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GS 2: POLITY, GOVERNANCE, SOCIAL JUSTICE, INTERNATIONAL RELATIONS/INSTITUTIONS

1. HMPV infection not new, no cause for alarm: Centre

Context: The Human Metapneumovirus (HMPV) has been in circulation globally, even in India, the Health Ministry said on Monday, while stating that none of those infected in India have any travel history and all are recovering well. The clarification came after the infection was confirmed in two infants in Karnataka and one in Gujarat. Health experts have clarified that the HMPV is not a new virus. It was first identified in 2001, and it has been circulating in the world for many years. Agencies in India are closely watching the situation in China and neighbouring countries and the World Health Organization had taken cognisance of the situation.

Key points

- **Overview:** China is undergoing an upsurge in respiratory diseases, with human metapneumovirus (HMPV) emerging as a key concern.
- **Human Metapneumovirus:** It is a respiratory virus that causes mild infections similar to that caused by a common cold. It can cause both upper and lower respiratory tract infections and is generally seen in winter and early spring.

Signs and symptoms - Symptoms can resemble those caused by a common cold. They include a cough, runny or blocked nose, sore, throat, fever and wheezing. The estimated incubation period is three to six days.

Transmission - It spreads through contact with an infected person or touching objects that have the virus on them.

Treatment - There is no vaccine and there is no specific antiviral to treat HMPV. Most people require over-the-counter medications to relieve fever and pain, possibly with a decongestant. Antibiotics will not work for HMPV.
- **Current Scenario in India:** As of January 6, 2025, India has reported three confirmed cases of Human Metapneumovirus (HMPV); two in Karnataka and one in Gujarat. These cases were identified through routine surveillance by the Indian Council of Medical Research (ICMR). Despite these detections, the Union Health Ministry has stated that there is no unusual surge in Influenza-Like Illness (ILI) or Severe Acute Respiratory Illness (SARI) cases nationwide.
- **HMPV Virus Outbreak:** *In China* - Recently, a surge in HMPV cases was reported in China, with hospitals witnessing an increase in respiratory illnesses caused by the virus.

In India - Three confirmed cases of Human Metapneumovirus (HMPV) have been reported in India.

Global Concerns - HMPV outbreaks often occur in late winter and spring, posing a threat to healthcare systems, especially during pandemics like COVID-19.
- **Preventive Measures:** *Hygiene Practices* - Wash hands frequently with soap and water. Use alcohol-based hand sanitizers.

Respiratory Etiquette - Cover your mouth and nose while coughing or sneezing.

Isolation - Avoid close contact with infected individuals.

Surface Cleaning - Disinfect commonly touched surfaces like doorknobs and toys.

Protect Vulnerable Groups - Vaccinate against other respiratory illnesses to reduce overall risk.

Q. In the context of vaccines manufactured to prevent COVID-19 pandemic, consider the following statements:

1. The Serum Institute of India produced COVID-19 vaccine named Covishield using mRNA platform.
2. Sputnik V vaccine is manufactured using a vector-based platform.
3. COVAXIN is an inactivated pathogen-based vaccine.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

GS 2: POLITY, GOVERNANCE, SOCIAL JUSTICE, INTERNATIONAL RELATIONS/INSTITUTIONS

2. Enhancing governance, the digital way

Context: In recent years, India has embarked on an ambitious journey toward digital governance — a transformation designed not only to improve citizen services but also to bolster the capabilities of government employees. This effort underscores a critical truth: the efficiency of public service delivery is inextricably linked to the skills and competencies of the workforce behind it. At its core, governance is a complex web of decision-making processes that involves stakeholders, from government bodies and non-governmental organisations to local community leaders and influential citizens.

E-governance

- **Overview:** E-Governance is an implementation of delivering government services, exchanging information, communicating transactions, integrating various stand-alone systems between government to citizen (G2C), government-to-business (G2B), government-to-government (G2G), Government-to-employees (G2E) as well as back-office processes and interconnection within the entire government framework.
- **Kinds of interactions in e-governance:** The 4 kinds of interactions in E-governance are-
 - *G2C (Government to Citizens)* - It is the interaction between the government and the citizens. G2C entitles citizens to benefit from the systemic delivery of a large range of public services.
 - *G2B (Government to Business)* - The primary objective of G2B is to cut strict regulations which will save time and reduce operational costs creating a more transparent business environment when dealing with the government.
 - *G2G (Government to Government)* - Government to Government interaction can be between various departments and agencies within government or between two governmental organisations like the union and state governments or between state governments.
 - *G2E (Government to Employees)* - Government to Employees interaction is between the government and its employees. ICT (Information and Communications Technology) tools help in making these interactions fast and efficient and thus increasing the satisfaction levels of employees.
- **Advantages of e-Governance:** It improves the delivery and efficiency of government services. It improves government interactions with business and industry. Citizen empowerment through access to information. More efficient government management.
- **E-Governance Initiatives:** The government set up NISG (National Institute for Smart Government). The state governments launched e-Governance projects like e-Seva, Bhoomi, and so on.
- **National E-Governance Scheme:** The National e-Governance Plan (NeGP) provides a comprehensive view of e-Governance initiatives across the country. Due to the E-Governance scheme, there is a digitization of internet connectivity across all India including urban cities as well as remote villages. The Government has proposed to implement “e-Kranti: National e-Governance Plan (NeGP) 2.0” under the Digital India program.
- **Conclusion:** e-Governance is getting a lot of encouragement in India, yet public promotion and the access number are important issues to be addressed. The success of e-Governance measures largely depends on the accessibility of high-speed internet, and the nationwide turnout of 5G technology soon will strengthen our resolution.

3. Leaves flutter in space: ISRO's experiment reaches milestone

Context: A batch of cowpea seeds which were taken into orbit by an Indian Space Research Organisation (ISRO) mission and which recently sprouted has unveiled their first leaves. The CROPS (Compact Research Module for Orbital Plant Studies) payload, developed by the Vikram Sarabhai Space Centre (VSSC), is envisioned as a multi-phase platform to develop and evolve the ISRO's capabilities for growing and sustaining flora in extraterrestrial environments. In addition to that the Indian Space Research Organisation on Monday said the docking of two SpaDeX satellites, scheduled for January 7, has been postponed to January 9.

Key points

- **Overview:** The space agency sent eight cowpea seeds as part of the Compact Research Module for Orbital Plant Studies experiment conducted by the Vikram Sarabhai Space Centre to study plant growth in microgravity conditions.
- **Cowpea:** Cowpea (*Vigna unguiculata*) is an annual plant within the pea family (Fabaceae). It is also known as a black-eyed pea, southern pea, etc.
- **Aspects of the Experiment:**
 - Purpose* - The main aim of the CROPS experiment is to study how plants grow in space, especially in microgravity (a condition where gravity is very weak, like in space). This research is important for long space missions, like those to the Moon or Mars, where growing food will be necessary.
 - Plant Used* - Cowpea seeds were chosen because they grow quickly and can adapt to different conditions, making them a good choice for space farming.
 - Environment* - The experiment was conducted in a closed-box environment with active temperature control to create stable conditions that mimic future space travel.
- **Findings:**
 - Seed Germination* - The cowpea seeds began to germinate within 4 days after launch, showing that plants can grow in space.
 - Leaves Expected Soon* - According to ISRO, the leaves of the plants should appear soon, meaning the plants are growing well in space.
- **Scientific Importance:**
 - Microgravity and Plant Growth* - In microgravity, plants do not grow like they do on Earth. They do not have gravity to guide their growth, which affects things like how they get water and nutrients. Understanding how plants grow in this condition is very important for space farming.
 - Space Farming* - This research is critical for future space missions where astronauts will need to grow their own food. The ability to grow plants in space is essential for long missions to places like Mars or the Moon.
 - Automated System* - The experiment uses a fully automated system, meaning the environment is controlled and data is collected without human intervention. This is important for future space stations or missions where humans may not be able to monitor plants every day.
 - Temperature Control and Monitoring* - The system closely watches and controls key factors like temperature, humidity, and soil moisture to keep the plants alive and growing.
- **Conclusion:** ISRO's successful experiment of cowpea seed germination in space shows that plants can grow in microgravity. This is a significant step toward ensuring food security for astronauts on long missions. The CROPS experiment is part of ISRO's ongoing effort to develop the technology to grow plants in space and support life during future space missions.

4. Budget FY26: AMFI calls for restoration of long-term indexation benefit for debt funds

Context: The Association of Mutual Funds in India (AMFI) has called for restoration of the long-term indexation benefit for debt schemes of mutual funds which was withdrawn in the Budget 2024. In its proposals for Union Budget 2025-26, the mutual fund body has also requested the government to restore earlier tax rates on capital gains, amend definition of equity-oriented funds to launch pension-oriented MF schemes with uniform tax treatment as National Pension Scheme (NPS) and a uniform rate for deduction of surcharge on TDS (tax deducted at source) in respect of NRIs.

Key points

- **Capital gains tax:** A capital gains tax is a tax imposed on the sale of an asset. It is calculated as the difference between the sale price of the property and its purchase price. Any gain or loss incurred from the sale of a house property may be subject to tax under the 'Capital Gains' head.
Types - Depending on the period an asset is held with the owner, there are two types of capital gains- Short-term Capital Gains and Long-term Capital Gains.
- **Long-Term Capital Gains (LTCG) Tax:** Capital gains tax is levied on the profit earned from the sale of capital assets, such as real estate, stocks and bonds. LTCG Tax is levied on the profit earned from the sale of assets held for longer periods.
- **Taxation procedure of LTCGs:** For equity shares and mutual funds, LTCG exceeding Rs 1.25 lakh is taxed at 12.5% without the benefit of indexation. For other assets like property, LTCG is taxed according to recent amendments.
- **Indexation:** It refers to adjusting the purchase price of an asset for inflation while computing the capital gain. Union Budget 2024 eliminates indexation benefit for all assets (barring property acquired prior to July 23, 2024).
 - *Cost Inflation Index (CII)* is used in the calculation of Inflation adjusted price of an asset which estimates the increase in an asset's price because of inflation.
- **Benefits of indexation:** Allows a taxpayer to neutralize the impact of inflation while lowering the tax liability. Ensures that taxpayers are taxed on real gains than gains at prevailing prices, which are a result of general increase in prices, and not economic growth.
- **Importance of indexation benefits:** It helps investors mitigate the impact of inflation on their investments. Reduces the overall tax burden on long-term capital gains.
- **Affect of indexation benefit in tax calculation:** By increasing the purchase price with indexation, the capital gain amount reduces, leading to lower tax liability. It is a significant advantage for investors looking to save on taxes over the long term.
- **Conclusion:** The benefit of indexation works best when your holding period is longer. For a holding period of 5 years, long-term capital gains tax on debt funds can come down from 20% to 6-7%. This is how indexation helps you to save tax on long-term capital gains from debt mutual funds and enhance your earnings.

5. AI impact on creative literature

Context: Artificial intelligence (AI) has increasingly made its presence felt across numerous domains, including creative literature. This transformation is fostering both excitement and apprehension among

authors, readers, and industry professionals. While AI is celebrated for its ability to innovate and expand the boundaries of creative expression, it also raises questions about originality, authenticity, and the role of human authorship in storytelling. By examining the positive and negative impacts of AI on creative literature, one can better understand its potential to reshape the literary landscape.

Key points

- **Overview:** As for the artistic creations originating from the use of artificial intelligence like writing, music, art, and literature, they are reaching the cutting edge. From the exploration above, one can see that AI can help human creative professionals in generation of ideas, cooperation, and supplement skill.
- **Features:** AI can aid in content creation, such as - Both Musical arrangement and production, Creating and composing artists and images and videos, literary writing and editing. AI can also enhance human creativity through - Generation of ideas and resulting suggestions, Collaboration and co-creation, Up gradation and training of Skills, Organisation and management of the work's project.
- **Significance:** AI has the potential to revolutionise the creative economy by:- AI has the potential to revolutionise the creative economy by –
 - The productivity and efficiency of the business should be improved.
 - Improving creative use of self and objects.
 - Increasing the density and diversity of the social networking structures.
 - Innovating on the business model and revenue proposition.
- **Pros:** Can replace monotonous work with computers so that people could focus on the creative approach. Bring fresh general concepts about creative direction and new ways for creatives to operate. Future human–AI interaction should facilitate teamwork and partnership between humans and an AI system. Unique creative resources should be made open for all, in the same way, the markets related to creativity should be made available to everyone.
- **Cons:** Replace certain jobs, or specific tasks within those jobs, wherein task repetitiveness is an issue. Promote libido obscures and auteurism. Added systematic biases and inaccuracies in materials produced by the system. High-quality training data and algorithms must be relied upon.
- **Challenges:** Controlling the problem of fake news while offering a transparent and accountable framework for people to make content using artificial intelligence. Creation of and implementation of Artificial Intelligence technologies that support and enhance human creativity. Creating synergy between people and machines: new challenges for cooperation
- **Way Forward:** AI can positively impact the creative economy, but it needs solvable issues and concerns to be discussed and solved. Using AI technologies that enhance creativity – in rather a way acts as a co-partner for human beings – can pave the way for viable opportunities for progress. To embrace all the opportunities of the use of AI in the creative economy, people and artificial intelligence will need to work together.

Q. Discuss the impact of Artificial Intelligence (AI) on the creative economy. How can AI be leveraged to enhance creativity and innovation, rather than replacing human creatives? What are the policy implications for India to harness the benefits of AI in the creative sector? (সৃষ্টিশীল অর্থনীতিত কৃত্ৰিম বুদ্ধিমত্তা (এআই) ৰ প্ৰভাৱ আলোচনা কৰক। মানুহৰ সৃষ্টিশীলতা সলনি কৰাৰ পৰিৱৰ্তে সৃষ্টিশীলতা আৰু উদ্ভাৱন বৃদ্ধি কৰিবলৈ এআই কেনেকৈ ব্যৱহাৰ কৰিব পাৰি? সৃষ্টিশীল খণ্ডত এআইৰ সুবিধাসমূহ ব্যৱহাৰ কৰিবলৈ ভাৰতৰ বাবে নীতিগত প্ৰভাৱসমূহ কি কি?)