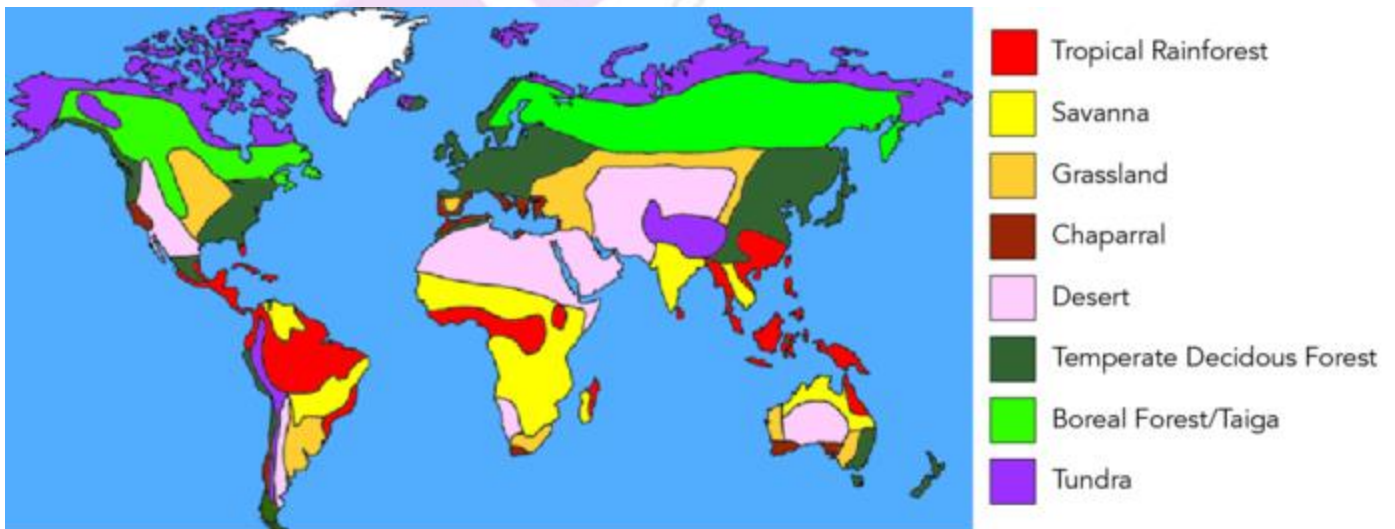
Options:

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

Answer: b

Explanation:

- Grasslands rarely receive enough rain to support trees, however they do possess enough soil nutrients to feed large, grassy expanses.



Q10. Which of the following can be found as pollutants in the drinking water in some parts of India? (2013)

1. Arsenic
2. Sorbitol
3. Fluoride
4. Formaldehyde
5. Uranium

Select the correct answer using the codes given below.

- a. 1 and 3 only
- b. 2, 4 and 5 only
- c. 1, 3 and 5 only
- d. 1, 2, 3, 4 and 5

Answer: c

Explanation:

- Sorbitol tends to be commonly found in fruits like apples, apricots, avocado, blackberries, cherries, lychee, nectarines, peaches, pears, plums, and prunes. Sorbitol is also manufactured and used as an artificial sweetener. Consuming sorbitol or other sugar alcohols in large amounts can cause bloating and diarrhea in some people, especially if you're not used to regularly consuming them.
- Formaldehyde is a simple chemical compound made of hydrogen, oxygen and carbon. All life forms – bacteria, plants, fish, animals and humans – naturally produce formaldehyde as part of cell metabolism. Formaldehyde is formed primarily by the combustion of organic materials and several natural and anthropogenic actions. Secondary formation of formaldehyde happens in the atmosphere through oxidation of natural and anthropogenic volatile organic compounds. Formaldehyde's production and use in the manufacture of resins, preservatives, disinfectants, and a variety of other chemicals may cause its release into the environment through various waste streams.

I. UPSC Mains Practice Questions

1. What do you understand by 'breakthrough infection'? Will vaccines offer lasting protection against Covid-19? Critically Evaluate. (15 Marks, 250 Words)[GS-2,Health]
2. Discuss the causes of Groundwater depletion and its Socio-economic and Ecological Consequences. Suggest measures to conserve Groundwater. (10 Marks, 150 Words)[GS-3,Environment and Ecology]