



VAJIRAM & RAVI
Institute for IAS Examination

The Analyst

CURRENT AFFAIRS Handout

15th October 2025



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CONTEXT: According to government data, cybercrimes such as fake job offers, online investment frauds, fraudulent social media profiles, and impersonation scams have surged in recent years.

Cyberthreats – Types & Methods

Cybercrime – Financial frauds

Cyber Espionage – Stone Panda

Cyber Warfare - Stuxnet worm

Cyber terrorism

Cyber Crime Status

- ❑ **Quantitative Trends** – 30% Rise – Better Reporting
- ❑ **Nature of Crimes:**
 - Financial frauds (including online scams and ATM frauds)
 - Hacking of computer systems
 - Identity theft.
 - Cyberstalking and Cyber Harassment – darker side of digital social interactions.
- ❑ **Geographical Distribution:**
 - Metropolitan and urban centres dominate the cybercrime map

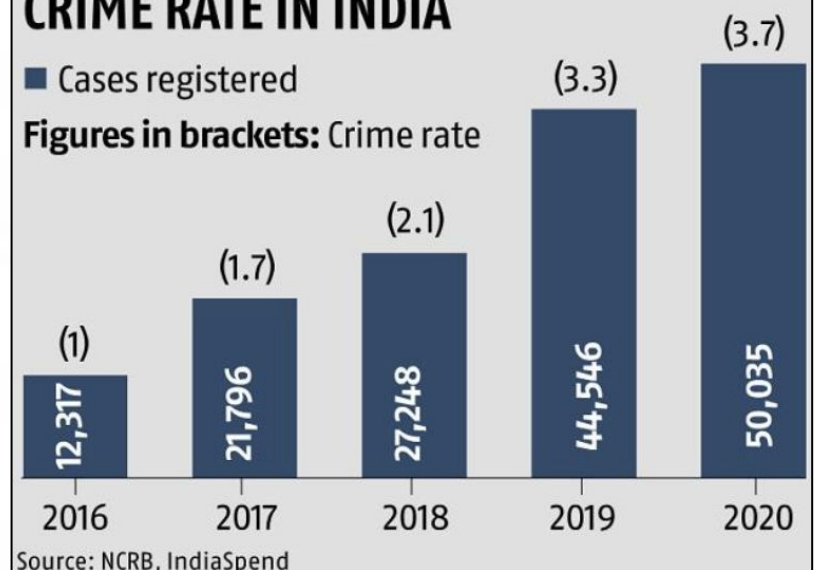
Types of Cybercrime



CASES REGISTERED AND CRIME RATE IN INDIA

■ Cases registered

Figures in brackets: Crime rate



Cybercrime – ignorance is the greatest vulnerability.



CONTEXT: According to government data, cybercrimes such as fake job offers, online investment frauds, fraudulent social media profiles, and impersonation scams have surged in recent years.

Factors contributing – Cyber Threat

1. **Technological and Skill Gaps – Shortage of cybersecurity expertise**
2. **Legal and Regulatory Lacunae**
3. **Infrastructural and Technological Limitations**
4. **Low Public Awareness and Digital Literacy**
5. **Jurisdictional and International Challenges**
6. **Organized Cybercrime Syndicates**

Steps Taken

Legal Measures

- ❑ **Information Technology Act, 2000:** The Act deals with the protection of CII, declaration of a 'protected system', cyberterrorism, hacking, violation of privacy, fraud, and other cyber crimes.
- ❑ **Digital Personal Data Protection Act (DPDP), 2023:** The act aims to balance the rights of individuals with the need to process digital personal data for legal purposes.

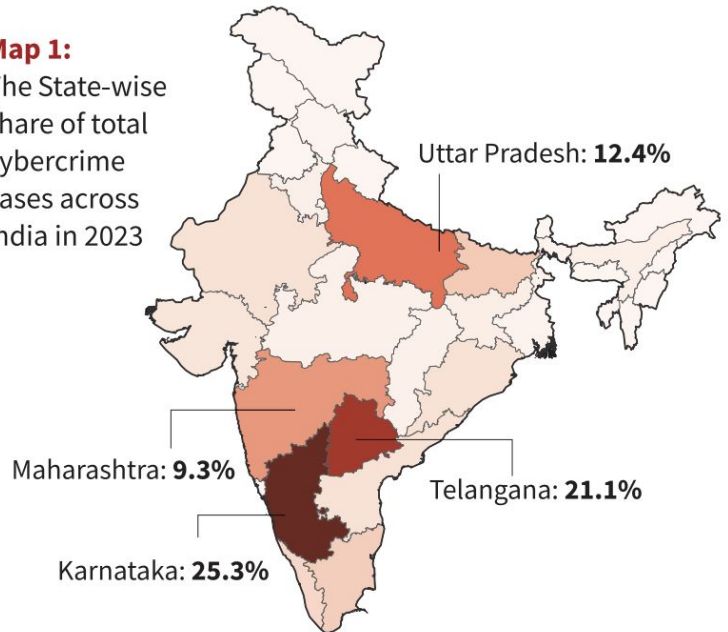
The act grants individual's rights such as:

- The right to obtain information about processing
- The right to seek correction and erasure of personal data
- The right to nominate another person to exercise rights in the event of death or incapacity



Map 1:

The State-wise share of total cybercrime cases across India in 2023



Institutional Measures

- **National Cyber Security Coordinator (NCSC):** It coordinates with different agencies at the national level for cyber security matters.
- **National Critical Information Infrastructure Protection Centre:** Designated as the National Nodal Agency for CII protection.
- **Defence Cyber Agency:** The union government has established it to deal with matters of cyberwarfare and cybersecurity.
- **Indian Computer Emergency Response Team (CERT-In):** Maintain India's cyber security and counter cybersecurity threats.
- **Indian Cyber Crime Coordination Centre(I4C):** The Ministry of Home Affairs has set up the I4C to deal with all types of cybercrime in the country, in a coordinated and comprehensive manner.



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WAY AHEAD

1. Modernizing Legal and Regulatory Frameworks

- Indian Cybersecurity Act – Clear Jurisdictions & Comprehensive Definition of Offenses – Dynamic Review

2. Strengthening Institutional Mechanisms

- **Sectoral CERTs:** healthcare, telecom, and education.
- Ensure real-time threat sharing and strategic coherence.

3. Building Human and Institutional Capacity

- **Indian Cybersecurity Service:** As suggested by IDSA, create a specialized all-India service to institutionalize expertise.
- **Cyber Forensics Modernization:** Equip labs and police units with AI-enabled investigation tools.
- **Academic Integration:** Introduce cybersecurity modules in higher education and technical curricula.

4. Technological Upgradation and Research

- AI and Blockchain for Security
- National Cyber R&D Fund
- Cyber Disaster Recovery Systems

5. Cyber Insurance as a Risk Mitigation Strategy

- According to **IRDAI**, cyber insurance serves as both *risk management* and *risk prevention* by incentivizing adherence to security protocols.
- Encourage mandatory cyber insurance for critical infrastructure operators, banks, and e-commerce platforms.
- Promote cyber insurance for individuals and SMEs, ensuring financial resilience against cyber frauds and data thefts.



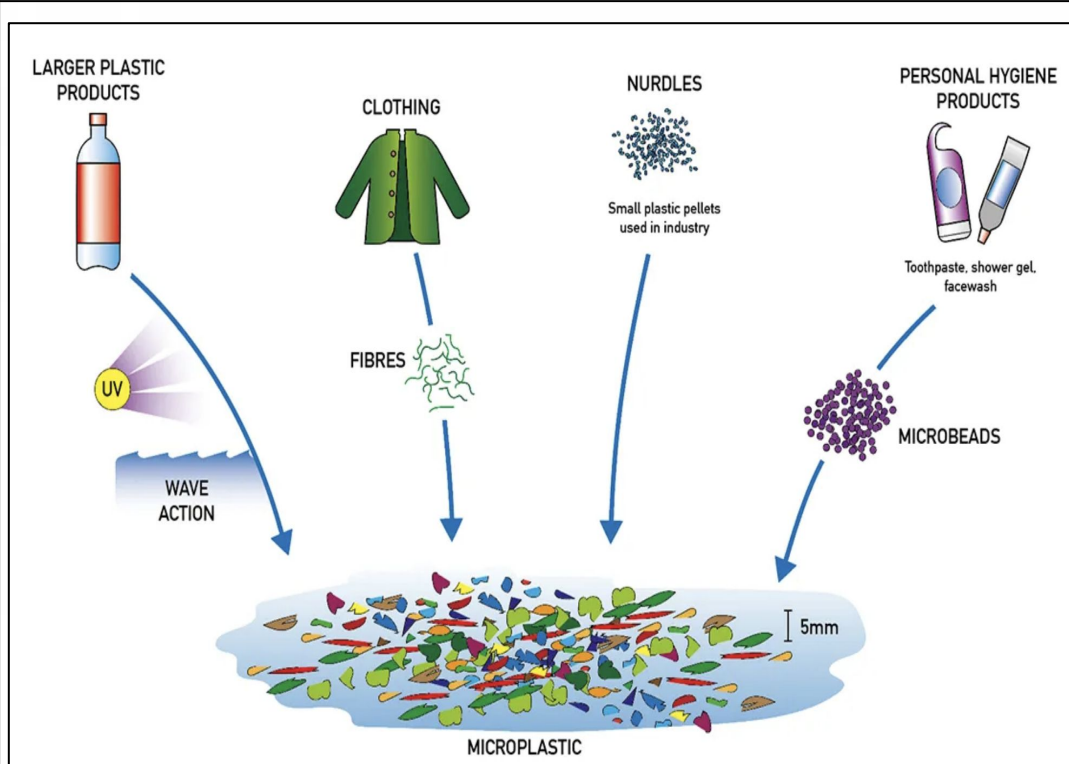
Mains Practice Question

Q. Despite several legal and institutional measures, cybercrime remains a perpetual threat. Examine the statement while highlighting factors behind rising rates of cyber crime. (250 words)



Microplastic – The long legacy left behind by plastic pollution

CONTEXT: A study has traced microplastic contamination in fish along the Goan coast; it also analysed factors that increase the uptake of these particles and the resulting risks for fish and human health



Causes / Drivers of Microplastic Pollution

- Over-reliance on single-use plastics
- Lack of adequate waste management
- Natural Process
- Industrial sources
- Tire wear and road dust

IMPACTS

Ecosystem / Aquatic and Marine Life

- Bioaccumulation and Biomagnification
- Physical harm
- Reproductive and developmental effects
- Habitat degradation

Human Health

- Accumulation in body
- Toxicological effects
- Vulnerable populations
- Indirect health risks

Types and Classification

TYPES

Primary Microplastics

Secondary Microplastics

SPREAD

Global Spread:

- UNEP notes a “long legacy” of microplastic pollution left behind by plastic production and waste.

Recent Findings / Data:

- A study in the Netherlands detected microplastics as small as **700 nanometers** in human blood.
- In India: The Delhi government – detecting microplastics in groundwater across the capital.



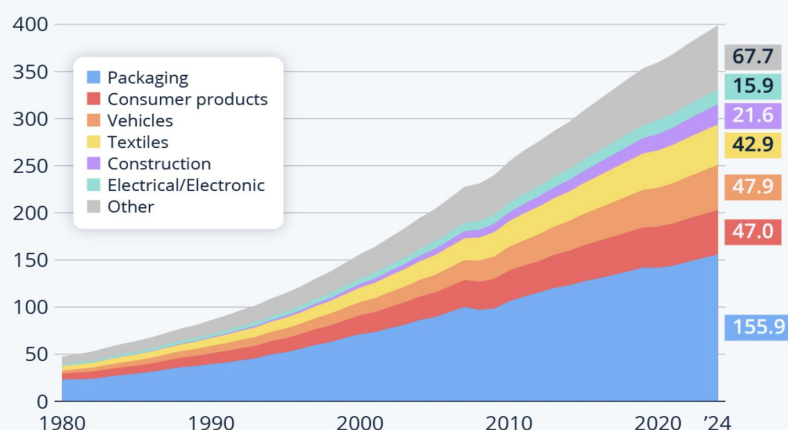
Microplastic – The long legacy left behind by plastic pollution



CONTEXT: A study has traced microplastic contamination in fish along the Goan coast; it also analysed factors that increase the uptake of these particles and the resulting risks for fish and human health

The World Is Flooded With Plastic Waste

Global plastic waste production by application (in million tonnes)*



* Forecast from 2020 onwards
Source: OECD

INITIATIVES

India-Level Initiatives

- **Plastic Waste Management Rules (2016, amendments in 2018, latest) and Extended Producer Responsibility (EPR):** Generating obligations for producers, importers, brand owners to take responsibility for lifecycle of plastics.
- **Bans on Single-Use Plastics:** Phased bans on certain items (e.g. straws, cutlery) to reduce plastic usage.
- **Studies and Monitoring:** Detection of microplastics in groundwater (Delhi), in soil, etc. Helps understand scope and develop data for policy.

Mains Practice Question

Q. What do you understand by microplastic pollution. While discussing impact of microplastic pollution suggest some strategies to tackle them. (150 words)

Way ahead

Stronger Regulatory Measures

- Ban or strictly limit intentionally added microplastics (microbeads, plastic abrasives) in cosmetics, cleaning agents, etc.

Improving Waste Management & Recycling Infrastructure

- Upgrade wastewater treatment plants
- Promote better plastic collection, segregation at source, recycling, and circular economy models.

Monitoring, Research & Data Gap Reduction

- Establish standardized, global protocols for measuring and reporting microplastic levels (size, type, chemical composition, quantities).
- National-level surveys to map hotspots.

Policy Integration

- Integrate microplastic control in existing environmental policies.



The drop in the number of wild elephants in India



SYLLABUS :GS 3 Environment & Ecology

Newspaper The Indian Express/ The Hindu **Page Number** : 10/ 09

INDIA'S ASIAN elephant population is estimated to be 22,446 — lower by 17.81% from the previous estimate done eight years ago, according to results of the much-delayed Synchronous All India Elephant Estimation (SAIEE) 2021-25 released Tuesday.

Compared to the last all-India estimate in 2017 of 27,312, the population is lower by 4,065 elephants. However, the latest population report added a caveat that the two figures are not directly comparable due to a change in methodology, and said the latest estimate should be treated as a “new baseline”.

Prelims Pointers

Region wise elephant population

- ❑ Western Ghats – 11,934
- ❑ North Eastern Hills and Brahmaputra floodplains – 6,559
- ❑ The Shivalik Hills and Gangetic plains – 2,062
- ❑ Central India and the Eastern Ghats – 1,891

State wise population

- ❑ Karnataka (6,013) > Assam (4,159) > Tamil Nadu (3,136) > Kerala (2,785) > Uttarakhand (1,792) > Odisha (912) > Chhattisgarh and Jharkhand (over 650).
- ❑ Smaller populations survive in northeastern states – Arunachal Pradesh (617), Meghalaya (677), Nagaland (252) and Tripura (153).
- ❑ Central and Eastern India – Madhya Pradesh (97) and Maharashtra (63) have tiny, fragmented herds.

According to the latest data, elephant numbers remain highest in the Western Ghats (11,934), followed by the North Eastern Hills and Brahmaputra floodplains (6,559), Shivalik Hills and Gangetic plains (2,062), and Central India and Eastern Ghats (1,891).

Among states, Karnataka continues to harbour the largest population (6,013), followed by Assam (4,159), Tamil Nadu (3,136), Kerala (2,785), Uttarakhand (1,792), and Odisha (912).

When asked why the population estimated using the new methodology reflected a large change in some states, Qamar Qureshi, one of the lead scientists involved in the exercise, said, “The previous population estimates are likely overestimates due to the methodology followed. The current methodology is scientifically sound, relying on dung sampling to extract DNA and identify individual elephants, which has been done for the first time.”

In the Western Ghats, Shivalik Hills and Brahmaputra plains, where elephants are most abundant, the report highlights habitat loss, fragmentation and disruption of traditional corridors caused by railway lines, roads, power infrastructure, encroachments and other land-use

72. With reference to Indian elephants, consider the following statements :

1. The leader of an elephant group is a female.
2. The maximum gestation period can be 22 months.
3. An elephant can normally go on calving till the age of 40 years only.
4. Among the States in India, the highest elephant population is in Kerala.

Which of the statements given above is/are correct ?

- (a) 1 and 2 only
- (b) 2 and 4 only
- (c) 3 only
- (d) 1, 3 and 4 only



The drop in the number of wild elephants in India



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Prelims Pointers Indian Elephant

- ❑ **IUCN – Endangered**
- ❑ Unlike African elephants, in India only some males have tusks.
- ❑ Elephants have **one of the longest pregnancies** – 22 months.
- ❑ **Lifespan** – 60-70 years.
- ❑ **Eating habit** – Grasses, tree bark, roots, leaves, small stems, cultivated crops such as bananas, rice, and sugarcane etc.
- ❑ **Social Life** – Matriarch-led herds, usually made up of females and calves.
- ❑ **Communication** – They “talk” through rumbles, trumpets, body language, and even vibrations felt through the ground.
- ❑ Elephants are **known to mourn their dead, showing remarkable emotional intelligence.**

Project Elephant

- ❑ **Launched in 1992** – Ministry of Environment and Forests
- ❑ **AIM**
 - Conserve elephant populations and their habitats
 - Reduce human-elephant conflicts
 - Improve the welfare of captive elephants.

Wildlife Institute of India

- ❑ **Established** – Autonomous institution established in 1982 under the MoEF
- ❑ **Location: Dehradun, Uttarakhand.**
- ❑ **Offers training programs, academic courses, and advisory in wildlife research and management.**
- ❑ It is **actively engaged in research** across the breadth of the country on biodiversity related issues.
- ❑ The board is chaired by The Union Minister and has representatives from the centre and state governments as well as institutions and academia.



Appoint nodal officers to trace missing children: SC

SYLLABUS : GS 2 : Social Justice

Newspaper The Hindu Page Number : 14

The Supreme Court on Tuesday directed the Union government to instruct all States and Union Territories to depute a nodal officer to handle cases of missing children and to provide their names and contact details for publication on the Mission Vatsalya portal operated by the Ministry of Women and Child Development.

Appearing for the Centre, Additional Solicitor-General Aishwarya Bhati informed the Bench that such a system was already in place through the Mission Vatsalya portal. She added that two earlier platforms, TrackChild and Khoya-Paya, had been integrated into it, and that 14 stakeholders were currently participating in the initiative.

Ms. Bhati submitted that any citizen who came across a missing child, or any parent or guardian seeking to report a missing child, could directly access the portal to file a complaint.

was “hardly any dissemination of information” among the stakeholders concerned despite the existence of a dedicated portal.

“There has to be cooperation between the State and the Centre in this... this is how you make it workable,” she said.

Prelims Pointers :

About Mission Vatsalya:

- It is a roadmap to achieve **development and child protection priorities** aligned with the Sustainable Development Goals (SDGs).
- It **lays emphasis on child rights, advocacy and awareness** along with **strengthening of the juvenile justice care and protection system with the motto to ‘leave no child behind’**
- **Nodal Ministry:** The Ministry of Women and Child Development
- The Scheme is implemented as a **Centrally Sponsored Scheme** since 2021-22.

Basic framework :

The Juvenile Justice (Care and Protection of Children) Act, 2015 provisions and the Protection of Children from Sexual Offences Act, 2012



Ruins of Delhi's first city to Buddha Relics



SYLLABUS : GS 1 : Art & Culture

Newspaper The Indian Express **Page Number : 01**

the first city of Delhi — Rai Pithora — will make its mark in public memory for another reason: as the spot where Lord Buddha's Piprahwa relics will be exhibited for the first time since they were excavated from ancient Kapilvastu nearly 130 years ago.

Prelims Pointers

Qila Rai Pithora

- **First Recognized City:** Delhi's first historically recorded city dates to the **11th century**.
- **Qila Rai Pithora:** Built/extended by **Prithviraj Chauhan (Rai Pithora)**
- **Anangpal Tomar** likely built **Lal Kot**, the first known defense structure in Delhi.
- Chauhan rulers later captured and expanded Lal Kot into **Qila Rai Pithora**.
- The **Iron Pillar of Mehrauli** reflects Rajput prosperity; originally from **Udayagiri, Central India**, possibly brought by Anangpal II.

Piprahwa Buddhist Relics & Treasures

Discovery: Excavated in **1898** at **Piprahwa**, near **India-Nepal border**. (Siddharth Nagar – UP)

The Piprahwa relics, comprising gems and jewels, were discovered in 1898 by William Claxton Peppe during the excavation of a stupa in Uttar Pradesh's Piprahwa village, in present-day Siddharthnagar district. In possession of his great-grandson Chris Peppe, the relics were repatriated to India recently, after their scheduled auction at Sotheby's Hong Kong was stopped.

"The exhibition will reunite, for the first time, the Piprahwa relics, which were taken to the United Kingdom in the late 19th century, with Lord Buddha's Piprahwa relics housed in the collections of the National Museum and the Indian Museum," Ministry officials tell *The Indian Express*.

Considered sacred in Buddhist heritage, the Piprahwa relics, deposited by the Sakyas, Lord Buddha's kin, also comprise his bone fragments, crystal caskets and gold ornaments. While

Artefacts Found:

Gold coins, ornaments, carved gems. Accompanied by a **reliquary urn** containing **bone relics of Gautama Buddha (Sakya clan portion)**.

Significance: Relics belonged to **Buddha**, founder of Buddhism; urn inscription confirmed authenticity.

Distribution: Bone relics were **given to the King of Siam (Thailand)** for dissemination among global Buddhist communities.



How does Gaganyaan's vital crew escape system work?

SYLLABUS : GS 3 : Science & Tech
Newspaper The Hindu Page Number : 10

The story so far:

The Gaganyaan mission aims to safely transport Indian astronauts to a low-earth orbit of around 400 km altitude using the human-rated LVM3 (HLVM3) rocket as the launch vehicle, and to return them safely. In human space missions, crew safety is more important than mission success. It is imperative that safety is addressed during all phases: launch pad, ascent, orbit, and descent.

What is the CES?

A dedicated Crew Escape System (CES) will be used during the initial part of the atmospheric phase of the Gaganyaan mission to ensure crew safety in the event of a contingency that jeopardises the mission. The CES is designed to rapidly separate the crew module, along with the crew, from a malfunctioning launch

vehicle, and move it to a safe distance in the least possible time. The atmospheric phase of flight is one of the most critical stages of the ascent, during which the rocket accelerates to hypersonic speeds – more than five times the speed of sound – and will be experiencing very high structural loads. The HLVM3 rocket is equipped with two powerful S200 solid-fuel boosters to lift off, and unlike liquid or cryogenic engines, solid motors cannot be shut down once they are ignited. Thus, the CES must extract the crew module with greater acceleration than the launch vehicle itself, and in minimal time. In the Gaganyaan mission, the CES could impart acceleration up to 10-times that of gravity. For a healthy human body, such high acceleration is tolerable for a few seconds if the crew is positioned correctly, with the acceleration acting perpendicular to the chest and the body pressed against the seat in a “child in cradle” orientation. Rocket systems are

What are different types?

The CES is classified into two types based on the way it extracts the crew module: (i) puller type – used in Gaganyaan, where the CES pulls the crew module away from the launch vehicle; (ii) pusher type – used in vehicles like SpaceX's Falcon 9, where the crew module is pushed away using compact, high-thrust liquid-fuel engines. Both systems have advantages and disadvantages, with the choice depending on propulsion technology and system integration aspects. Once the CES has moved the crew module a safe distance away from the failing vehicle, the module will be released and decelerated by a

multistage parachute system. This will reduce the module's velocity in steps, ensuring it splashes down safely in the sea without exceeding the crew's physiological limits upon impact. Typically, the crew will remain inside the module until splashdown. But during the Soviet Union's first human spaceflight, Yuri Gagarin ejected from the Vostok module at approximately 7 km altitude and parachuted safely to the ground.

The Integrated Vehicle Health Management system, which is a network of sensors, electronics, and software, will aid in taking a decision to activate the CES when a contingency arises. It will monitor all vital parameters of vehicle systems and crew health in real time.

Has it been tested?

The ISRO has developed a cost-effective, single-stage Test vehicle powered by the Vikas engine to validate the CES. The first successful test occurred in October 2023, during which the CES was activated when the Test vehicle reached transonic conditions – a critical phase in atmospheric flight when the velocity transitions from subsonic to supersonic. ISRO plans additional Test vehicle flights to simulate other critical ascent trajectory conditions. The CES is a cornerstone of the Gaganyaan programme and reflects ISRO's commitment to astronaut safety.

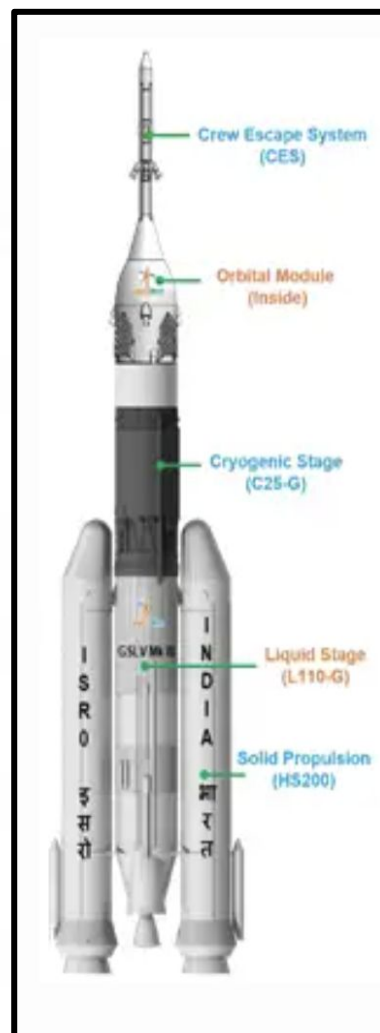
Prelims Pointers

Objective:

- To **demonstrate indigenous capability to undertake human space flights.**
- **Space exploration:** it will lay the foundation for a sustained Indian human space exploration programme.
- **Conduct Experiments:** Gaganyaan also encourages and supports micro-gravity experiments
- **Launch vehicle:** LVM-3 (Launch Vehicle Mark-3).

Payloads:

- **Crew Module:** It is the spacecraft carrying human beings.
- **Service Module:** It will support the crew module and is powered by liquid propellant engines.



WHO issues product alert on oral liquid medicines



SYLLABUS : GS 3 : International relations
Newspaper The Hindu **Page Number** : 14

The World Health Organization (WHO) has issued a medical product alert on three liquid medicines identified in India as contaminated and reported to it on October 8.

They have been identified to be of specific batches of Coldrif, Respifresh TR and ReLife, manufactured by Sresan Pharmaceutical, Rednex Pharmaceuticals, and Shape Pharma, respectively.

“The CDSCO [Central Drugs Standard Control Organisation] has informed WHO that none of the contaminated medicines have been exported from India and there is currently no evidence of illegal export,”

Substandard product

The WHO said the products were considered substandard as they failed to meet quality standards and specifications. On October 8, the CDSCO reported presence of diethylene glycol in at least three oral liquid medicines. Diethylene glycol is toxic to humans when consumed and can prove fatal.

Prelims Pointers

World Health Organisation (WHO)

- ❑ **Established** – 1948
- ❑ **Membership** – WHO currently has 194 member states.
- ❑ **Headquarters** – Geneva, Switzerland.
- ❑ **World Health Assembly (WHA)** – supreme decision-making body of the WHO and includes representatives from all member states.
- ❑ **Regional Offices** – Africa, the Americas, Southeast Asia, Europe, the Eastern Mediterranean, and the Western Pacific.
- ❑ **Funding mechanism**: The WHO gets its funding from two main sources:
 - **Assessed contributions**: These are the dues countries pay to be a member of the Organisation.
 - **Voluntary contributions**: It is from Member States (in addition to their assessed contribution) or from other partners.

Central Drugs Standard Control Organisation (CDSCO)

- ❑ National Regulatory Authority (NRA) under Drugs and Cosmetics Act.
- ❑ Works under the Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India.
- ❑ The Drugs Controller General of India (DCGI) is the head of the CDSCO.
- ❑ **Headquarters**: New Delhi.
- ❑ **Responsibility**
 - Approval of new drugs
 - Conduct of clinical trials
 - Laying down the standards for drugs
 - Control over the quality of imported drugs in the country
 - Coordination of the activities of State Drug Control Organizations
 - CDSCO, along with state regulators, is jointly responsible for the grant of licenses for certain specialized categories of critical Drugs such as blood and blood products



Q1. Consider the following statements regarding cybersecurity measures in India:

1. The Information Technology Act, 2000, includes provisions related to cyberterrorism, hacking, and the protection of Critical Information Infrastructure (CII).
2. The Digital Personal Data Protection Act, 2023, provides individuals the right to seek correction and erasure of personal data.
3. The Indian Cyber Crime Coordination Centre (I4C) operates under the Ministry of Defence to counter cyber warfare threats.

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

Answer: a

Q2. Consider the following statements regarding India's initiatives to tackle plastic pollution:

1. The Plastic Waste Management Rules make producers and brand owners responsible for managing the plastic lifecycle.
2. India has banned all single-use plastic items, including packaging material.

Which of the statements given above is/are correct?

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

Answer: a

Q3. Which of the following sequences of states correctly represents the descending order of the elephant population?

- a) Karnataka > Assam > Tamil Nadu > Kerala > Uttarakhand
- b) Assam > Karnataka > Tamil Nadu > Kerala > Uttarakhand
- c) Karnataka > Tamil Nadu > Assam > Kerala > Uttarakhand
- d) Karnataka > Assam > Kerala > Tamil Nadu > Uttarakhand

Answer: a

Q4. Consider the following statements regarding Mission Vatsalya:

1. It aims to align child development and protection priorities with the Sustainable Development Goals (SDGs).
2. The scheme is implemented by the Ministry of Social Justice and Empowerment.
3. It has been implemented as a Centrally Sponsored Scheme since 2021–22.

How many of the statements given above is/are correct?

- a) Only One
- b) Only Two
- c) All Three
- d) None

Answer: b

Q5. Consider the following statements regarding the historical development of Delhi's earliest city:

1. Qila Rai Pithora was originally constructed by Anangpal Tomar in the 11th century.
2. Anangpal Tomar likely built Lal Kot, the first known defence structure in Delhi.

Which of the statements given above is/are correct?

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

Answer: b





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