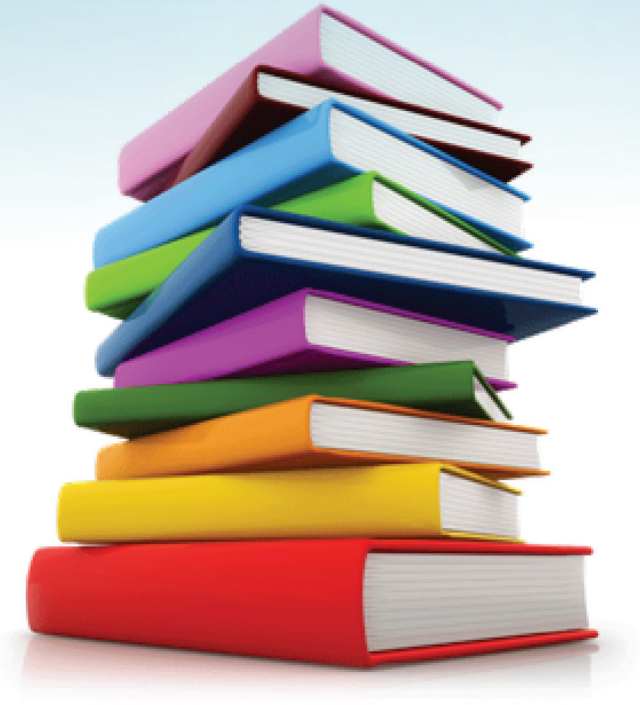
PLUTUS IAS

Weekly CURRENT AFFAIRS



PLUTUS IAS WEEKLY CURRENT AFFAIRS 8-5-2023 to 14-5-2023

Corporate Office :

706 1st Floor Dr. Mukherjee Nagar Near Batra Cinema Delhi – 110009

17A/41, 1st Floor, WEA Karol Bagh, New Delhi 110005

Basement 8, Apsara Arcade, Karolbagh metro station Gate no.–6, New Delhi 110005

C 59 Noida Sector 2, Noida, Uttar Pradesh 201301

Phone: 08448440231 **Email:** info@plutusias.com **Web:** http://plutusias.com/

CONTENTS

S. NO	TOPICS	PAGE NO
1.	NATIONAL TECHNOLOGY DAY	1 - 4
2.	JAN SURAKSHA SCHEMES	4 - 7
3.	ODF+ VILLAGE	7 - 9
4.	WORLD HERITAGE LIST	9 - 12
5.	SEMICONINDIA FUTUREDESIGN ROADSHOW	13 - 15
6.	CRIME AND SECURITY IN THE AGE OF NEW TECHNOLOGIES	16 - 18

CURRENT AFFAIRS MAY 2023

NATIONAL TECHNOLOGY DAY

This article covers "Daily Current Affairs" and the topic details "National Technology Day". The topic "National Technology Day" has relevance in the Science and Technology section for the UPSC CSE exam.

Relevance of the topic "National Technology Day"

For Prelims

What is National Technology Day?

When is it celebrated?

For Mains:

GS 3:Science and Technology

What is the significance of National Technology Day?

What are the achievements made by India in the field of Science and technology?

Way Forward

Why in the news?

Union Minister Dr Jitendra Singh led a high-level joint meeting of various Science Ministries and departments to discuss plans for jointly observing National Technology Day on May 11th.

What is National Technology Day?

National Technology Day is an annual observance in India that commemorates the country's technological achievements and highlights the importance of science and technology in India's growth and development.

The day is celebrated on May 11th every year to mark India's successful nuclear tests in Pokhran on May 11th, 1998, which demonstrated the country's capability to become a nuclear power.

The theme of National Technology Day this year will be "Atal Tinkering Labs".

When is it celebrated?

It is celebrated on May 11th to create a cohesive and unified approach to celebrating the day and highlighting the importance of technology in India's development.

What is the significance of National Technology Day?

1. **Celebrate the role of technology in our lives:** The day serves as a reminder of the critical role that technology plays in the progress of a nation and encourages the development of new technologies in various fields such as agriculture, health, energy, and defence.
2. **Honour the works of scientists:** The day is also an occasion to honour Indian scientists and engineers who have made significant contributions to the country's technological advancements.

What are the achievements made by India in the field of Science and technology?

India has made significant achievements in the field of science and technology in various domains. Here are some notable examples:

1. Space Technology: India's space agency, ISRO, has successfully launched numerous satellites and conducted various space missions. Some of the most significant achievements include the Mars Orbiter Mission (MOM), Chandrayaan-1 and 2 missions, and the successful launch of the GSLV MK III, India's heaviest rocket. The Gaganyaan to be launched soon will place Indians in space.
2. Information Technology: India's IT sector has grown rapidly in the past few decades and has become a major contributor to the country's economy. The service sector is a major part of the economy. Indian IT companies are globally recognized for their expertise in software development, IT services, and business process outsourcing.
3. Defence Sector: India has developed advanced weapon systems making use of the latest technology. The establishment of DRDO has produced a variety f indigenous aircrafts, missile systems etc.
    1. A-SAT mission known as Mission Shakti "killed" a missile in space.
    2. Indians have developed missiles like Prithvi, Agni which are one of the kind in the world.
    4. Nuclear Technology: India is one of the few countries in the world that has developed nuclear technology indigenously. The country has developed nuclear

reactors, nuclear power plants, and nuclear weapons.

5. Agriculture: India is one of the world's largest producers of food grains, fruits, and vegetables.
    1. The Green Revolution in the 1960s and 70s saw India become self-sufficient in food production, thanks to the adoption of new agricultural practices and technologies. It consequently led to India becoming the leading exporter of food grains as well.
6. Healthcare: India has made significant progress in the field of healthcare, particularly in the development of affordable and accessible medical technologies. Some of the notable achievements include
    1. Low low-cost medical devices
    2. Telemedicine
    3. Eradication of polio
    4. India holds the title of "the pharmacy of the world" today.
    5. Web-based Ayushman Bharat insurance scheme

Way Forward

India continues to invest in research and development in these fields to drive growth and development in the country. India has also launched a series of missions to develop and exploit scientific temper among science enthusiasts. Some of the schemes are as follows:

1. ATAL tinkering labs
2. INSPIRE mission
3. VAJRA scheme
4. Technology-Based Entrepreneurship Development Programme (TEDP)
5. IMPacting Research INnovation and Technology (IMPRINT-2)
6. Aatmanirbhar Bharat ARISE
7. Abdul Kalam Technology Innovation National Fellowship
8. Accelerate Vigyan
9. Access to Knowledge for Technology Development and Dissemination (A2K+)

10. Advanced Hydrogen and Fuel Cell Programme (AHFC)

Source:

https://pib.gov.in/PressReleseDetail.aspx?PRID=1922495

JAN SURAKSHA SCHEMES

This article covers "Daily Current Affairs" and the topic details "Jan Suraksha Schemes". The topic "Jan Suraksha Schemes" has relevance in the Governance section for the UPSC CSE exam.

Relevance of the topic " Jan Suraksha Schemes"

For Prelims:

Details of Pradhan Mantri Suraksha Bima Yojana (PMJJBY), Pradhan Mantri Jeevan Jyoti Bima Yojana (PMSBY) and Atal Pension Yojana (APY)

For Mains:

GS 2:Governance

What is the significance of Jan Suraksha Schemes?

What are the issues in Jan Suraksha Schemes?

Way Forward

Why in the news?

Pradhan Mantri Suraksha Bima Yojana (PMJJBY), Pradhan Mantri Jeevan Jyoti Bima Yojana (PMSBY), and Atal Pension Yojana (APY) complete 8 years of providing social security cover.

Details of Pradhan Mantri Suraksha Bima Yojana (PMJJBY), Pradhan Mantri Jeevan Jyoti Bima Yojana (PMSBY) and Atal Pension Yojana (APY):

Pradhan Mantri Suraksha Bima Yojana (PMJJBY)

- **About the scheme:** The Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) is a government-backed one-year life insurance scheme that offers coverage for death due to any reason.
- **Eligibility:** Individuals between the ages of 18 and 50 who have an individual bank or post office account are eligible to enroll in the scheme. Those who join the scheme

before turning 50 can continue to have their lives covered up to the age of 55 by paying regular premiums.

- **Benefits:** The scheme provides a life cover of Rs. 2 lahks against an annual premium of Rs. 436.
- **Status of the scheme:** The scheme has had more than 16.19 crore cumulative enrollments as of 26.04.2023 and has paid out Rs. 13,290.40 crores for 6,64,520 claims.

Pradhan Mantri Suraksha Bima Yojana (PMJJBY)

- **About the scheme:** The Pradhan Mantri Suraksha Bima Yojana (PMSBY) is a renewable one-year accidental insurance scheme that offers coverage for death or disability due to accidents.
- **Eligibility:** Individuals between the ages of 18 and 70 who have an individual bank or post office account are eligible to enroll in the scheme.
- **Benefits:** The scheme provides an accidental death cum disability cover of Rs. 2 lakh (Rs. 1 lakh in case of partial disability) for death or disability due to an accident against an annual premium of Rs. 20.
- **Status of the scheme:** The scheme has had more than 34.18 crore cumulative enrollments as of 26.04.2023 and has paid out Rs. 2,302.26 crores for 1,15,951 claims.

Atal Pension Yojana (APY)

- **About the scheme:** The Atal Pension Yojana (APY) is a social security scheme initiated by the Government to ensure financial stability for all, especially those in the unorganized sector. It is administered by the Pension Fund Regulatory and Development Authority (PFRDA) under the National Pension System (NPS).
- **Eligibility:** The scheme is available to all non-income tax-paying bank account holders between 18 to 40 years of age, with contributions varying based on the pension amount chosen.
- **Benefits:** Upon reaching 60 years of age, subscribers will receive a minimum monthly pension of Rs. 1000 or Rs. 2000 or Rs. 3000 or Rs. 4000 or Rs. 5000 based on their contributions.
- **Disbursement of Scheme Benefits:** Subscribers, their spouse, or nominee will receive the pension corpus upon the subscriber's death. If the subscriber dies before turning 60, their spouse can continue contributions until the subscriber would have attained 60 years of age.
- **Contribution by Central Government:** The Government guarantees the minimum

pension, funding any shortfall in the corpus. If returns on investment exceed expectations, subscribers receive enhanced benefits.

- **Payment Frequency:** Contributions can be made monthly, quarterly or half-yearly.
- **Withdrawal:** Subscribers can exit the scheme under certain conditions, with deductions for government co-contribution and interest.
- **Achievements:** As of 27.04.2023, over 5 crore individuals have subscribed to APY.

What is the significance of Jan Suraksha Schemes?

1. These schemes are especially relevant for low-income earners, casual workers, and those engaged in the informal sector who may not have access to traditional insurance products due to high costs or lack of awareness.
2. These schemes provide affordable insurance and pension products that offer protection against financial contingencies such as accidental death, disability, and natural death.
3. They also encourage savings and help in building a culture of savings and investment among people who would otherwise not have access to these products.

What are the issues with Jan Suraksha Schemes?

- **Lack of Awareness:** Many people who are eligible for these schemes are not aware of their existence or how to enroll in them.
- **Limited Coverage:** The coverage provided by the schemes is limited, and there are still many people who are not covered under any social security scheme.

  For example, the PMSBY covers only accidental death or disability, while the PMJJBY covers only death due to any reason. This leaves many other risks uncovered, such as illness, disability due to non-accidental reasons, and so on.
- **Low Insurance Coverage:** The insurance coverage provided by these schemes is also relatively low, which may not be sufficient to cover the actual costs of medical treatment or other expenses in case of an eventuality.

  For example, the life insurance cover under the PMJJBY is only Rs. 2 lacks, which may not be enough for many families.
- **Delay in Claims Processing:** There have been reports of delays in claims processing and disbursal, which can be a major issue for people who are in urgent need of funds.
- **Operational Issues:** The implementation of the schemes has also faced operational issues, such as difficulties in enrolling people due to a lack of infrastructure, inadequate staff, and technical glitches in the enrollment process.

Source:

https://pib.gov.in/PressReleseDetail.aspx?PRID=1922622

ODF+ VILLAGE

This article covers "Daily Current Affairs" and the topic details "ODF Village". The topic "ODF+ Village" has relevance in the Governance section for the UPSC CSE exam.

Relevance of the topic "ODF+ Village"

For Prelims:

What is ODF+ Village?

What is Swachh Bharat Abhiyaan 2.0?

For Mains:

GS 2:Governance

What is the significance of Swachh Bharat Abhiyaan 2.0 ?

Way Forward

Why in the news?

India achieves another major sanitation milestone – 50% of Villages Are Now ODF Plus under Swachh Bharat Mission Gramin Phase II

What is an ODF+ Village?

An ODF+ Village village is one which has sustained its Open Defecation Free (ODF) status along with implementing either solid or liquid waste management systems.

As of date, more than 2.96 lakh villages have declared themselves ODF Plus, which is a significant step towards achieving the SBM-G phase II goals by 2024-25.

ODF Plus Model village is one which is:

1. Sustaining its ODF status and has arrangements for both Solid Waste Management and Liquid Waste Management
2. Observes visual cleanliness, i.e., minimal litter, minimal stagnant wastewater, and no plastic waste dumped in public places;
3. Displays ODF Plus Information, Education & Communication (IEC) messages.

So far, 1,65,048 villages have arrangements for solid waste management, 2,39,063 villages have arrangements for liquid waste management, 4,57,060 villages have minimal stagnant water and 4,67,384 villages have minimal litter.

What is Swachh Bharat Abhiyaan 2.0?

Swachh Bharat Abhiyan, also known as the Clean India Mission, was a significant cleanliness campaign launched by the Government of India on October 2, 2014. It aimed to make India clean and open defecation-free by October 2, 2019, in commemoration of Mahatma Gandhi's 150th birth anniversary.

In order to sustain the achievements of SBM 1.0 the government launched the Phase-II of SBM (G):

The major components of the Phase-II of SBM (G) are:

1. Sustaining Open Defecation Free Status (ODF-S),
2. Solid (Biodegradable) Waste Management,
3. Plastic Waste Management (PWM),
4. Liquid Waste Management (LWM),
5. Faecal Sludge Management (FSM),
6. GOBARdhan, Information Education and
7. Communication/Behavior Change

The SBM-G program has been instrumental in improving the health and well-being of millions of people across the country. Several reports in the past few years have exhibited the ground impact of the SBM-G programme.

SBM(G) is a shining example of what can be achieved when there is a concerted effort to improve sanitation and hygiene. Department of Drinking Water & Sanitation, Ministry of Jal Shakti congratulates and applauds the contribution of all villages, Gram Panchayats, Districts, States/UT on this proud achievement.

Swachh Bharat Abhiyan 2.0 holds significance on the following aspects:

1. Sustaining the Achievements: SBM 2.0 aims at maintaining the cleanliness of public spaces, ensuring the usage and maintenance of constructed toilets, and promoting long-term behaviour change towards sanitation and hygiene practices.
2. Strengthening Sanitation Infrastructure: This could involve the construction of additional toilets, waste management systems, and promoting innovative and sustainable sanitation technologies.
3. Behavioral Change and Awareness: Swachh Bharat Abhiyan 2.0 further emphasises the importance of behavioural change in promoting cleanliness and hygiene practices.

4. Waste Management and Environmental Sustainability: SBM 2.0 aims to to strengthen waste management systems, promote recycling initiatives, and create awareness about the environmental impact of improper waste disposal.
5. Urban Sanitation: SBM 2.0 aims at urban planning, investment in sanitation facilities, and the adoption of smart technologies for efficient waste management.
6. Inclusivity and Equity: SBM 2.0 aims at targeted interventions, policies, and programs to address the specific needs and challenges faced by these groups.

Source:

https://pib.gov.in/PressReleseDetail.aspx?PRID=1923036

WORLD HERITAGE LIST

This article covers "Daily Current Affairs" and the topic details "World Heritage List". The topic "World Heritage List" has relevance in the Art and Culture section for the UPSC CSE exam.

Relevance of the topic "World Heritage List"

For Prelims:

What is a World Heritage List?

What is Shantiniketan?

What are Indian sites included in the World Heritage List?

For Mains:

GS 1 : Art and Culture

What is the significance of the World Heritage List?

Way Forward

Why in the news?

Santiniketan, associated with Nobel laureate Rabindranath Tagore, has been recommended for inclusion on UNESCO's World Heritage List.

What is a World Heritage List?

The World Heritage List, also known as the UNESCO World Heritage List, is a collection of cultural and natural sites around the world that are considered to have outstanding

universal value. It is maintained by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and was established in 1978.

The purpose of the World Heritage List is to identify and protect sites that are considered to be of exceptional importance to humanity. These sites can include natural wonders, such as national parks, forests, or geological formations, as well as cultural sites, such as ancient cities, archaeological sites, or religious buildings.

What is Shantiniketan?

Shantiniketan, meaning "Abode of Peace," is a small town located in the Birbhum district of the state of West Bengal, India. It is renowned as the home and educational institution established by the Nobel laureate poet, writer, philosopher, and artist, Rabindranath Tagore.

In 1901, Rabindranath Tagore founded an experimental school in Shantiniketan, which later grew into Visva Bharati University in 1921. The institution follows Tagore's philosophy of education, emphasizing a holistic approach that integrates intellectual, artistic, and cultural pursuits. It seeks to foster a harmonious relationship between nature, humanity, and the arts.

Shantiniketan and Visva Bharati University became centres of education, literature, music, and arts, attracting scholars, artists, and students from around the world. The town itself is characterised by its serene and tranquil environment, surrounded by lush greenery, gardens, and open spaces.

The university campus features distinct architectural styles, blending traditional elements with influences from different cultures, reflecting Tagore's vision of a global centre of learning. The Tagore family's ancestral home, "Udayan," is also located within the campus and has been preserved as a museum.

Shantiniketan is not only a place of learning but also a vibrant cultural hub. It hosts various festivals, including the Poush Mela and Basanta Utsav (Holi), which attract a large number of visitors and showcase traditional music, dance, and arts.

The town and its educational institutions, Shantiniketan and Visva Bharati University, hold a significant place in Indian history and continue to inspire generations with Tagore's philosophy and contribution to literature and education.

What is the significance of the World Heritage List ?

- **Prestige and Recognition:** Being included on the World Heritage List is prestigious and brings international recognition and support for the preservation and conservation of the site.
- **Tourism:** It also often leads to increased tourism and economic benefits for the local communities.
- **Preservation:** The sites are repositories of past information and culture. Such protection makes them important for governments to pay attention to.

What are Indian sites included in the World Heritage List?

There are a total of 40 sites inscribed in the World Heritage List.

Cultural 32

1. Agra Fort (1983)
2. Ajanta Caves (1983)
3. Archaeological Site of Nalanda Mahavihara at Nalanda, Bihar (2016)
4. Buddhist Monuments at Sanchi (1989)
5. Champaner-Pavagadh Archaeological Park (2004)
6. Chhatrapati Shivaji Terminus (formerly Victoria Terminus) (2004)
7. Churches and Convents of Goa (1986)
8. Dholavira: a Harappan City (2021)
9. Elephanta Caves (1987)
10. Ellora Caves (1983)
11. Fatehpur Sikri (1986)
12. Great Living Chola Temples (1987, 2004)
13. Group of Monuments at Hampi (1986)
14. Group of Monuments at Mahabalipuram (1984)
15. Group of Monuments at Pattadakal (1987)
16. Hill Forts of Rajasthan (2013)
17. Historic City of Ahmedabad (2017)
18. Humayun's Tomb, Delhi (1993)
19. Jaipur City, Rajasthan (2019)
20. Kakatiya Rudreshwara (Ramappa) Temple, Telangana (2021)
21. Khajuraho Group of Monuments (1986)
22. Mahabodhi Temple Complex at Bodh Gaya (2002)
23. Mountain Railways of India (1999, 2005, 2008)
24. Qutb Minar and its Monuments, Delhi (1993)

25. Rani-ki-Vav (the Queen's Stepwell) at Patan, Gujarat (2014)
26. Red Fort Complex (2007)
27. Rock Shelters of Bhimbetka (2003)
28. Sun Temple, Konârak (1984)
29. Taj Mahal (1983)
30. The Architectural Work of Le Corbusier, an Outstanding Contribution to the Modern Movement (2016)
31. The Jantar Mantar, Jaipur (2010)
32. Victorian Gothic and Art Deco Ensembles of Mumbai (2018)

Natural 7

1. Great Himalayan National Park Conservation Area (2014)
2. Kaziranga National Park (1985)
3. Keoladeo National Park (1985)
4. Manas Wildlife Sanctuary (1985)
5. Nanda Devi and Valley of Flowers National Parks (1988, 2005)
6. Sundarbans National Park (1987)
7. Western Ghats (2012)

Mixed 1

1. Khangchendzonga National Park (2016)

Source:

https://pib.gov.in/PressReleseDetail.aspx?PRID=1923036

SEMICONINDIA FUTUREDESIGN ROADSHOW

This article covers "Daily Current Affairs" and the topic details "SemiconIndia FutureDESIGN Roadshow". The topic "SemiconIndia FutureDESIGN Roadshow" has relevance in the Science and Technology section for the UPSC CSE exam.

Relevance of the topic "SemiconIndia FutureDESIGN Roadshow"

For Prelims:

What is SemiconIndia FutureDESIGN Roadshow?

What are semiconductors?

Types of semiconductors

For Mains:

GS 3:Science and Technology

What is the role of semiconductors in the electronics industry?

Way Forward

Why in the news?

- Shri Rajeev Chandrasekhar, the Minister of State for Electronics & Information Technology and Skill Development & Entrepreneurship, will inaugurate the highly anticipated 3rd SemiconIndia futureDESIGN Roadshow at IIT Delhi. This event marks a significant milestone in the ongoing efforts of the Ministry of Electronics & Information Technology (MeitY) to foster innovation and skill development in the field of semiconductor design.
- Under the banner of MeitY, a series of roadshows are being organized across the country with the primary objective of nurturing the next generation of semiconductor designers. These roadshows seek to cultivate a vibrant ecosystem that promotes collaborative development and joint ownership of intellectual properties (IPs), with active participation from industry leaders.

What are semiconductors?

- Semiconductors are materials that have electrical conductivity between that of a conductor and an insulator. They are used in a wide range of electronic devices and are essential components of modern electronics. Semiconductors can be pure elements like silicon or germanium, or they can be compounds like gallium arsenide or cadmium selenide. These materials are carefully chosen for their specific properties to perform various functions in electronic devices.

What is the role of semiconductors in the electronics industry?

Semiconductors play a critical role in the electronic industry. They are a foundational element in the electronics industry:

- **Fabrication of electronic devices:** They are used to create electronic components such as transistors, diodes, and integrated circuits, which are essential building blocks for electronic devices like computers, smartphones, televisions, and many other consumer electronics.
- **Control the flow of current:** They are used to control the flow of electrical current, which makes them ideal for switching and amplifying electronic signals.
- **Use as sensors:** They can also be used as sensors to detect light, temperature, pressure, and other physical properties.
- **Use in solar cells:** They are used in solar cells to convert sunlight into electrical energy, and in LEDs (light-emitting diodes) to produce light.

Why is the Indian government focussing on semiconductor manufacturing?

- **Promote domestic manufacturing of electronics:** The Indian government is focusing on semiconductor manufacturing as a part of its broader strategy to promote domestic manufacturing as major electronic devices use semiconductors.
- **Reduce the country's dependence on imports:** China is an important semiconductor manufacturing country. India sources its requirements for semiconductors from China. In order to lower the trade deficit and reduce dependence, the Indian government is making a push.
- **Reduce supply chain disruptions:** India being an importing nation is vulnerable to supply chain disruptions caused as a result of trade tensions or geopolitical conflicts.
- **Create self-sufficiency and self-reliance:** This is an effort towards AtmaNirbhar Bharat to attain self-sufficiency in products and processes.
- **Create Employment opportunities:** It is a high-tech and capital-intensive industry that offers high-value job opportunities and generates significant economic benefits.
- **Augment Exports:** India can become a leader in semiconductor manufacturing that can be exported to other countries. This not only earns foreign exchange but also creates a durable market.
- **Create a thriving ecosystem:** The Indian government hopes to attract investments, boost innovation and R&D, and create a thriving semiconductor industry in the country.
- **Drive economic growth:** All the above processes of growth, employment, and exports can drive higher economic growth.

What are government schemes to promote semiconductor manufacturing?

The Indian government has launched several schemes and initiatives to promote semiconductor manufacturing in the country. Here are some of the notable ones:

- **Production-Linked Incentive (PLI) scheme for the electronics industry:** It offers incentives to eligible companies that manufacture electronic components and semiconductors in India. The scheme aims to promote domestic manufacturing, reduce import dependence, and increase exports. Under this scheme, the government has allocated a budget of INR 41,000 crore over five years, starting from 2020-21.
- **National Policy on Electronics (NPE):** The NPE is a comprehensive policy framework that aims to make India a global hub for electronics manufacturing. The policy was first introduced in 2012 and was revised in 2019. The policy outlines a roadmap for the development of the electronics industry in the country, with a focus on semiconductor manufacturing.
- **Modified Special Incentive Package Scheme (M-SIPS):** The M-SIPS was launched in 2012 and offers financial incentives to eligible companies that invest in the electronics industry in India. The scheme provides subsidies for capital expenditure, interest on loans, and reimbursement of certain taxes and duties. The M-SIPS scheme has been extended until 2023.
- **Electronics Manufacturing Clusters (EMC) scheme:** The EMC scheme was launched in 2012 and aims to create world-class infrastructure for electronics manufacturing in the country. The scheme provides financial assistance for the establishment of greenfield EMCs and the upgradation of existing industrial estates.

Sources:

https://www.semiconductors.org/semiconductors-101/what-is-a-semiconductor/
https://www.thehindu.com/opinion/op-ed/explained-indias-push-for-semiconductors/article66652916.ece

CRIME AND SECURITY IN THE AGE OF NEW TECHNOLOGIES

This article covers "Daily Current Affairs" and the topic details "Crime and Security in the age of New Technologies". The topic "Crime and Security in the age of New Technologies" has relevance in the Security section for the UPSC CSE exam.

Relevance of the topic "Crime and Security in the Age of New Technologies"

For Prelims:

What are new technologies like NFTs, AI and Metaverse?

For Mains:

GS 3:Science and Technology

What is the status of Crime and Security in the Age of New Technologies?

Way Forward

Why in the news?

MHA will organize the "G20 Conference on Crime and Security in the age of NFTs, AI and Metaverse".

What are new technologies like NFTs, AI and Metaverse?

New technologies like NFTs, AI, and the metaverse have gained significant attention and are transforming various aspects of our lives. Here's a brief overview of each:

Non-Fungible Tokens (NFTs):

- NFTs are unique digital assets that are verified on a blockchain, typically using cryptocurrency technology.
- Unlike cryptocurrencies such as Bitcoin or Ethereum, which are fungible (interchangeable), NFTs are distinct and cannot be exchanged on a one-to-one basis.
- NFTs have gained popularity in the art world, allowing artists to tokenize and sell their digital creations, such as artwork, music, videos, virtual real estate, and more.
- Each NFT contains a unique digital signature, making it one-of-a-kind and providing proof of ownership.

Artificial Intelligence (AI):

- AI refers to the simulation of human intelligence in machines that can perform tasks that would typically require human intelligence.
- AI technologies encompass various methods, including machine learning, deep learn-

ing, natural language processing, computer vision, and robotics.

- AI systems can analyze vast amounts of data, recognize patterns, make predictions, and automate processes.
- AI is being used in diverse fields such as healthcare, finance, transportation, customer service, and entertainment, and has the potential to revolutionize industries and improve efficiency.

Metaverse:

- The metaverse is a virtual reality-based collective virtual shared space, created by the convergence of virtually enhanced physical reality and physically persistent virtual reality.
- It is essentially a fully immersive, interactive, and interconnected virtual world. The metaverse allows users to engage with each other and digital content through avatars and virtual reality devices, blurring the boundaries between the physical and digital realms.
- It offers opportunities for social interaction, entertainment, commerce, and creative expression. Companies are working on developing metaverse platforms and applications that offer experiences ranging from gaming to virtual meetings, shopping, and more.

What is the status of Crime and Security in the Age of New Technologies?

The intersection of NFTs (Non-Fungible Tokens), AI (Artificial Intelligence), and the metaverse presents both opportunities and challenges in the realm of crime and security. Let's explore some key aspects:

NFTs and Intellectual Property Crime:

- NFTs have gained significant popularity and this has also led to an increase in intellectual property theft, where unauthorized copies of digital creations are minted as NFTs and sold without the original creator's consent.
- Protecting intellectual property rights in the digital space becomes crucial, and legal frameworks may need to adapt to address these new challenges.

AI and Cybersecurity Threats:

- The integration of AI technologies in various aspects of our lives also introduces new cybersecurity risks.
- AI algorithms can be exploited by cybercriminals to conduct more sophisticated attacks, such as automated spear-phishing campaigns or AI-generated deepfake content for social engineering.

Fraud and Scams in the Metaverse:

- The metaverse, a virtual reality space where people can interact with one another and digital assets, opens up opportunities for fraud and scams.
- Criminals can create counterfeit NFTs or virtual items and trick users into purchasing them.
- Additionally, identity theft and financial fraud can occur within the metaverse, where individuals' virtual identities and financial transactions are vulnerable to exploitation. Developing secure protocols and user education are crucial to mitigate these risks.

AI-powered Surveillance and Privacy Concerns:

- AI technologies are increasingly used for surveillance purposes, such as facial recognition systems and predictive policing algorithms.
- While these tools can enhance security, they also raise concerns about privacy and potential misuse.
- Striking a balance between public safety and protecting individual rights is a key challenge as AI surveillance capabilities expand.

Money Laundering and Cryptocurrency:

- The rise of cryptocurrencies, often used in NFT transactions, has raised concerns about money laundering and illicit financial activities.
- Cryptocurrencies offer a degree of anonymity, making it challenging to trace transactions and identify the individuals involved.
- Regulators and law enforcement agencies must adapt to monitor and regulate cryptocurrency activities effectively.

Way Forward

Addressing these challenges requires collaboration among various stakeholders, including technology developers, policymakers, legal experts, and law enforcement agencies. Striking a balance between innovation, security, and privacy is crucial in the age of NFTs, AI, and the metaverse to ensure a safe and trustworthy digital environment.

Source:

https://pib.gov.in/PressReleseDetail.aspx?PRID=1923790