

28 Feb 2021: UPSC Exam Comprehensive News Analysis

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Category: ECONOMY

1. 'Govt. vendors may use only parts, inputs from China'

Context:

The government has placed curbs on the procurement of finished goods from China by firms supplying goods and services under the public procurement system, while allowing the use of Chinese raw material or components without prior permission.

Background:

- In July 2020, the government had altered its public procurement norms.
- It ensured that contractors executing works and turnkey projects do not sub-contract any work to players from 'a country sharing a land border with India' unless the proposed sub-contractor was registered with the Indian government.

Details:

- A registration committee had been set up by the Department for Promotion of Investment and Internal Trade under the Commerce and Industry Ministry to deal with such proposals.
- A bidder is permitted to procure raw material, components, sub-assemblies, etc. from the vendors from such countries which shares a land border. This would not constitute sub-contracting.
- But, vendors proposing to source finished goods from Chinese suppliers will need to seek registration with the committee.

Significance:

- The development assumes significance at a time the government is considering rebooting approvals for China-related investment proposals following the disengagement at the Indo-Chinese border after an extended period of tension.

2. 'TRIPS waiver for vaccines key to growth'

Context:

India and South Africa have jointly moved a proposal at the WTO's Trade Related Intellectual Property Rights (TRIPS) council for a waiver to help more countries get access to medicines and vaccines during the pandemic.

Details:

- While 57 WTO members have backed the proposal, the EU, U.S., Japan and Canada have opposed the idea stressing the importance of intellectual property for innovation.
- India's ambassador to the World Trade Organisation (WTO) raised concerns that failing to approve the COVID-19 waiver for equitable access to medicines under the TRIPS Agreement could dent

global economic output by trillions of dollars at the cost of protecting vaccine makers' business worth just \$30-40 billion.

- He cautioned that if TRIPS waiver is not delivered, it would come in the way of global growth and livelihoods.
- India's WTO representative also pitched for greater market access for agriculture, arguing that developing countries have reduced their tariffs but still face barriers to trade from countries that continue to give high subsidies to large farmers.

Trade Related Intellectual Property Rights (TRIPS):

- Property Rights of the WTO is commonly known as the TRIPS Agreement.
- This Agreement was negotiated as part of the eighth round of multilateral trade negotiations in the period 1986-94 under General Agreement on Tariffs and Trade (GATT) commonly referred to as the Uruguay Round extending from 1986 to 1994.
- TRIPS deal with 8 kinds of property rights – Patents, Trademarks, trade dress, Copyrights, Industrial Designs, Plant Varieties, Integrated Circuits and layouts, and Geographical Indication.
- It sets down minimum standards for the regulation by national governments of many forms of intellectual property as applied to the nationals of other WTO member nations

Category: SCIENCE AND TECHNOLOGY

1. IISER Kolkata scientists simulate Mars on the computer, suggest how it lost its atmosphere

Context:

Scientists from Indian Institution for Science Education and Research (IISER) Kolkata have simulated Mars on the computer to study how it lost its atmosphere.

Study of Exoplanets:

- Exoplanets are studied to gauge whether they possess conditions that will favour the presence and sustainability of life.
- In this quest, an important part is looking at the solar system to gain insights – hence the many missions to Mars and Venus probing for signs of past life.
- One thing that astronomers search for in exoplanets, in the so-called Goldilocks zone of habitability, is the existence of liquid water and an atmosphere like that on Earth.
 - In this context it is believed by many that Mars once had such an atmosphere.

Study:

- In the simulation, the researchers built a computer model of a Mars-like planet interacting with the plasma wind from a Sun-like star.
- The physics is described by Maxwell's equations. It describes electro-magnetic fields and their interactions with matter in the presence of plasma.
- They studied two scenarios.

- In the first one, the planet has a magnetic dynamo and an intrinsic magnetosphere surrounding it.
- In the second scenario, they modelled the same system but with no intrinsic magnetic field.

Inference:

- From the study, the scientists infer that when Mars had an intrinsic magnetosphere, it enveloped the planet and shielded its atmosphere from the stripping effect of the solar wind.
- When the planet lost its intrinsic magnetosphere, only the imposed one due to the pileup of the solar wind remained.
- This imposed magnetosphere was made of the Sun's magnetic fields which slips past Mars when the solar wind flows past it after impacting the day side.
- So, there is a continuous slippage of magnetised plasma from the day-side to the night-side of Mars which also strips away the atmosphere of Mars slowly.

How did Mars lose its atmosphere?

- While the mechanism as to why Mars lost its atmosphere has remained in doubt, scientists from IISER Kolkata suggest that it was the planet's intrinsic magnetic dynamo which, by shielding its atmosphere from the sun's solar wind, protected its atmosphere.
- When the magnetic dynamo switched off, the atmosphere slowly was eroded by the solar wind and eventually vanished, leaving the thin remnant as seen today.

2. Nanosheets help in the detection of uric acid in urine, alcohol in breath

Context:

Applications of nanosheets in mass spectrometry.

Mass Spectrometry:

- Mass spectrometry (MS) is an analytical technique that is used to measure the mass-to-charge ratio of ions.
- The results are typically presented as a mass spectrum, a plot of intensity as a function of the mass-to-charge ratio.
- It is an important tool and has helped win several Nobel Prizes.
- It provides valuable information about the composition and structure of molecules.
- It finds applications in drug testing to carbon dating.
- Using mass spectrometry, researchers can ionise or break down the compound into simple ions and then identify the molecules based on their masses.

Recent development:

- The current process of ionisation requires electrical potential of a few kilo volts, heat or high energy ultraviolet lasers (UV-lasers).
- But recently, researchers have developed a new method of soft ionisation using nanosheets.

- This eliminates the need for external energy sources completely.

Details:

- The team used a simple filter paper as a support material and coated this with 2D molybdenum disulphide (MoS₂).
 - Sheets of carbon is pulled out and graphene is created.
 - Similarly, this molybdenum disulphide was created as a thin sheet and spread on a paper.
 - This modified paper produces an electric current when liquids flow over it.
- The team observed that a flow of pure methanol over the nanosheet generates a record-high current of 1.3 microampere.
- By simply flowing raw urine (about 5 microlitre) over the nanostructured surface and measuring the corresponding current, the team detected the uric acid in the urine of a healthy individual.
- They also demonstrated that the device can be used as a self-energised disposable sensor for breath alcohol detection.

Other applications:

- The device can find many more applications: check glucose in blood, toxic chemicals in any liquid, pesticide or any contaminants in drinking water.

Significance:

- It can even detect very low levels.
- The current wet chemical or reagent-based methods are lengthy and require skilled labour.
- It is cost-effective, and that is needed is simple paper coated with nanostructures.
- By just flowing the liquid and studying the spectrum, molecular detection has now been made simple and easy.

Category: ENVIRONMENT AND ECOLOGY

1. Footfall in the flurry: tracking the elusive snow leopard in Himachal

Context:

A study by wildlife officials and Nature Conservation Foundation reports that the Himachal's hilly terrain is home to as many as 73 snow leopards.

Details:

- The first-ever such study on snow leopards was completed in January 2021 by the Himachal Pradesh Wildlife Department and the Mysore-based Nature Conservation Foundation (NCF).
- The entire snow leopard habitat of the State [of Himachal Pradesh] was first stratified into three categories — high, low or unknown snow leopard occurrence, based on questionnaire surveys of local communities residing in these areas.
- Camera trap surveys were then carried out in areas under each of the categories.

Key observations:

- In Himachal Pradesh, the snow leopard's habitat covers a greater part of the districts of Lahaul-Spiti and Kinnaur.
- Its potential habitat also extends into the upper regions of the districts of Shimla, Kullu, Chamba and Kangra.
- The population of the primary wild ungulate prey of snow leopards, blue sheep and ibex for the entire snow leopard habitat was assessed by using the double observer survey technique.
- It was found that the snow leopard density was positively correlated with the wild prey density, indicating that higher wild prey densities corresponded to higher snow leopard densities.

Snow Leopard Enumeration Project:

- The wildlife wing of the Himachal Pradesh Forest Department commenced the snow leopard enumeration project in 2018.
- This was carried out with techniques aligned to the protocols prescribed by the Union Ministry of Environment, Forest and Climate Change under the Snow Leopard Population Assessment in India (SPAI).

Conservation:

- India has been conserving snow leopard and its habitat through the Project Snow Leopard (PSL).
- Project Snow Leopard (PSL) was launched in 2009 to promote an inclusive and participatory approach to conserve snow leopards and their habitat.
- For Snow Leopard conservation, India has identified three large landscapes, namely, Hemis-Spiti across Ladakh and Himachal Pradesh; Nanda Devi – Gangotri in Uttarakhand; and Khangchendzonga – Tawang across Sikkim and Arunachal Pradesh.

Read more about [Snow Leopards](#)

D. GS 4 Related

Nothing here for today!!!

E. Editorials

Category: POLITY AND GOVERNANCE

1. New rules for social media, OTT platforms

Context:

The government has notified guidelines: The Information Technology (Guidelines for Intermediaries and Digital Media Ethics Code) Rules, 2021, that seek to provide a grievance redressal mechanism for users of digital platforms of all kinds — social media sites, messaging apps, over-the-top (OTT) streaming services, and digital news publishers.

Details:

- The Information Technology (Guidelines for Intermediaries and Digital Media Ethics Code) Rules, 2021 also mandate that social media and messaging platforms will have to adhere to new requirements in assisting investigative agencies of the government.
- The Electronics and Information Technology Minister called it a soft-touch oversight mechanism to deal with issues such as the persistent spread of fake news and other misinformation.

Broadly, what do the new rules require digital platforms to do?

- The broad themes of the guidelines revolve around grievance redressal, compliance with the law, and adherence to the media code.
- Social media platforms will have to appoint a grievance officer to deal with users' complaints.
- The platforms whose registered users in India are above the threshold notified by the government must appoint a 'Chief Compliance Officer', who will have to ensure that the rules are followed.
 - The officer shall be liable in any proceedings relating to any relevant third-party information, data or communication link made available or hosted by that intermediary.
 - The intermediaries will also have to appoint a nodal contact person for 24x7 coordination with law enforcement agencies.
- A social media intermediary would have to enable the identification of the first originator of the information on its computer resource as may be required by a judicial order.
- For digital publishers of news and current affairs as well as video streaming services, an identical three-tier structure for grievance redressal has been mandated.
 - This structure will look into grievances in relation to a Code of Ethics, which is listed in the appendix to the rules.
 - Among other things, the Code of Ethics includes the 'Norms of Journalistic Conduct' as prescribed by the Press Council of India, as also content that shall not be published and the Programme Code under the Cable Television Networks (Regulation) Act, 1995.
 - The guidelines also require streaming services to classify content based on its nature and type.

What is the context in which these rules have been framed?

- Questions about how social media platforms can be made accountable for the spread of fake news and pornographic content have been raised in Parliament and by the Supreme Court in recent years.
- The question of stricter regulation of digital media came up in 2020 when the Supreme Court was hearing a case involving Sudarshan TV. In the course, it asked the government for suggestions to improve the self-regulatory mechanism for electronic media.
- Recently, there has also been a face-off between the government and Twitter over its non-compliance with the government order to block several hashtags and handles of journalists, activists and politicians in the backdrop of the ongoing farmers' protests.

What has changed from earlier?

- The scope of regulation of the digital space has been expanded.
- The new guidelines replace the Information Technology (Intermediaries Guidelines) Rules, 2011.

- They also regulate digital news publishers and streaming services, which was not the case earlier.
- Under Section 79 of the Information Technology Act, the intermediaries are not liable for user-generated content, provided they adhere to the rules — “an intermediary shall not be liable for any third-party information, data, or communication link made available or hosted by him,” it states. These rules have been tightened now.

Criticisms:

- For digital news media, these guidelines will subject it to governmental regulation in a way.
- The three-tier structure of regulation will entail oversight by a government committee at the highest level.
- Any grievance that does not get satisfactorily solved at the self-regulatory levels will get escalated to the government panel.
- The Internet Freedom Foundation (IFF), a digital liberties organisation, refers to this as “excessive governmental control over digital news and OTT content”.
- The other rule that has been criticised by the IFF is the requirement of traceability of the originator of a problematic message.
- The rules have also been criticised for increasing the potential for censorship and surveillance.

Category: INTERNATIONAL RELATIONS

1. The ‘imperfect’ fight against proliferation

The Biden administration’s attempts to revive the Iran deal have turned the spotlight on the United Nations’ nuclear watchdog – International Atomic Energy Agency (IAEA).

International Atomic Energy Agency (IAEA):

- IAEA was set up as an autonomous organisation on July 29, 1957, at the height of the Cold War.
- Though established independently of the UN through its own international treaty, the Agency reports to both the UN General Assembly and the Security Council
- As the preeminent nuclear watchdog under the UN, the IAEA is entrusted with the task of upholding the principles of the Nuclear Non-Proliferation Treaty of 1970.
- IAEA claims that it “works with its member states and multiple partners worldwide to promote the safe, secure and peaceful use of nuclear technologies”.

Details:

- IAEA played a key role in enforcing the Joint Comprehensive Plan of Action from which Donald Trump withdrew the U.S. in 2018.
- The 2015 Joint Comprehensive Plan of Action (JCPOA), or the Iran nuclear deal, proved that the IAEA can emerge beyond its mandate of being a monitoring and inspection agency and, in fact, play a key role in finding solutions to tense international crises.

Civil nuclear solution:

- Apart from dealing with the sovereign states and their pursuit of civil and military nuclear programmes, the IAEA is also active in championing civil nuclear solution.
- It is active in a number of areas like health – one of the main areas of peaceful application of nuclear know how.
- It is also active in dealing with climate change, pandemic containment and in prevention of Zoonotic diseases.

Recent Development:

- Recently, the IAEA and Iranian diplomats struck a temporary deal to continue inspection of Iran's nuclear plants for three more months.
- This keeps the diplomatic path to revive the deal open.

Issue:

- However, there have always been questions about the Agency's ability to work independently, without being drawn into big power rivalries.
- The IAEA has some secrecy around its functions and is accused of not being transparent about its actions .
- What the IAEA missed in terms of real authority over sovereign states, it compensated for it through the actions of its leadership that kept the issue of non-proliferation on the multilateral table.
- While it played a key role in providing platform for holding frank discussion about civil nuclear requirement for several countries, it proved to be ineffective to prevent power politics from influencing nuclear negotiations.
 - Pakistan pursued a nuclear weapons programme in the 1980s and despite overwhelming evidence in possession of the American authorities, they did not pursue the case effectively through the IAEA because of the cooperation between the U.S. and Pakistan on the Afghan front.
- The IAEA's lack of enforcement capability was hinted by El Baradei who had observed that IAEA had uneven authority as it does not have any power to override the sovereign rights of any member nation of the UN.
- The uneven authority produced results when in the case of Iran when the Agency's efforts were backed by big powers. The same, is not true for North Korea.
 - The IAEA was the first to announce that the North Korean nuclear programme was not peaceful.
 - North Korea finally expelled IAEA observers and as a result, there are no on-the-ground international inspectors in North Korea.
 - The world is reliant on ground sensors and satellite imageries to observe North Korea's nuclear actions.
- Major criticism of the IAEA is that it never challenges the nuclear dominance of the five permanent members of the UNSC, who themselves hold some of the biggest nuclear arsenals of the world.

Iran challenge:

- The days to come will test the ability of the IAEA to deal with powerful states from its position of uneven authority.
- Tying all the loose ends of difficult negotiation with respect to the Iran Nuclear deal will be the biggest challenge for all parties.

F. Prelims Facts

1. Genetic Lego

What's in News?

According to a study, similar to Lego blocks, genetic elements can be rearranged or shuffled to form new genes.

- Researchers found that the so-called “jumping genes” or “transposons” were added to the genetic mix during evolution.
- Transposons in the genetic mix rustled up new genes through a process called exon shuffling which generates new genes.

G. Tidbits

1. New light on rise of mammals

What's in News?

Scientists have documented the earliest-known fossil evidence of primates.

Details:

- Several fossils of Purgatorius – the oldest genus in a group of the earliest-known primates called plesiadapiforms, were analysed.
 - These ancient mammals were small-bodied and ate specialised diets of insects and fruits that varied by species.
- The scientists also analysed fossilised teeth found in the Hell Creek area in the U.S.
- Based on the age of the fossils, the scientists said the ancestor of all primates, including the plesiadapiforms and modern day primates such as lemurs, monkeys and apes, likely lived alongside large dinosaurs.

Significance:

- It sheds light on how life on land recovered after the extinction event 66 million years ago that wiped out the dinosaurs and led to the rise of mammals.
- The discovery represents the oldest dated occurrence of archaic primates in the fossil record.
- It adds to the understanding of how the earliest primates separated themselves from their competitors following the demise of the dinosaurs.

H. UPSC Prelims Practice Questions

Q1. Consider the following statements:

1. Channapatna toys are made of ivory wood and are coloured with vegetable dyes.
2. Channapatna toys have been given the Geographical Indication Tag under the World Trade Organization.
3. Channapatna is known as the Toy-City of Andhra Pradesh.

Which of the given statement/s is/are INCORRECT?

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

Answer: d

Explanation:

- Channapattana is a city and taluk headquarter in Ramanagara District in Karnataka.
- It is noted for its famous handmade lacquer wooden toys all over the world and hence popularly known as “Gombegala Ooru” or the “Toy-City” of Karnataka
- Channapatna toys are made of ivory wood and are coloured with vegetable dyes.
- Channapatna toys have been given the Geographical Indication Tag under the World Trade Organization.

Q2. Under which of the following categories is the Snow Leopard listed in the IUCN Red List?

- a. Near Threatened
- b. Vulnerable
- c. Endangered
- d. Critically Endangered

Answer: b

Explanation:

According to the latest assessment, Snow Leopard is listed as Vulnerable in the IUCN Red List.

Q3. Consider the following statements:

1. National Bamboo Mission is a Centrally Sponsored Scheme.
2. It is a sub-scheme under the Mission for Integrated Development of Horticulture (MIDH).
3. The bamboo grown outside forest areas has been excluded from the definition of tree.

Which of the given statement/s is/are correct?

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

Answer: c

Explanation:

- National Bamboo Mission is a Centrally Sponsored Scheme.
- It is a sub-scheme under the Mission for Integrated Development of Horticulture (MIDH).
- The bamboo grown outside forest areas has been excluded from the definition of tree by amending Section 2 (7) of the Indian Forest Act, 1927 in 2017. This would help in exempting it from trees that need permits for felling or transportation.

Q4. Consider the following statements:

- 1. Earth is in the Sun's Goldilocks zone.
- 2. Goldilocks Zone refers to a habitable zone around a star, where it is not too hot and not too cold for liquid water to exist on the surface of surrounding planets.

Which of the given statement/s is/are incorrect?

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

Answer: d

Explanation:

Both the statements are correct.

I. UPSC Mains Practice Questions

- 1. Critically evaluate the Information Technology (Guidelines for Intermediaries and Digital Media Ethics Code) Rules, 2021 unveiled by the government.(15 Marks, 250 Words)[GS-2,Polity and Governance]
- 2. Analyse the role of International Atomic Energy Agency (IAEA) in enhancing nuclear accountability of the world. What are the related concerns? (15 Marks, 250 Words)[GS-2,International Relations]