

# FWD

FORTUNE WEEKLY DIGEST



► Social Media & Mental Health   ► Great Nicobar Project   ► Railway Accidents & KAVACH

14<sup>th</sup> JUNE - 22<sup>nd</sup> JUNE, 2024

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## EDITOR'S NOTE

As UPSC aspirants, it is essential to stay updated on current affairs to excel in the examination. This **Fortune Weekly Digest (ForWarD)** brings you the latest news and developments from around the world, carefully curated and analyzed to help you prepare for the Civil Services (Main) Examination.

We understand that time is precious, and we have made sure to present the information in a concise and easy-to-understand manner.

The magazine is divided into different sections. Mains relevant topics have been covered in detail with a UPSC previous year question perspective. The jot downs are examples and interesting facts to enrich your answer writing. Cherrypicks has some key words from the week, helpful again in answer writing and essay. We have also included essay topics and sample questions to help you gauge your preparation.

We have designed this magazine to best supplement the daily current affairs notes we have launched by the name of **FIND (Fortune IAS News Daily)** and **FINDER (Fortune IAS News Daily Explainer)** and the **Fortune Prelims Precise** monthly compilation. This magazine will be explained in detail and your queries addressed in a live class we conduct.

At a time when there is no dearth of current affairs materials, our hope is help you get a one-stop solution for all your current affairs needs.

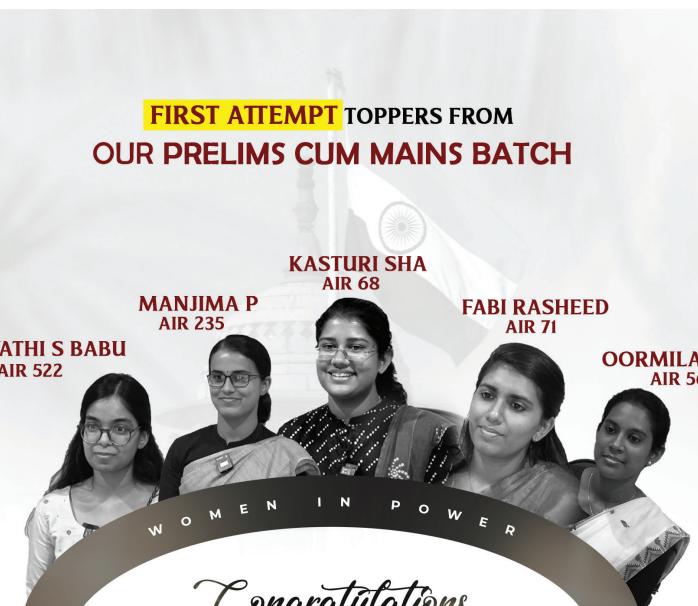
This magazine is a work in progress and your feedback will be appreciated.

We hope that this magazine will serve as a valuable resource for your exam preparation and contribute to your success in the UPSC examination.

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**FIRST ATTEMPT TOPPERS FROM  
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# NTA CONTROVERSY AND NEW ACT

**Syllabus: GS II - Statutory, regulatory and various quasi-judicial bodies**

## PYQ MAPPING

**Q) For achieving the desired objectives, it is necessary to ensure that the regulatory institutions remain independent and autonomous." Discuss in the light of the experiences in recent past. (2015)**

### SHORT TAKES

- » **National Recruitment Agency:** Announced in the 2020-21 Budget with an allocation of over Rs 1,500 crore for its first three years, the National Recruitment Agency (NRA) was established to conduct a **computer-based Common Eligibility Test (CET) for Non-Gazetted posts**. Despite its formation nearly four years ago, the NRA has yet to conduct the proposed tests, remaining largely inoperative and understaffed.
- » **Standard Operating Procedures (SOPs):** Detailed, written instructions designed to achieve uniformity in the performance of specific functions. They ensure that processes are carried out consistently and accurately, minimising errors and ensuring quality and compliance with regulations

## INTRODUCTION

- » The NEET controversy, marked by routine paper leaks and incorrect results, has eroded trust in the **National Testing Agency (NTA)** and is linked to aspirant suicides.
- » The cancellation of the NET examination further questions the NTA's integrity, revealing flawed policies governing competitive exams.
- » The Public Examinations (Prevention of Unfair Means) Act, 2024, was enacted to combat cheating and restore public trust in the education system.

## ABOUT NATIONAL TESTING AGENCY

- » **Establishment:** The body was set up in **2017** as an autonomous and self-sustained testing organisation under the Department of Higher Education, Ministry of Education after cabinet approval. It was established under the **Societies Registration Act, 1860**.
- » **Features:**
  - » The NTA is non-statutory testing agency led by a governing body
  - » NTA comes under the purview of the Right to Information Act (RTI).
- » **Function:** The NTA is responsible for **conducting entrance examinations** for admission to higher educational institutions (universities, colleges, etc.) and fellowship programs.
- » **Composition:** The NTA's governing body comprises a team of **14 persons**, including directors from esteemed institutions such as three IITs, two NITs, and two IIMs, along with other educational and medical experts and bureaucrats.
- » **Exams Conducted:**
  - » Major entrance exams facilitated by NTA include:
    - National Eligibility Test (NET) for lectureship and research positions.
    - Joint Entrance Examination (JEE) Main for engineering programs.
    - National Eligibility cum Entrance Test (NEET) for undergraduate medical programs.
    - Common Management Admission Test (CMAT) for admission to Management Programme(s) in India.
    - Graduate Pharmacy Aptitude Test (GPAT) is conducted for admission of Pharmacy graduates into the Masters programmes



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## CORE ISSUES AND ALLEGATIONS

② **NEET Allegations 2024:** NEET is the largest exam under the 'One Exam, One Nation' model due to the number of candidates (over 20 lakh applicants), languages, and diversity.

» **Errors:**

- Instances like the **distribution of the wrong question paper** at some centres.
- Both **primary and back-up question papers were accessed** simultaneously without clear emergency protocols.
- Wrong normalisation methodology for awarding "**grace marks**" for such candidates.

» **Consequences**

- The distribution error led to panic among candidates. Incorrect papers were retrieved, and the correct ones were distributed without compensating for lost time.
- Exceptionally huge grace marks were awarded for the time lost, which was later scrapped due to a public outcry.

» **Way Forward**

- **Statement of Procedures(SOPs):** The NTA must devise SOPs similar to those of the IITs to stabilise cut-offs, avoid inflated scores and ranks, and achieve a long-tail distribution.
- **Adopting a professional war-room culture:** Necessary to facilitate quick and sound decision-making throughout the examination process.

② **Cancellation of UGC NET June 2024:** The Centre announced the cancellation of the examination, a day after conducting it due to **indications of compromised integrity**. A fresh examination will be scheduled, and the matter has been referred to the CBI for investigation.

② **Postponement of CSIR NET and NEET PG Entrance, 2024:** NTA cited **unavoidable circumstances as well as logistic issues** for the postponement of these CSIR-NET. The Health Ministry's **National Board of Exams** also cancelled NEET-PG amidst all the controversy.

## THE PUBLIC EXAMINATIONS (PREVENTION OF UNFAIR MEANS) ACT, 2024

- o **Enforcement:** The Public Examinations (Prevention of Unfair Means) Bill, 2024 was passed by Parliament on **February 9** and received the President's assent on **February 12**. However, it was notified by the Union government to **come into effect from June 21** only after all the NEET controversy.
- o **Objective:** To **prevent unfair means** in public examinations conducted by the designated authorities and ensuring integrity and fairness in the assessment processes.

## ANALYSIS OF THE ACT

• **Public Examinations:**

⑤ **Definition:** "Public examination" is any examination conducted by entities listed in the Schedule or any other authority notified by the Central Government.

⑤ **Authorities:** The Act's schedule includes the exams conducted by:

- Union Public Service Commission (UPSC)
- Staff Selection Commission (SSC)
- Railway Recruitment Boards (RRBs)
- Institute of Banking Personnel Selection (IBPS)
- National Testing Agency (NTA)

- Ministries or Departments of the Central Government, including their attached and subordinate offices, involved in the recruitment of staff.
- Such other authority as may be notified by the Central Government

• **Candidate:**

⑤ **Definition:** The law defines a "candidate" in public examinations as either "a person who has been granted permission by the public examination authority to appear in the examination" or "a person authorised to act as a scribe on behalf of another candidate in the examination."

### • Service Provider:

- ◎ **Definition:** The Act defines a service provider as any entity engaged by the public examination authority to conduct public examinations and their affiliates or subcontractors providing computer resources or materials.

### • Investigation:

- ◎ An officer not below the rank of Deputy Superintendent of Police or Assistant Commissioner of Police shall investigate any offence under this Act.
- ◎ Additionally, the central government can refer the case to any central investigating agency

### • Actions Constituting Unfair Means:

**Section 3** of the Act specifies several actions that are deemed to constitute unfair means in public examinations **for monetary or wrongful gain**, including:

- ◎ Leakage of question papers or answer keys.
- ◎ Unauthorised access or possession of question papers or response sheets.
- ◎ Tampering with answer sheets or response sheets.
- ◎ Providing solutions to candidates during examinations.
- ◎ Assisting candidates directly or indirectly.
- ◎ Tampering with documents necessary for candidate short-listing or merit determination.
- ◎ Tampering with computer networks, resources, or systems.
- ◎ Creating fake websites or conducting fake examinations.
- ◎ Issuing fake admit cards or offer letters for monetary gain.

### • Designation as Public Servants:

The Act designates the chairperson, members, officers, and other employees of the public examination authority as 'public servants' within the meaning of Bharatiya Nyay Sanhita

- ◎ **Legal Protection:** Section 14 ensures no suit, prosecution, or other legal proceedings can be initiated against any public servant for actions done in good faith or intended in the discharge of their official functions or exercise of their powers.

- The first provision to Section 14 states that public servants of any public examination authority are subject to administrative action according to the service rules of the authority.

- The second provision allows for proceedings against public servants where there is a *prima facie* case of an offence under the Act.

### • Stringent punitive clauses:

Section 9 States that all offences under this Act shall be cognizable, non-bailable, and non-compoundable.

- ◎ **Individuals:** Individuals found guilty of committing offences under the Act face imprisonment for a minimum of three years, extendable up to five years, along with a fine of up to Rs.10 lakh.

- Defaulting on the fine may lead to additional imprisonment, as per the provisions of the Bharatiya Nyay Sanhita, 2023 (BNS), which will replace the IPC starting July 1.

- ◎ **Service Providers:** Act imposes a fine on service providers of up to Rs.1 crore.

- Service providers are also liable to pay the proportionate cost of the examination and may be barred from conducting public examinations for four years.

- ◎ **Burden of Proof: Section 10(4)** shifts the burden of proving innocence to the accused.

- Individuals can avoid punishment if they prove that the offence was committed without their knowledge and that they took due diligence to prevent it.

### • Bona fide candidates:

Bona fide candidates and their scribes, meaning genuine and honest test-takers, are exempt from the Public Examinations (Prevention of Unfair Means) Act.

- ◎ This Act targets those who facilitate cheating, not the students themselves.
- ◎ The Act clarifies that even students who violate exam rules will not be penalised under its provisions.
- ◎ Instead, the relevant examination authority will take appropriate disciplinary action.

### • Rules:

Post enforcement of the Act, the rules have been notified by the Ministry of Personnel, Public Grievances and Pensions on June 24, 2024.

### • Computer-Based Test (CBT) Parameters:

The Rules comprehensively outline the procedures for CBT, encompassing candidate registration, centre allocation, admit card issuance, question paper handling, answer evaluation, and final recommendations.

## • National Recruitment Agency:

The central government's National Recruitment Agency shall prepare the norms, standards, and guidelines for CBTs in consultation with stakeholders. Once finalised, these norms will be notified by the Centre.

## • Reporting Framework:

The Rules outline a structured framework for reporting incidents of unfair means:

- The venue in-charge prepares a detailed report (Form 1) along with findings if any incident occurs.

• This report is submitted to the Regional Officer through the Centre Coordinator.

• If a *prima facie* case for filing a First Information Report (FIR) is established, the venue in-charge initiates necessary action.

• In cases where lower-level personnel fail to report incidents, the Centre Coordinator reports the matter (Form 2) to the Regional Officer.

• The Regional Officer conducts an inquiry and directs the Centre Coordinator to file an FIR if a service provider representative at the examination centre level is found involved.

## NEED FOR THE ACT

• **Addressing Paper Leaks:** This act is prompted by the rampant issue of paper leaks in recruitment exams nationwide. These leaks have disrupted government job recruitments, impacting millions of applicants and delaying crucial hiring decisions.

» **Example:** Over the past five years, 48 instances of paper leaks across 16 states have been identified affecting 1.51 crore applicants vying for about 1.2 lakh government job vacancies

• **Legislative Void:** Currently, there is no specific law addressing malpractices in public examinations, hindering effective prosecution of those involved. This gap leaves the examination system vulnerable to exploitation.

• **Ensuring Fairness and Credibility:** The Act aims to enhance transparency and fairness in public exams, reassuring aspirants that their efforts will be recognized. By deterring manipulation, it seeks to restore public trust in examination integrity.

• **Safeguarding Youth and Future Prospects:** Beyond immediate disruptions, the Act aims to secure the future prospects of youth by ensuring exams are conducted securely and impartially.



## ISSUES WITH THE ACT

- **Delayed notification:** The act passed by Parliament in February and receiving Presidential assent shortly thereafter was notified only in June. This has raised concerns about the government's rationale despite the Act's significance in addressing paper leaks and exam malpractices.
- **Delayed rule framing:** Section 16(1) mandates the Centre to formulate rules to operationalize the provisions of the Public Examinations (Prevention of Unfair Means) Act, 2024, through notification in the Official Gazette.
  - » Though passed in February, the late notification of the Act raises concerns about timely rule preparation and without the requisite rules in place, the effective implementation of the Act could be hindered.
- **Non Retrospective Nature:** The Act does not apply retrospectively, meaning it cannot address past incidents of malpractice in public examinations that occurred before its enactment and notification and cannot address recent question paper leaks in NEET-UG and UGC-NET exams.
- **Ambiguity in Candidate Accountability:** The Bill exempts "candidates" from legal action under its provisions, leaving them under the administrative measures of public examination authorities. However, the government's position on leniency towards candidates implicated in recent question paper leaks and securing undeserved ranks remains unclear.
- **Potential Government Overlook:** The definition of institutions excludes the public testing agencies like National Testing Agency from its purview, which is currently under scrutiny for its omissions and commissions. In response to demands from students and parents, the central government had to replace the NTA director-general.
- **Questionable Effectiveness:** The effectiveness of the act is questionable, as existing state laws against cheating in public examinations in Uttarakhand, Gujarat, Rajasthan, Chhattisgarh, Uttar Pradesh, and Andhra Pradesh have not proven to be effective deterrents.

## WAY FORWARD

- ✿ **Fast-Track Rule Formulation:** Prioritise the development and notification of clear and comprehensive rules outlining the Act's operational procedures.
- ✿ **Ensure transparency:** By involving stakeholders like examination boards, educational institutions, and student representatives in the rule-making process.
- ✿ **Strengthen Candidate Regulations:** While protecting innocent candidates is important, create clear guidelines with sanctions for those actively involved in acquiring or utilising leaked exam materials.
- ✿ **Robust Enforcement Mechanisms:** Allocate adequate resources for establishing dedicated investigation and prosecution units to handle exam malpractice cases effectively.
- ✿ **Public Awareness Campaigns:** Launch nationwide campaigns to educate students, parents, and the public about the Act's provisions and the consequences of cheating.
- ✿ **Model law:** The Act should serve as a model draft for States to adopt at their discretion, aiding them in preventing criminal elements from disrupting State-level public examinations.

## CONCLUSION

The Act's effectiveness hinges on overcoming its limitations. While retrospective application may be a legal hurdle, amendments for serious cases could show a commitment to accountability. Public awareness campaigns are crucial for fostering academic integrity. Ultimately, the Act's success depends on swift rule formulation, robust enforcement, and sustained vigilance to safeguard the integrity of public examinations in India.

## SAMPLE QUESTION

**Q)** The Public Examinations (Prevention of Unfair Means) Act, 2024, has been introduced to address the rampant issue of cheating in public examinations. Analyse its potential effectiveness in curbing exam malpractices and suggest additional measures to ensure a level playing field in public examinations. **(10 marks)(150 words)**

# SOCIAL MEDIA & MENTAL HEALTH

## ***Syllabus: GS II - Health***

## PYQ MAPPING

**Q) In order to enhance the prospects of social development, sound and adequate health care policies are needed particularly in the fields of geriatric and maternal health care. Discuss (2020)**

## SHORT TAKES

- **Digital Services Act (DSA)** - It was passed by the European Union (EU) on February 17, 2024. It aims to make the internet safer, fairer, and more transparent for users.. Key provisions of the DSA include **requirements for platforms to take proactive measures to address illegal content** (such as hate speech and terrorist propaganda), implement **transparency measures** for advertising, and establish mechanisms for user complaint handling and dispute resolution.

## WHY IN NEWS

American Surgeon General Dr Vivek Murthy is advocating for warning labels on social media platforms due to concerns about their impact on adolescents' mental health. He said that these platforms pose significant mental health risks, similar to the way tobacco products were identified as health risks in the 1960s, leading to warning labels being mandated on cigarette packaging.

## INTRODUCTION

Social media has become an integral part of modern life, profoundly influencing how individuals interact, communicate, and perceive the world around them. While it offers unprecedented connectivity and access to information, the impact of social media on mental health has increasingly drawn attention in recent years.

# IMPACT OF SOCIAL MEDIA ON MENTAL HEALTH

## Positive Impacts

## Social Capital:

Social networks facilitate the formation and upkeep of social capital. This enables individuals to access social support from fellow members. These connections are associated with positive social outcomes such as increased trust and reciprocity, which contribute to better overall health.

**Eg** - Mutual friendships and rewarding social interactions, on social media reduced stress during the COVID-19 pandemic.

## Access to Information and Resources:

Social media provides a vast amount of information on mental health awareness, resources, and support groups. This accessibility can empower individuals to seek help, learn coping strategies, and find relevant services.

### ✓ Reduced Stigma:

By sharing personal experiences and stories related to mental health challenges, social media can contribute to reducing the stigma associated with mental illnesses. Open discussions on platforms can normalise seeking help and encourage others to share their own struggles.

**Eg-** The hashtag campaign **#BellLetsTalk**, initiated by Bell Canada, takes place annually and aims to raise awareness about mental health issues and reduce stigma surrounding them.

## Creativity and Expression:

Platforms like Instagram, YouTube, and TikTok provide outlets for creative expression through art, music, videos, and writing. Engaging in creative activities can be therapeutic and beneficial for mental health.

## Community Building:

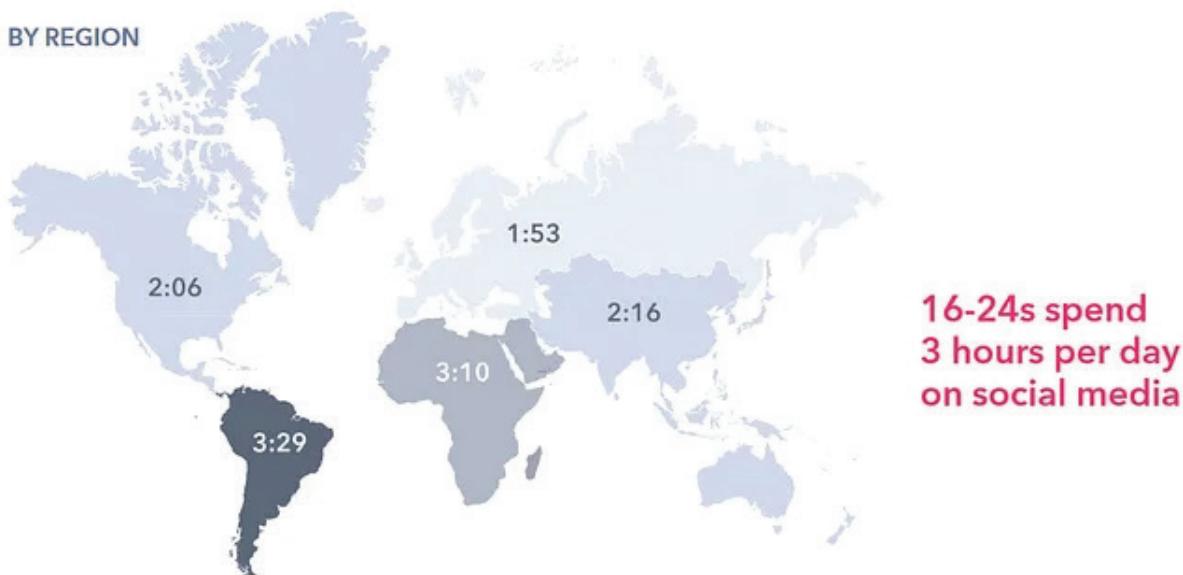
Online communities focused on specific mental health issues (e.g., anxiety, depression, eating disorders) provide a safe space for individuals to share experiences and seek advice from others who understand their struggles.

**Eg - 7 Cups**, an online platform provides free emotional support and counselling through trained listeners and licensed therapists.

## NEGATIVE IMPACTS

### Negative Impacts

- **Comparison and Self-Esteem:**
  - Frequent exposure to meticulously crafted and idealised posts on social media can prompt social comparison. This may result in individuals measuring their lives, appearances, and accomplishments against others, potentially causing feelings of inadequacy and reduced self-esteem.
- **Cyberbullying and Online Harassment:**
  - Social media platforms can foster environments where cyberbullying and online harassment thrive. Being subjected to hurtful comments, trolling, or cyberbullying can profoundly affect one's mental health and well-being.
  - Eg- cyberbullying of actor Leslie Jones
  - Recent data from the **Centers for Disease Control and Prevention (CDC)** shows that **14.9 percent of adolescents** in the United States have been cyberbullied, and **13.6 percent** have attempted suicide
- **Depression:**
  - Despite the social nature of social media, excessive use can lead to feelings of loneliness and depression. People may feel disconnected from real-life interactions and suffer from "virtual" relationships.
  - Eg- Death of actor Sushant Singh Rajput
  - According to UNICEF, 1 in 7 Indians aged 15 to 24 years feels depressed.
- **Body Image Issues:**
  - Exposure to idealised body images on social media can contribute to body dissatisfaction and body image issues, particularly among young adults and teenagers.
  - Eg- Filters and photo editing apps make it easy to create perfectly edited images. But the gap between edited images and reality can lead to anxiety and shame.
- **Addiction Issues:**
  - Individuals compulsively checking their social media accounts throughout the day, may experience heightened stress levels, disrupted sleep patterns, and decreased productivity in daily life. Gradually Individuals may feel anxious or restless when unable to do so leading to addiction.
- **Time Spend on Social Media(in Hrs) :**



Question: Roughly how many hours do you spend engaging with/connected to social networks or services during a typical day?

Source: GlobalWebIndex 2012-2018 (avg. conducted across each wave of research)

Base: 61,196 (2012), 156,876 (2013), 168,045 (2014), 197,734 (2015), 211,023 (2016), 370,052 (2017), 113,932 (Q3 2018), Internet Users aged 16-64

## SOLUTIONS

- ✿ **Use of regulating algorithms:** The government could consider regulating some of the advanced algorithms that social media corporations use to increase user time expenditure and profits. **For Eg-** regulate "infinite swiping", a design feature that continuously pushes forward new content after a user has exhausted content from the people they follow.
- ✿ **Guidelines for Screen Time:** The American Academy of Pediatrics recommends avoiding all social media use in children younger than 18 months. For children aged 2 to 5, screen time should be limited to 1 hour a day. Also include tobacco-like warning labels for social media.
- ✿ **Promotion of Positive Content:** Encourage the creation and dissemination of positive, inspiring, and constructive content on social media platforms. **Eg -** Instagram introduced its Guides feature in 2020, that included uplifting and supportive content for users, such as tips on mindfulness and self-care practices.
- ✿ **Regulation and Policy Development:** Implement regulations and guidelines that promote responsible social media use and protect user well-being. This may include measures to combat cyberbullying, regulate harmful content, enforce data privacy protections, and promote transparency in algorithms that impact user behaviour. **Eg-** Digital Services Act put forth by European Union.
- ✿ **User Empowerment Tools:** Provide users with tools and features that empower them to manage their online experiences effectively. This includes options for **controlling privacy settings, managing notifications, filtering content, and setting time limits** on social media usage.
- ✿ **Support for Mental Health Services:** Increase accessibility to mental health resources and support services. Collaborate with mental health professionals to provide online counselling, support groups, and crisis intervention services tailored to individuals affected by social media-related issues like cyberbullying or digital addiction.

## CONCLUSION

By adopting a multifaceted approach that combines education, support services, regulation, and industry collaboration, it is possible to mitigate the negative impact of social media on mental health while harnessing its positive potential for communication, connectivity, and information sharing.

### SAMPLE QUESTION

**Q) Discuss the impacts of social media on mental health. Enumerate the measures that can be taken to tackle its harmful effects. (15 marks)(250 words)**



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## G7: ANALYSIS

**Syllabus: GS II - International relations**

### PYQ MAPPING

**Q) Quadrilateral Security Dialogue (Quad)' is transforming itself into a trade bloc from a military alliance, in present times – Discuss. (2020)**

**Q) How will I2U2 (India, Israel, UAE and USA) grouping transform India's position in global politics? (2022)**

### SHORT TAKES

- **Partnership for Global Infrastructure and Investment (PGII)-** It is a developmental initiative designed to reduce the infrastructure deficit in developing nations and contribute to advancing global progress on Sustainable Development Goals (SDGs). This infrastructure plan was initially introduced in June 2021 at the G7 Summit held in the United Kingdom.
- **India–Middle East–Europe Economic Corridor (IMEC)-** It is a project aimed at improving connectivity and fostering economic integration among Asia, the Arabian Gulf, and Europe. It encompasses railway and shipping routes, data cables, energy pipelines, and road networks.

### WHY IN NEWS

Recently, the 50th G7 Summit was hosted in Italy's Apulia region at Borgo Egnazia from June 13-15, 2024. India was invited as a guest as part of the "G7-Outreach Summit"

### INTRODUCTION

The Group of Seven (G7) is an intergovernmental political and economic forum consisting of **Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States**. It was formed in the 1970s, primarily as a forum for discussions among the world's major industrial nations on economic policies and global issues.

### HISTORY

- The G7 started as the **Group of Six (G6) in 1975**, comprising the United States, France, Italy, Japan, the United Kingdom, and West Germany. The nations aimed to address economic issues of mutual concern, particularly after the collapse of the Bretton Woods system and during a period of economic instability.
- The leaders of the G7 countries met for the first time in 1975 in Rambouillet, France. This marked the beginning of the annual summits among the heads of state.
- **Canada joined the group in 1976**, making it the G7.
- The first talks between the then European Community and the G7 took place in London in 1977, and since the Ottawa Summit of 1981, the European Community (now European Union) has been part of all working sessions.
- **Russia began participating in G7 summits in 1998**, at the Birmingham Summit forming the G8, but was **suspended in 2014** following its annexation of Crimea. Since then, the group has returned to being the G7.

### FUNCTIONING OF G7

- **Informal Structure:** Unlike formal international organisations, the G7 has no permanent secretariat or formal decision-making authority. Decisions are made through consensus and are non-binding.
- **Annual Summits:** The G7 holds annual summits where leaders from member countries gather to discuss and coordinate policies on a wide range of global issues.
- **Leadership Rotation:** The presidency of the G7 rotates annually among its member countries. The presidency sets the agenda for the summit and leads discussions. Eg: 2023- Japan; 2024- Italy
- **Outreach and Engagement:** In addition to the core members, the G7 often invites leaders from other countries and international organisations to participate in discussions. This outreach helps broaden the scope of the summit's impact and can include dialogue with leaders from emerging economies and regions facing specific challenges.

**Eg-** Participation of Indian PM Narendra Modi, Pope Francis etc in G7 summit 2024

- ➡ **Dialogue and Cooperation:** The primary function of the G7 is to foster dialogue and cooperation among member countries on global challenges. Discussions at G7 summits can lead to joint statements, declarations, and commitments that guide international policies and initiatives. Eg- Decision to commit 50 billion \$ package for Ukraine.

## RECENT OUTCOMES OF APULIA SUMMIT 2024 (50TH G7 SUMMIT)

- 👉 **\$50 billion in aid:** The most significant achievement was a \$50 billion financial package for Ukraine. This will be funded by leveraging interest earned on frozen Russian assets held by G7 countries.
- 👉 **Accelerating Clean Energy:** G7 members recommitted to ambitious goals set at COP28, including tripling renewable energy capacity and doubling global energy efficiency by 2030.
- 👉 **PGII (Partnership for Global Infrastructure and Investment):** Countries have committed to mobilise \$600 billion by 2027 to support infrastructure projects in developing and middle-income nations.
- 👉 **Infrastructure projects:** The G7 pledged to extend support for infrastructure initiatives such as the Lobito Corridor in Central Africa, as well as the Luzon(philippines) and Middle Corridors(Europe-Asia).They also committed to promote **India -Middle East- Europe economic corridor.**
- 👉 **Phasing Out Coal:** For the first time, the G7 pledged to phase out unabated coal power generation in the first half of the 2030s.
- 👉 **Artificial Intelligence:** An action plan on the use of AI in the world of work and develop a brand to support the implementation of the International Code of

## RELEVANCE OF G7

## Economic Powerhouses:

- » The G7 countries represent some of the largest and most advanced economies in the world. They control 60% of global wealth and 46% of global GDP. Their collective economic strength allows them to influence global economic policies.
- » Eg- The G7 finance ministers agreed on a global minimum corporate tax rate of at least 15%. Subsequently, in 2021, more than 136 countries, representing over 90% of global GDP, endorsed a framework for international tax reform, including the establishment of a global minimum tax rate.

## Global Governance:

- » The G7 serves as a forum for leading democracies to discuss and influence global governance issues such as climate change, global health, cybersecurity, and human rights
- » Eg- The G7 played a crucial role in advocating for the adoption and implementation of the Paris Agreement, which was negotiated in 2015 and aims to limit global temperature rise to well below 2 degrees Celsius above pre-industrial levels.

## Crisis Response:

- » The G7 has historically played a crucial role in responding to global crises, such as financial downturns, humanitarian emergencies, and health pandemics. Member countries' collective resources and diplomatic influence can mobilize swift and coordinated responses to mitigate global challenges.
- » Eg- During the global financial crisis that began in 2007, the G7 countries played a crucial role in coordinating a global response to stabilise financial markets and prevent a deeper economic downturn.

## Platform for Dialogue:

- » The G7 provides a platform for diplomatic dialogue among like-minded countries, fostering trust, cooperation, and understanding on diverse geopolitical issues.
- » Eg- Since Russia's annexation of Crimea in 2014 and subsequent involvement in Ukraine. The G7 has been instrumental in coordinating sanctions against Russia in response to its actions in Ukraine. It has provided a forum for member countries to engage in diplomatic dialogue with Ukraine.

## **Leadership on Global Challenges:**

- » As a group of advanced economies with significant technological and scientific capabilities, the G7 is positioned to lead efforts on tackling complex global challenges like climate change, biodiversity loss, and technological innovation.

## LIMITATIONS

### ● Divergence on Geopolitical issues:

- » The G7 countries, despite their alignment on many economic and political issues, often exhibit divergence on geopolitical matters. Eg- Divergence of G7 countries in approach towards China, climate policy implementation, israel-palestine issue etc.

### ● Representation Issues:

- » The G7 represents a small subset of the global community. This limited representation leads to criticisms of elitism and exclusion, as it excludes emerging economies and regions that are increasingly influential in global affairs. Eg- Absence of emerging economies like China, India etc

### ● Effectiveness in Addressing Global Challenges:

- » The G7's relevance and effectiveness in relation to emerging global issues and the evolving landscape of international relations is diminishing for its inability to adapt and be responsive to these challenges.
- » Eg- G7 was criticised for its delayed response and unequal distribution of vaccines during COVID 19, prompting concerns about its capacity to tackle any global health issues.

### ● Shift in Economic Centers of Gravity:

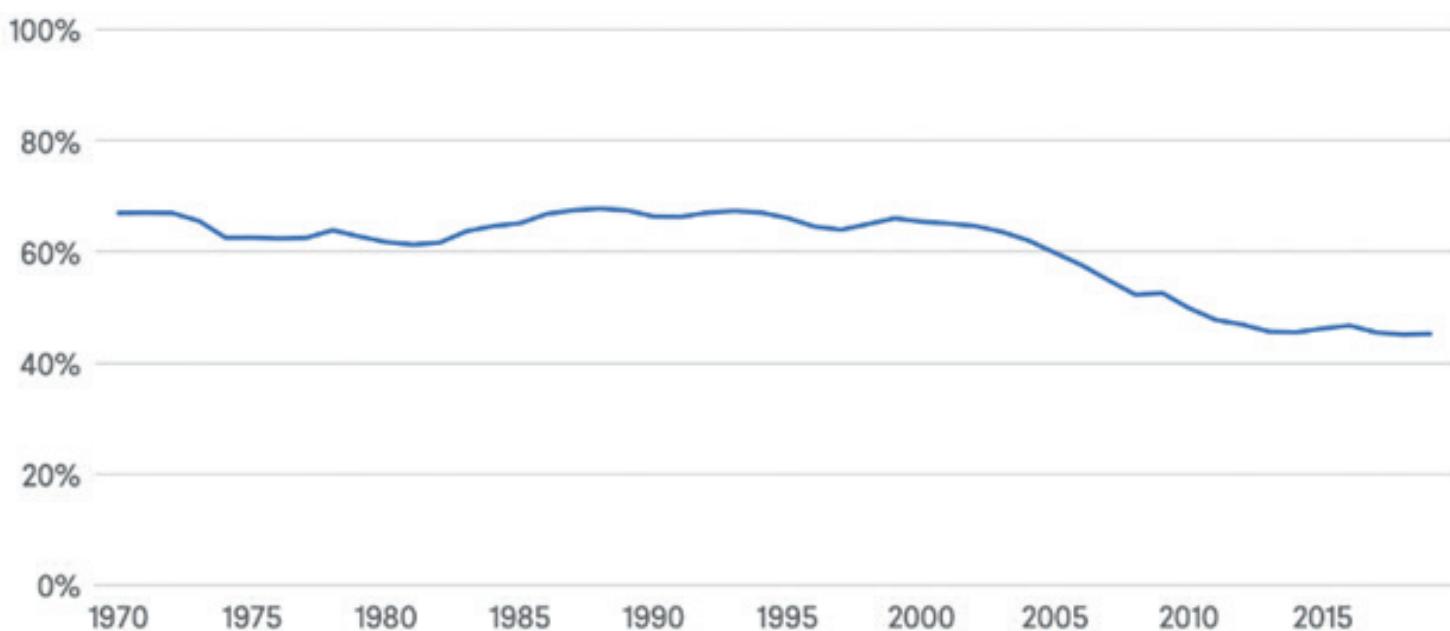
- » The rise of new economic centres of gravity, particularly in Asia and other emerging markets, has reshaped global economic dynamics. These regions have become engines of growth, investment, and innovation, challenging the G7's traditional dominance.

### ● Inefficiency in addressing climate change issues:

- » Despite shared commitments to climate action, G7 countries adopt inconsistent or contradictory domestic policies related to energy transition, carbon pricing, subsidies, and environmental regulations. They being the largest source of legacy emissions, has not made any progress in addressing the issue.
- » Eg- some member countries' targets for reducing greenhouse gas emissions by 2030 are not aligned with limiting global temperature rise to 1.5 degrees Celsius, as outlined in the Paris Agreement.

## The G7's Share of Global GDP Has Declined

G7 countries' aggregate GDP as a percentage of the world total (current U.S. dollars)



## SHOULD INDIA BE A PART OF G7?

### Arguments in Favour

- ✓ **Economic Opportunities:** G7 countries represent some of the world's largest economies and trading partners. India can leverage its participation to strengthen economic ties, attract investments, and promote trade relations.
- ✓ **Strategic Partnerships:** G7 membership allows India to build strategic partnerships with key countries on issues such as security, climate change, technology, and global health. These partnerships can facilitate cooperation on shared concerns and enhance India's diplomatic influence. **Eg-** Helps to counter the growing threat of China
- ✓ **Global Influence:** Being part of the G7 meetings allows India to contribute to global economic discussions and decision-making processes. It helps India to voice the concerns of the **Global South**.
- ✓ **Technology and Innovation:** Participation in the G7 can facilitate collaboration with advanced economies in technology and innovation sectors. This includes partnerships in research and development, digital economy initiatives, and skills development in emerging technologies.
- ✓ **Development Aid and Investment:** G7 countries are major providers of development aid and investment globally. India can benefit from access to financial resources, technology transfers, and expertise in areas crucial for its development agenda, such as infrastructure, healthcare, and education.
- ✓ **Common ideals:** India is the largest democracy. All G7 members are democratic. India is also a votary of rules-based global order. India has grown to become the 3rd largest GDP and 4th largest military spender.

### Arguments against

- ▼ **Issue of inclusiveness:** India currently engages in other multilateral groupings such as BRICS (Brazil, Russia, India, China, South Africa), SCO (Shanghai Cooperation Organisation), and G20. These forums often include emerging economies and reflect India's preference for a more inclusive global governance framework compared to G7.
- ▼ **Different Priorities:** The G7 agenda may not always align with India's national priorities. For instance, issues like climate change and global trade regulations may be important but not necessarily the highest priority compared to domestic developmental challenges, security concerns, or regional stability issues.
- ▼ **Flexibility in Alliances:** By not being bound by G7 commitments, India retains flexibility in forming alliances and partnerships based on its specific interests and evolving geopolitical dynamics. This flexibility allows India to pursue bilateral and regional agreements that may better serve its strategic goals. **Eg-** India retaining relations with UAS and Russia simultaneously.
- ▼ **Avoiding Dominance of Western Powers:** G7, dominated by Western powers, may not adequately represent the diverse interests and perspectives of countries from other regions, including India. Not being part of the G7 allows India to avoid potential dominance or influence of Western agendas on global economic and political issues.

### WAY FORWARD

- ✿ **Inclusivity:** Experts have suggested restructuring the G7 to G7+ to include a euro-zone representative and to accommodate China, India, and Brazil. This would more accurately mirror the current global economic landscape in terms of both GDP and population.
- ✿ **Adaptation to Changing Global Dynamics:** Recognize and respond to shifts in global economic power and geopolitical dynamics. This might involve revising membership criteria, adapting decision-making processes, or exploring alternative formats for global economic governance.
- ✿ **Implementation and Accountability:** Ensure that commitments made at G7 meetings are followed through with concrete actions. Establish mechanisms for monitoring and accountability to track progress on agreed-upon goals and initiatives.
- ✿ **Multilateralism:** Advocate for and support multilateral approaches to global challenges, reinforcing the importance of international cooperation and rules-based systems.
- ✿ **Convergence in Decision Making:** Uniformity in decisions taken by member countries in relation to pressing global challenges like climate change, cybersecurity, global health, and inequality.

## CONCLUSION

While the G7 faces challenges related to inclusivity, representation, and adapting to a changing global landscape, its historical significance and role in global economic governance cannot be underestimated. As the world continues to evolve, the G7's ability to adapt and address new challenges will be crucial in maintaining its relevance and effectiveness as a significant international forum.

### SAMPLE QUESTION

**Q) Is G7 as an institution losing its relevance in present times. Critically Analyse? (10 marks)(150 words)**

## GREAT NICOBAR PROJECT

*Syllabus: GS II - Conservation, Environment Pollution and Degradation*

### PYQ MAPPING

**Q) Discussion the various social problems which originated out of the speedy process of urbanisation in India (2013)**

**Q) There is a clear acknowledgement that Special Economic Zones (SEZs) are a tool of industrial development, manufacturing and exports. Recognizing this potential, the whole instrumentality of SEZs requires augmentation. Discuss the issues plaguing the success of SEZs with respect to taxation, governing laws and administration. (2015)**

### SHORT TAKES

- **Andaman and Nicobar Islands Integrated Development Corporation Limited (ANIIDCO):** Established on June 28, 1988, under the Companies Act 1956 to accelerate the economic growth of the A&N islands. Its primary goal is to develop and responsibly utilise natural resources to achieve balanced and environmentally friendly territorial development. The Corporation is chaired by the Chief Secretary of the A&N Administration.
- **National Commission for Scheduled Tribes (NCST):** The Constitution (89th Amendment, 2003) established the National Commission for Scheduled Tribes (NCST) as a constitutional authority dedicated to advancing the economic interests of India's Scheduled Tribes under Article 338A.
- **Maritime India Vision 2030:** A ten-year blueprint for the maritime sector by the Ministry of Ports, Shipping, and Waterways, unveiled by the Prime Minister of India during the Maritime India Summit in November 2020. This strategic plan is expected to generate over Rs. 20,000 Cr in annual revenue for Indian ports and create more than 20,00,000 direct and indirect jobs in the maritime sector.

### WHY IN NEWS?

- Recently, the opposition and environmentalists reportedly characterised the proposed **mega infrastructure upgrade on Great Nicobar Island** as posing a serious risk to the island's indigenous population and delicate ecosystem.
- They have urged the **immediate suspension of all approvals and a comprehensive reevaluation of the project**, including scrutiny by relevant Parliamentary committees.

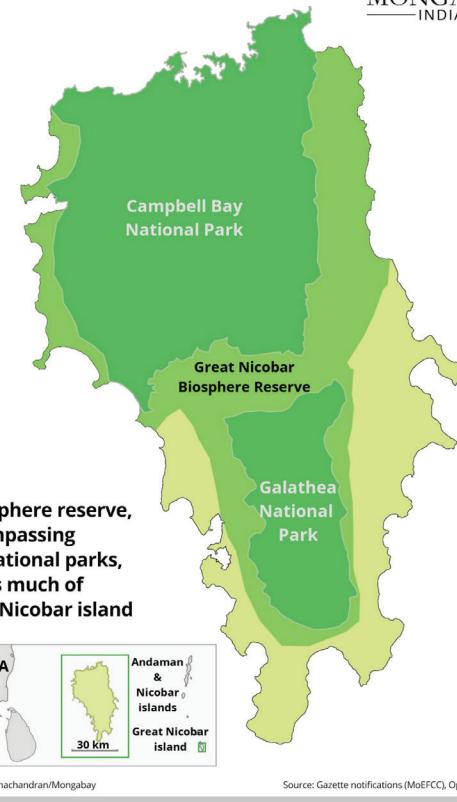
### INTRODUCTION

- In March 2021, **NITI Aayog unveiled a ₹72,000 crore plan** called 'Holistic Development of Great Nicobar Island as part of Maritime India Vision 2030, to be implemented by **ANIIDCO**. The project comprises four key components including an international container terminal, airport, power plant and township.
- The project aims to transform the Andaman and Nicobar (ANI) into a **pivotal economic hub**. These interconnected initiatives form the cornerstone of the new city and its comprehensive master plan.

## GREAT NICOBAR ISLAND

- ➊ **Archipelago:** ANI are a cluster of 836 islands, split into two groups — the Andaman Islands to the north and the Nicobar Islands to the south — by the 150-km wide Ten Degree Channel. Great Nicobar is the southernmost and largest island of the Nicobar group.
- ➋ **Location:** Great Nicobar is a densely forested island spanning 350 square miles situated approximately 800 miles east of Chennai in India.
- ➌ **Habitation:** The island is home to two tribal communities — the Shompen and the Nicobarese, who number less than 1000. Settlers from mainland India number around 6,000..
- ➍ **Land Use:** It is largely composed of national parks, protected forests, and tribal reserve areas, with over 95% of its land designated as such.
  - » **Biosphere Reserve:** The UNESCO-recognized Great Nicobar Biosphere Reserve, which covers much of the island, is home to unique tropical evergreen forests and a rich biodiversity of 650 plant species and over 1800 animal species, including many endemic species.
  - » **National Parks:** The island includes Campbell Bay National Park and Galathea National Park, both integral parts of the biosphere reserve.

MONGABAY  
INDIA



## IMPORTANCE

- ➊ **Boost to Infrastructural growth:** The extensive infrastructure project, overseen by the Andaman and Nicobar Islands Integrated Development Corporation (ANIIDCO), aims to incorporate
  - » **Galathea Bay International Container Transshipment Terminal (ICTT)**
  - » **Great Nicobar International Airport** capable of handling 4,000 passengers per hour during peak times
  - » **A residential township**
  - » **A gas and solar-powered power plant** across an area spanning 16,610 hectares.
- ➋ **Strategic Importance:** The Bay of Bengal and Indian Ocean region hold significant strategic and security importance for India, particularly as China aims to extend its presence in the area.
  - » **Naval Force:** Buildup of Chinese naval forces at critical Indo-Pacific choke points such as Malacca, Sunda, and Lombok Straits.
  - » **Military Facility:** Development of a military facility on Coco Islands (Myanmar), located just 55 km north of the Andaman & Nicobar Islands.
- ➌ **Economic Advantage:** Roughly equidistant from Colombo in Sri Lanka to the southwest, and Port Klang in Malaysia and Singapore to the southeast, Great Nicobar Island is situated near the Malacca Strait—a crucial route connecting the Indian Ocean to the Pacific.
  - » The International Container Transshipment Terminal (ICTT) is anticipated to enable Great Nicobar to integrate into the regional and global maritime economy as a significant hub for cargo transshipment.
  - » A planned "greenfield city" aims to harness the island's potential in both maritime commerce and tourism.

## CONCERN

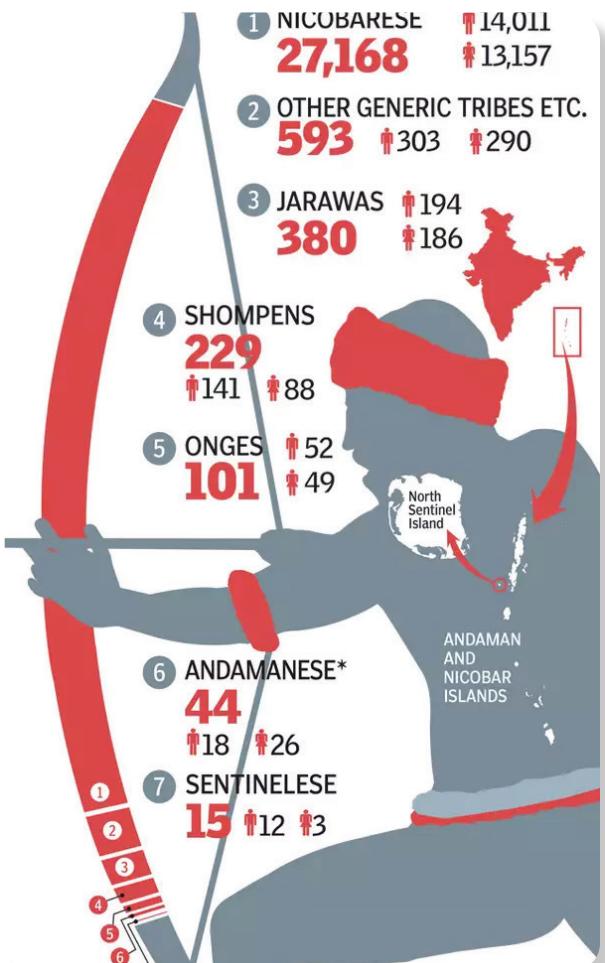
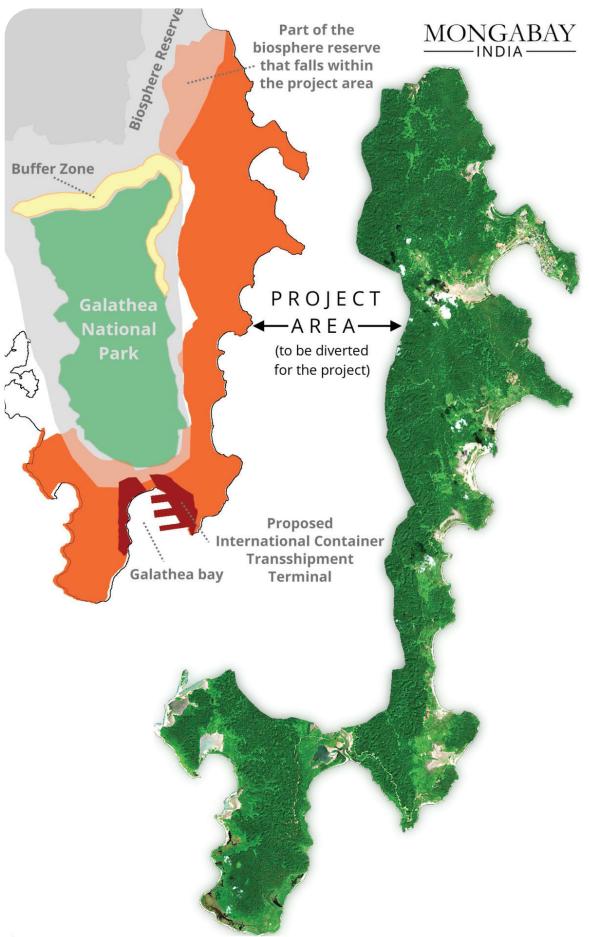
- ➊ **Tectonic vulnerability:** The port and project site is located in a seismic zone category 5 within the "ring of fire," known for frequent earthquakes.
  - » **Example:** The area experienced a significant subsidence of about 15 feet during the December 2004 tsunami, highlighting its high seismic risk and necessitating careful planning and mitigation for development projects.
- ➋ **Destruction of rich biodiverse area** - Since receiving final environmental clearance from the Union Ministry of Environment, Forest and Climate Change in November 2022, the project has drawn criticism from environmentalists and anthropologists.

## » Threat to Marine Ecosystem:

- **Inaccurate Environmental Data:** The Zoological Survey of India (ZSI) identified 117 coral species in Galathea Bay, while the project's Environmental Impact Assessment (EIA) claims no corals exist.
- **Endangered Turtle Habitat:** The National Marine Turtle Action Plan identifies Galathea Bay as a critical nesting site for the endangered Leatherback sea turtle. Coastal development projects like the proposed one can significantly disrupt nesting patterns and endanger these turtle populations

## » Impact on Flora and Fauna:

- » **Denotification:** The Indian government officially denotified two wildlife sanctuaries: the Galathea Bay wildlife sanctuary and the Megapode wildlife sanctuary
- » **Biodiversity Loss:** The project threatens the rich biodiversity of **Galathea National Park**, home to 648 plant species and 330 animal species, including endangered and endemic fauna like the Nicobar wild pig, tree shrew, crested serpent eagle, paradise flycatcher, and megapode.
- » **Deforestation:** The planned felling of nearly a million trees across a vast 130 square kilometre area will lead to significant deforestation and disrupt the delicate rainforest ecosystem.
  - **Mangrove loss:** The island is set to lose between 12 to 20 hectares of its mangrove habitat, placing around 960,000 trees in jeopardy of being cut down. This loss stems from the redirection of approximately 130 square kilometres of forest land, a move countered by plans for afforestation in Haryana's Aravalli region.
  - Haryana has a poor track record in forest conservation and also has plans to bring in a jungle safari in place.



## ● Adverse impact on Indigenous tribal community:

Experts from various fields have raised concerns with the National Commission of Scheduled Tribes (NCST) about the 'Great Nicobar Project' and its potential detrimental effects on the indigenous population.

- » **Encroachment :** The total area of the Great Nicobar Island's tribal reserve is 751.01 square kilometers. The proposed development area covers a total of 166.10 square kilometres. Importantly, 84.10 square kilometres of the proposed development area fall within the tribal reserve itself. This means **over half (50.6%)** of the project area is located on tribal reserve land.
- » **Reclamation of ancestral land affected:** Despite the Great Nicobarese people's efforts to reclaim ancestral lands deemed "uninhabited" by NITI Aayog's plan, the government has consistently disregarded their requests since their post-tsunami resettlement. This large-scale project further hinders their endeavours.
- » **Disruption of Essential Resources:** The project threatens vital riparian (riverside) areas and forested lands crucial for the Shompens way of life and could significantly impact their

hunting, fishing, and gathering practices.

» **Threat to Tribes:** The project poses a significant risk to the welfare and existence of the Shompen, an indigenous community identified as a Particularly Vulnerable Tribal Group, as well as to the Nicobarese, classified as a Scheduled Tribe. They will be exposed to new diseases.

#### ● **Violation of legal rights:** The Administration neglected to adhere to legal obligations.

» **Failed Consultation :** The administration seems to have violated legal requirements for consultation with the Tribal Council of the Islands.

» **Objections:** The Tribal Council of Great Nicobar Island specifically objects to the Project. They claim they were pressured into giving initial approval ("No Objection" letter) through misleading information and their initial approval has now been withdrawn.

» **Violation of constitution:** There are allegations that the administration bypassed the legally required consultation with the Scheduled Tribes Commission, as stipulated by Article 338A (9) of the Constitution.

#### ● **Denotification of Tribal Area:**

» **Conditional Approval:** The Union Ministry of Tribal Affairs issued a "no objection certificate" on November 18, 2020 subject to compliance with the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA)

» **Documents withheld:** Information regarding the environmental clearance process and its appraisal, typically a publicly accessible document, has been withheld from public view.

#### ● **Rising Population Pressure:** The development of townships and construction activities will lead to a significant increase in the population of the island. According to a pre-feasibility report, the population is projected to reach 52,000 by 2025 with the initiation of the project, and 165,000 by 2040.

### WAY FORWARD

- ✿ **Ensure Transparent Process:** Transparency in large-scale projects is significant as it provides stakeholders, including the public, environmental organisations, and affected communities, with accurate information on the project's scope, environmental risks, and proposed mitigation measures.
- ✿ **Inclusiveness In Decision Making:** Inclusiveness in decision-making by collaborating with civil society in environmental concerns enriches policy outcomes by integrating diverse perspectives and expertise. Ultimately, it strengthens public trust and support for environmental initiatives, promoting sustainable outcomes.
- ✿ **Review by High powered Committee:** The review of Environmental Clearance is conducted by a High-Powered Committee (HPC) chaired by the Secretary of the Ministry of Environment, Forests, and Climate Change, Government of India (MoEF&CC). The HPC assesses and scrutinises the environmental impact of projects to ensure compliance with regulatory standards and sustainability principles.
- ✿ **Compensatory Afforestation:** Compensatory Afforestation initiative helps to mitigate the ecological impact of development by maintaining biodiversity, preventing soil erosion, and enhancing local climate resilience. Moreover, it supports the livelihoods of indigenous communities by preserving their natural resources and traditional knowledge.

### CONCLUSION

Balanced and sustainable development in Nicobar Island is crucial for preserving its unique environment and supporting its indigenous communities, such as the Shompen and Nicobarese. Striking a balance between economic growth and environmental conservation is imperative to safeguard Nicobar's biodiversity and cultural richness for future generations. Therefore, prioritising sustainable development by integrating conservation efforts with socio-economic development goals is important.

### SAMPLE QUESTION

**Q)** The Great Nicobar Project promises significant economic benefits but raises concerns about environmental sustainability and the welfare of indigenous communities. Critically examine the potential benefits and drawbacks of the project. **(10 marks)(150 words)**

# RAILWAY ACCIDENTS AND KAVACH

**Syllabus: GS III - Infrastructure - Railways**

## PYQ MAPPING

**Q1** The setting up of a Rail Tariff Authority to regulate fares will subject the cash strapped Indian Railways to demand subsidy for the obligation to operate nonprofitable routes and services. Taking into account the experience in the power sector, discuss if the proposed reform is expected to benefit the consumers, the Indian Railways or the private container operators. (2014)

**Q2** Why is Public Private Partnership (PPP) required in infrastructure projects? Examine the role of PPP model in the redevelopment of Railway Stations in India (2022)

## SHORT TAKES

- **Research Design and Standards Organisation (RDSO):** Established in 1957 and headquartered in Lucknow, Uttar Pradesh, it serves as the research and development (R&D) arm for Indian Railways, specialising in the development of technical specifications for railway equipment, construction, operation, and maintenance.
- **Radio Frequency Identification (RFID):** An RFID tag, consisting of a microchip and antenna, is affixed to an object such as a train wagon or locomotive. When within range of an RFID reader, the tag emits a unique identifier signal which the reader captures, decodes, and transmits to a central computer system.
- **Signal Passed at Danger (SPAD) :** Refers to a situation on a railway network where a train proceeds past a signal that is displaying a stop aspect (typically a red light) without proper authorization.

## RECENT INCIDENTS

- **Balasore Accident:** A horrific train accident occurred near Balasore, India on June 2nd, 2023. A passenger train was mistakenly switched onto the wrong track, colliding with a stationary goods train and another incoming passenger train. The devastating collision resulted in nearly 300 deaths and over 1200 injuries.
- **West Bengal Accident:** A freight train rammed into 13174 Agartala-Sealdah Kanchanjunga Express, a passenger train on June 16, near Siliguri in West Bengal, which left at least 11 people dead and more than 40 injured.
- o **Reason:** The Railway Board's initial report revealed that the goods train, operating under a defective automatic signalling system, was travelling above speed limits when it crashed. The prima facie cause is the Loco Pilot's disregard of rule 9.01 of the General and Subsidiary Rules for passing an automatic signal at a restricted speed of 15 kmph.

## WHY IN NEWS

A goods train crashed into a stationary Sealdah-bound Kanchanjunga Express train near New Jalpaiguri on June 17. The accident, due to a failure in the automatic signalling system, led to the derailment of the train's rear compartments. This incident highlights serious concerns about railway safety and signalling reliability.

## INTRODUCTION

Collisions represent the most severe type of accidents on Indian Railways, often resulting in significant casualties and injuries. In the fiscal year 2022-23, Indian Railways witnessed six major collisions, a notable increase from the two recorded in 2021-22. In 2023-24, four additional collisions occurred, all involving passenger injuries and fatalities. Despite some overall improvements, the long-term perspective underscores that safety must take precedence over speed and comfort.

## MAJOR ACCIDENTS

- **Bihar Rail Disaster:** Country's deadliest and world's second biggest train accident happened in 1981 in Bihar. On June 6, 1981, at least 800 people were killed when seven of the nine bogies of an overcrowded passenger train derailed from a bridge and fell into the Bagmati river during a cyclone at Balaghat in Bihar. As per estimates, the death toll varied from 800 to 2,000 as the waterlogged bodies were fished out one by one after several days of rescue work.
- **Indore-Patna Express Accident:** On November 20, 2016, 14 coaches of the Indore-Patna Express derailed in Kanpur Dehat, killing 152 people. The National Investigation Agency (NIA) initially investigated the incident due to suspicions of terrorist sabotage. In 2020, the final Commissioner of Railway Safety(CRS) report attributed the accident to a sudden mechanical failure, specifically a corroded welding part falling off and obstructing the track, causing two coaches to derail and crash into a third.

## STATISTICS OF RAILWAY ACCIDENTS

### → Limited Progress on Accidents:

While the overall number of accidents has decreased, this seems primarily due to the manning of unmanned crossings. Derailments and collisions, which cause the most serious casualties, haven't shown significant improvement.

### → Consequential Train Accidents:

A consequential train accident, according to the Indian Railways, includes those with serious repercussions, including injuries, loss of life, rail traffic disruption and damage to railway property. The average number of such accidents has declined significantly. This represents a substantial improvement compared to 2000-01, when over 470 such accidents occurred annually.

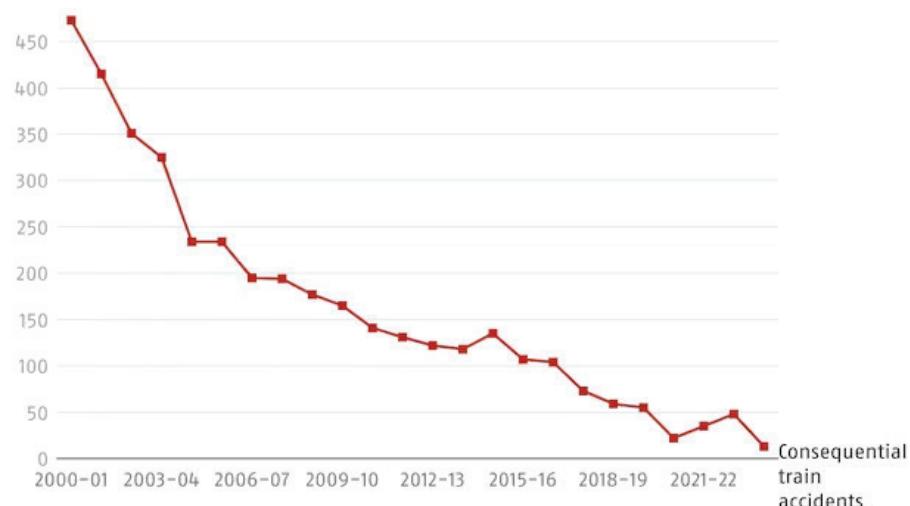
» Five-year average (2018-2023) of consequential accidents is 44 accidents per year.

→ **Collision Frequency:** Despite the overall decline, train collisions still occur at a rate of roughly one every 3-4 months.

→ **Decline in Derailments:** Over the last two decades, derailments, which historically constituted the majority of railway accidents, have significantly reduced from around 350 per year around the year 2000 to 22 in the year 2021-22

### Three accidents on average every month

Consequential train accidents (yearly)



\*Data as of July 2023

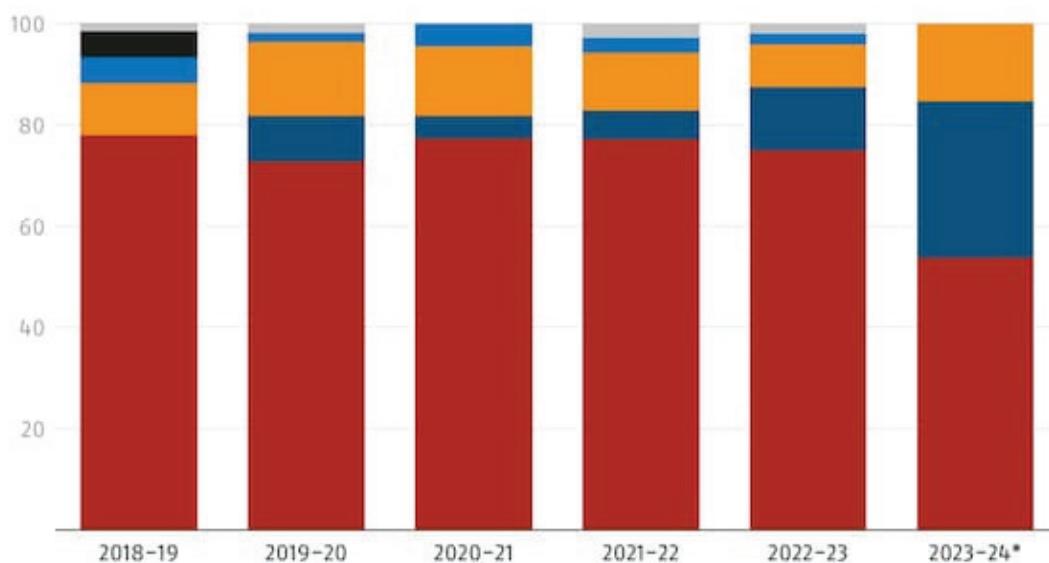
Source: Parliament reply, Business Standard calculations

BS

### Collisions second-largest cause

Reasons for consequential train accidents (in %)

■ Derailment ■ Collision ■ Fire in train ■ Manned level crossing accident ■ Unmanned level crossing accident ■ Miscellaneous accidents



\*Data as of July 2023

Source: Parliament reply, Business Standard calculations

BS

## ABOUT INDIAN RAILWAYS

- o **Extensive Network:** Indian Railways boasts the largest government-operated railway system in terms of passenger traffic. The network has surpassed 100,000 kilometres of operational track and is nearing complete electrification.
- o **Subsidised Services:** Passenger fares are offered below cost, a unique feature sustained by a cross-subsidy mechanism. (This means profits from freight transport subsidise passenger fares.)
- o **Self-Financing Model:** Ordinary working expenses cover staff costs and fuel bills, creating a seemingly sustainable model

## MAJOR ISSUES

● **Policy Inconsistency:** The Railway Board, the highest administrative body under the Union Minister of Railways, has lacked direction, with frequent policy shifts hindering long-term planning for Indian Railways' growth and expansion.

● **Stagnant Performance:** Train speeds remain frustratingly slow, punctuality hasn't improved, and safety concerns persist, raising questions about the effectiveness of the Railway Board.

» **Example:** The Comptroller and Auditor General (CAG) of India recently issued a report on the speed and punctuality of Indian Railways (IR) for 2019-20. **The report reveals that between 2014 and 2019, there has been no increase in the average speed** of mail and express trains, which has remained at 50-51 kmph.

● **High Rate of Asset Failures:** Frequent equipment failures, especially **signal malfunctions and rail fractures** are critical issues faced and these failures contribute significantly to major accidents, as seen in the Balasore tragedy.

● **Blame Shifting:** A recurring issue with each serious railway accident is the tendency to assign blame to lower-level functionaries. This pattern hinders accountability and obstructs systemic improvements.

● **Staff shortages:** Ensuring a sufficient number of qualified personnel are employed to operate and maintain the railway network effectively remains a critical issue.

» **Example:** Despite empanelling nearly 1.12 lakh candidates between April 2022 and June 2023 for operational safety posts, around 53,180 positions remained vacant as of July 1, 2023.

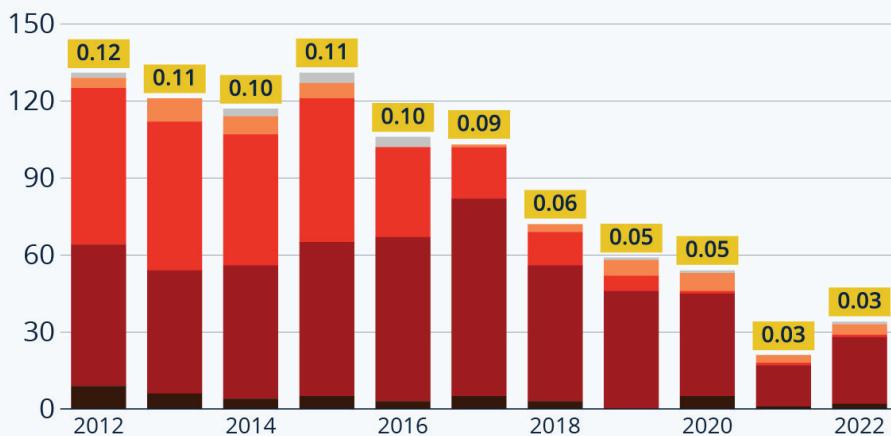
» Despite nearly 20,000 vacancies for loco pilot/assistant loco pilot positions this year, Indian Railways initially planned to recruit only 5,658 heads, later revising this to 18,799 following criticism

● **Information Management and Communication Issues:** Premature and inaccurate statements by railway officials

## Indian Railways Are Improving, But Safety Issues Remain

Number of train related accidents in India\*

■ Collisions ■ Derailments ■ Level Crossing Accidents ■ Fires ■ Other  
■ Accident per million train kms



\* Excluding KRCL

Source: Indian Railways Yearbook



**statista**

following accidents highlight significant flaws in the management and dissemination of information which undermines public trust.

- » **Example:** The Chairperson of the Railway Board prematurely blamed the Kanchenjunga accident on the container train crew's disregard of signals and incorrectly stated both crew members had died, though the assistant loco pilot survived.
- **Focus on financially dubious projects:** Instead of prioritising the existing network, resources are allocated to expensive projects with questionable financial viability.
- » **Bullet train lines:** These lines would be incompatible with the existing network due to a different gauge system.
- » **Dedicated freight corridors (DFCs):** While DFCs have merit, their cost-effectiveness is debatable.
- » **Vande Bharat trains:** These trains prioritise luxury over addressing the core issues of speed and network efficiency.

## POSITIVE STEPS TAKEN

- ✓ **Dedicated Safety Funds:** Indian Railways has received dedicated funding streams for safety improvements
  - » **Rashtriya Rail Sanraksha Kosh (RRSK):** This special fund introduced in 2017-18 specifically targets safety-related projects. In 2022-23, the government extended RRSK for another five years with Gross Budgetary Support (GBS) of Rs 45,000 crore.
- ✓ **Level Crossing Safety:** Interlocking systems have been installed at nearly 11,100 level crossings (as of May, 2023). This significantly reduces the risk of accidents at these vulnerable points.
  - » All unmanned level crossings on Broad Gauge routes were eliminated by Jan 2019.
- ✓ **Track Safety:**
  - » The maintenance has been revolutionised by introducing advanced **Track Recording Cars**, which are faster and more reliable.
  - » Complete track circuiting has been provided at 6,609 stations by May 31, 2023.
  - » To verify track safety, **ultrasonic testing** of rails is conducted to detect flaws.
- ✓ **Rolling Stock**
  - » Advanced/improved technologies like **Online Monitoring of Rolling Stock** System (OMRS) and **Wheel Impact Load Detector** (WILD) have been adopted for predictive maintenance of rolling stock.
- ✓ **Reduced Human Error:**
  - » **Mechanization of track-laying activities** with track machines to minimise human error during track construction and maintenance
  - » Provision of **electronic interlocking systems** with centralised operation of points and signals at 6,427 stations eliminates human error in managing switches and signals, a major cause of accidents.
- ✓ **Automatic Block Signalling (ABS):** The Automatic Block Signalling System controls train movements automatically, improving transportation efficiency and speeding up operations. It increases line capacity by allowing more trains to operate in the same section.
  - » It was implemented on 4,111 km of High-Density Routes by Oct 31, 2023.
- ✓ **Capital Grant Utilisation:** Railways are now allowed to utilise capital grants for safety-related works like repairs, replacements, and maintenance of critical assets. This provides more flexibility in addressing safety needs.
- ✓ **Increased Investment:** The Union government has made record-breaking capital expenditure (capex) allocations of 25% for Indian Railways in 2023-24 and 2024-25. This investment is being used for:
  - » **Expansion:** Extending the network to reach remote areas.
  - » **Capacity Building:** Increasing the capacity of congested routes to improve efficiency.
  - » **Dedicated Freight Corridors:** Building dedicated corridors to improve freight movement.
  - » **Speed Upgrades:** Efforts are underway to increase train speeds.

## WAY FORWARD

- ✿ **Low-cost Locomotive Equipment:** Equipping locomotives with affordable technology to assist drivers in preventing accidents.
  - » **Example:** Automatic Train Protection Systems, working in the Mumbai suburban for the last few decades, could be emulated elsewhere
  - » Vigilance Control Devices (VCD) to ensure the alertness of loco pilots, and GPS-based Fog Safety Devices (FSD) in fog-affected areas.
- ✿ **Infrastructure Upgrades:** Ensure the quality and proper maintenance of railway lines to minimise derailment risks.
- ✿ **Rolling Stock Maintenance:** Prioritise the upkeep of trains and compartments, ensuring they are in good working condition to address potential equipment failures
- ✿ **Enhanced Signal Maintenance:** Strengthening preventive maintenance protocols for crucial signalling assets to minimise malfunctions.
- ✿ **Intensified Staff Training:** Providing rigorous training to railway staff to improve their skills and awareness regarding safety procedures.
- ✿ **Leveraging Technology:** AI can analyse vast amounts of data from various sources (station loggers, locomotive microprocessors) to identify patterns and underlying causes of accidents.
- ✿ **Stricter SPAD Response:** Treating every "Signal Passed at Danger" (SPAD) incident with utmost seriousness and implementing appropriate disciplinary actions or corrective measures.

- ✿ **Learning from Best Practices:** Benchmark safety and efficiency performance against international leaders and adopt successful strategies.
  - » **Britain**
    - The Confidential Incident Reporting and Analysis System (CIRAS) was developed for British Railways in the mid-1990s.
    - It encourages lower-level staff to report deviations confidentially in real-time, fostering openness and frank expression of views.
    - It represents a shift from conventional top-down inspection methods, empowering staff by giving them a platform to report safety concerns without fear of reprisal.
  - » **Switzerland**
    - **Hub-and-Spoke Model:** Switzerland's hub-and-spoke design is centred on hubs like Zurich for easy transfers, in contrast to India's end-to-end connectivity approach between distant cities.
    - ✿ **Attitudinal Change:** A shift from fault-finding and punishment to a culture of shared commitment to safety at all levels of the organisation.
    - ✿ **Clarify Protocols for Signal Failures:** Clear and well-drafted rules should be established to eliminate ambiguity and ensure a uniform response by station masters and crews in case of Automatic signal failures.
    - ✿ **Need for Accountability:** With increased spending, the importance of internal outcome audits to assess the impact of these investments is higher

## KAVALCH

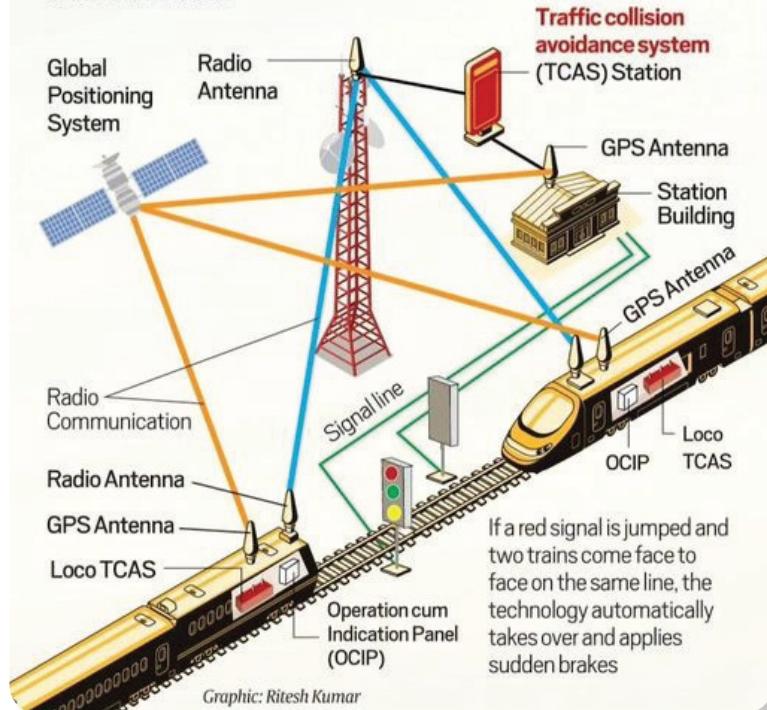
- ➡ **About:** An indigenously developed Automatic Train Protection (ATP) system developed by Research Design and Standards Organisation (RDSO) with industry support,
- ➡ **Timeline**
  - 👉 **1980s:** Major railway networks worldwide adopt Automatic Train Protection (ATP) systems similar to Kavach.
  - 👉 **2012:** Initial development of Kavach started in 2012 under the name Train Collision Avoidance System (TCAS)
  - 👉 **February 2016:** Initial field trials for Kavach (meaning 'armour') begin on Indian Railways passenger trains.
  - 👉 **2019:** Kavach achieves Safety Integrity Level 4 (SIL-4) certification, a critical and highest safety benchmark.
  - 👉 **July 2020:** Kavach is officially adopted as the national Automatic Train Protection (ATP) system for Indian Railways.

## WORKING

- 🌀 **Technology:** Kavach utilises high-frequency radio communication and a concept of continuous updating of train movement
- 🌀 **Intervention:** Kavach aids the loco pilot in trains running within specified speed limits by automatic application of brakes in case the pilot fails to do so.
- 🌀 **Tracking:** Radio Frequency Identification (RFID) tags installed on rails, stations, and signals help Kavach identify tracks, locate trains, and determine their direction. This is crucial for calculating safe distances and preventing collisions.
- 🌀 **Safety Zone Creation:** When Kavach detects a potential risk, it brings all trains within a 5-kilometre radius to a halt, creating a safety zone to prevent accidents on nearby tracks.
- 🌀 **Low Visibility Support:** The On-Board Display of Signal Aspect (OBDSA) helps drivers see signals clearly even in bad weather conditions with poor visibility.
- 🌀 **Messages:** The system also relays **SoS messages** during emergency situations.

## HOW RAILWAYS' KAVACH PROTECTION SYSTEM WORKS

KPS is a set of electronic and radio frequency devices installed in locomotives, in the signalling system as well the tracks, that talk to each other using ultra-high radio frequencies to control the brakes of trains and also alert drivers



## PHASED IMPLEMENTATION

- ❖ **Goal:** The government aimed to equip 2,000 kilometres of tracks with Kavach in 2022-2023. Railway ministry aims to extend Kavach's coverage to a substantial 44,000 kilometres of track over the next five years.
- ❖ **Current Status:** Kavach has been deployed on 1,465 km and in 139 locomotives, including Electric Multiple Unit rakes, in South Central Railway.
- ❖ **Tenders & Contracts:** Tenders have been issued for 10,000 km of Kavach, but only 6,000 km have contracts awarded.
  - » Contracts for Kavach have been awarded for the **Delhi-Howrah** and **Delhi-Mumbai** corridors, encompassing roughly 3,000 km of tracks across various railway zones.

## FEATURES

- ❖ **Versions:** The Kavach system, currently at version 3.2, is set for an upgrade to version 4.0 to enhance its capabilities further.
- ❖ **Cost Effectiveness:** It is the least expensive automatic train collision prevention technology, according to the railways
- ❖ **Advanced Technology:** The technology possesses the highest certification level, Safety Integrity Level 4 (SIL-4) certification. It indicates that there is a 10,000-year chance of only one Kavach mistake.

## ISSUES

- **Limited Manufacturers:** A key bottleneck in wider implementation is the limited number of Indian Original Equipment Manufacturers (OEMs) currently producing Kavach. There are only three.
- **Resource Constraints:** Budgetary allocation (₹560 crore as of February 2024) might be insufficient to support the increased manufacturing, deployment, and maintenance needs of Kavach.
- **Prioritisation Strategy:** The current prioritisation scheme (high-density routes > highly-used routes > passenger high-density routes) might not be optimal for maximising immediate safety benefits.
- **Installation Time:** Implementing KAVACH requires installing compatible equipment on locomotives, stations, and tracks, leading to a time lag of several years before it becomes fully operational on these two major routes.

## WAY FORWARD

- ✿ **Nurturing Domestic Industry:** Indian Railways should actively support domestic manufacturers by providing:
  - » Clear long-term contracts
  - » Financial incentives
  - » Technological collaborations
- ✿ **Focus on Trunk Routes and Automatic Signalling Territories:** The Railways should concentrate on the trunk routes and Automatic Signalling territories for faster Kavach installation, aiming for 4,000 to 5,000 km/year.
- ✿ **Alternative:** If Indian Railways is uncertain about Kavach's efficacy or implementation speed, it can consider installing ETCS Level II (established European system) in key sections while Kavach matures.
- ✿ **Faster Installation in Locomotives and Trains:** The CRS report on the Vizianagaram train accident suggested that installing Kavach in locomotives and trains ahead of ground installations can increase the probability of preventing collisions.

## CONCLUSION

As India aims to enhance its railway network with advanced technology, Kavach stands out as a crucial element in improving safety. Indian Railways should address persistent safety issues through efficient use of increased funding and a faster Kavach rollout is essential. Prioritising a comprehensive safety strategy will be vital for Indian Railways to achieve world-class standards and financial sustainability.

### SAMPLE QUESTION

**Q)** How can technologies like the Kavach anti-collision system contribute to transforming the safety landscape of Indian Railways? Analyse the importance of balancing technological advancement with financial sustainability in achieving world-class standards. **(10 M)(150 W)**

*Congratulations*  
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## ETHICS - CASE STUDY

Q) You are the Sub-Inspector of an area where there is rampant usage of drugs, especially among youth. Even school going children have become vulnerable to this issue. After the local media reported this drug usage, the govt. has ordered the police and district administration to act on the issue. Recently, a drug deal worth crores of rupees was busted and all those who involved were arrested. However, within minutes, a minister from the ruling party called for their release. You are informed by your subordinates that politicians are playing a significant role in this drug menace and previous officers who dared to act against them were transferred or suspended without any reasons.

1. Who are the various stakeholders in the case?
2. What are the ethical issues that need to be addressed in the case?
3. Being a police officer, evaluate the options available to you for tackling this menace..
4. What course of action will you take? Justify.

## ETHICS - EXAMPLES

1. **Social Media influence, Value based education:** Shikha Metray, a 23-year-old NIFT Delhi graduate, was arrested by Ghaziabad Police for allegedly promoting child sexual abuse through her YouTube gaming channel 'Kuvari Begum.' She is a graduate of National Institute of Fashion Technology, Delhi but regularly creates offensive content.
2. **Innovation:** Ahead of the Paris Olympics, India's team is focusing on sleep optimization with a dedicated advisor and amenities like sleeping pods and travel kits. This initiative aims to enhance performance of athletes and reduce injury risks associated with poor sleep.
3. **Gender Rights:** Thailand's Senate has passed a marriage equality bill, making it the first country in Southeast Asia to recognize same-sex marriage. The legislation, which now awaits the king's assent, will grant LGBTQ couples equal inheritance and adoption rights.
4. **Gender Rights:** Women are suing the Japanese government over the restrictive conditions of the Maternal Protection Act, which they argue violates their constitutional right voluntary sterilisation amidst government efforts to combat Japan's declining birth rate
5. **Good Governance:** The Kollam district panchayat will replace the term 'request' with 'demand' in all official communications, changing 'apeksha pathram' (request forms) to 'avashya pathram' (demand forms). This shift reflects the belief that in a democracy, people have the right to demand services from their elected representatives.
6. **Social Media Influence:** A 13-year-old boy was arrested for sending a fake bomb threat email to Delhi airport, claiming a Dubai-bound flight had a bomb. Influenced by social media, he did it "for fun." The airport was put on high alert, but the threat was later confirmed to be a hoax.
7. **Social Justice:** Flood-affected children in Assam will receive "school in a box" kits with learning materials in 167 model relief camps to ensure educational continuity. The Assam State Disaster Management Authority (ASDMA) is training officials to use these kits effectively and maintain education for displaced children aged 6-18 years.
8. **Social Welfare:** The Kudumbashree Mission is launching 'Happiness Centres' across 168 model community development societies in Kerala under the National Rural Livelihoods Mission FNHW(food, nutrition, health and WASH). These centres aim to address diverse societal challenges, intending to establish Kerala as a benchmark for happiness nationwide.



## MODEL ESSAY

*"Don't limit a child to your own learning for he was born in another time"*

### Introduction

- Quote by Rabindranath Tagore
- Meaning: Children need the freedom to learn and grow in ways their parents couldn't, because the world they're born into is constantly evolving.

### Need for Open-Minded Learning

- **Continuous Learning:** Need the ability to continuously learn, adapt, and develop new skills to thrive in this dynamic environment.
- **Open-Mindedness and Critical Thinking:** Children need the freedom to explore new ideas, question assumptions, and develop their own unique perspectives based on current knowledge and evolving values.
- **Independence and Exploration:** Children learn best by doing and exploring. Promotes creativity, problem-solving skills, and ability to discover their own passions.
- **Resilience and Adaptability:** Encouraging children to explore new concepts and embrace change, -navigate unforeseen challenges and opportunities.

### Hindrance to open minded learning

- **Rigid Educational Systems:** Traditional, exam-focused education systems, overemphasis on rote memorization and standardised testing can stifle curiosity and independent learning.
- **Limited Access to Resources:** Unequal access to resources like libraries, internet connectivity, and quality educational materials can severely restrict a child's ability to explore different subjects and perspectives.
- **Fear of Failure:** This fear of failure can hinder their willingness to explore new ideas, ask questions, and engage in open learning.
- **Information Overload and Misinformation:** Struggle to discern credible sources and navigate the vast information landscape, hindering their ability to learn openly and accurately.

### Way forward

- **Embrace the Future:** Integrate age-appropriate

technology into learning. Explore coding basics, virtual reality experiences. **Eg:** Atal Tinkering Labs -establishes tinkering labs in schools-access to tools, equipment, and resources to experiment, innovate, and explore their interests in science & robotics

- **Nurture Adaptability:** Exposing children to diverse experiences. Volunteer in different communities or participate in workshops on new skills. **Eg:** Skill India Mission focuses on developing future-ready skills- highlights the importance of adaptability in a rapidly changing job market.
- **Focus on Lifelong Learning:** Encourage a love for reading and independent research. **Eg:** National Digital Library of India (NDL)- Initiative by the Ministry of Education -focus on lifelong learning- single-window search facility for a vast collection of digital learning resources.
- **Develop Critical Thinking Skills:** Encourage them to ask questions, and analyse information from multiple perspectives. **Eg:** National Education Policy 2020- emphasises a shift from rote learning to a more holistic approach-promotes critical thinking, problem-solving, and lifelong learning skills.
- **Foster Collaboration and Communication:** Enrolling in team-based activities like sports, debate clubs, or student government.

### Conclusion

- Briefly reiterate the importance of allowing children to learn and adapt in a changing world.
- Fostering open-mindedness and critical thinking prepares the child to thrive in the future.

### Sample Quotes

- *A genuine leader is not a searcher for consensus but a moulder of consensus* -Martin Luther King, Jr.
- *Deep roots are not reached by the frost*- JRR Tolkien
- *The man who has no imagination has no wings*.- Muhammad Ali

## MAINS JOT DOWN



### GS- III - SCIENCE & TECHNOLOGY

- ➡ India's share in the global space economy to rise 4 times by 2030 in comparison to 2021.
- ➡ In 2023, the size of India's space economy is estimated at \$8.4 billion.
- ➡ Space Start-ups have increased to nearly 200 in 2024 from 1 in 2022.
- ➡ Rising involvement of the private sector & 100% FDI allowed in space sector has contributed to its growth.
- ➡ The space sector has the potential to capture 9% of global market share by 2030.



### GS- I - ART & CULTURE

- ➡ Recently, the PM inaugurated Nalanda University in Rajgir, Bihar.
- ➡ Nalanda was founded by Kumargupta I in the 5th century CE, it continued as a centre of learning until the 12th century CE.
- ➡ It had students from other countries like Tibet, China, Sri Lanka, Burma, Thailand etc.
- ➡ Major disciplines included Veda, fine arts, medicine, mathematics, astronomy, politics, and the art of warfare.
- ➡ The university was visited by Chinese travellers I-Qing and Xuan Zang in 7th century AD.



### GS- III - MINERALS

- ➡ Centre introduced Offshore Areas (Existence of Mineral Resources) Rules, 2024.
- ➡ The Act governs the development and regulation of mineral resources within India's territorial waters, continental shelf, exclusive economic zone, and other maritime zones.
- ➡ The new rules don't apply to mineral oils and hydrocarbons and minerals specified in Part B of the First Schedule to the Mines and Minerals (Development and Regulation) Act, 1957.



### GS- III - ENVIRONMENT

- ➡ The UN Sustainable Development Solutions Network (SDSN) released the Sustainable Development Report 2024.
- ➡ The Sustainable Development Report (SDR) reviews progress made each year on the Sustainable Development Goals since their adoption by the 193 UN Member States in 2015.
- ➡ India is positioned 109th among 166 countries, demonstrating commendable progress in reducing poverty and advancing quality education goals, though facing challenges in meeting targets for sustainable cities and climate action.
- ➡ 'State of Global air-2024' Report released by Health Effects Institute.
- ➡ India and China jointly accounted for 54% of the total global disease burden attributed to air pollution.
- ➡ Worldwide, air pollution was the second leading cause of death in 2021, resulting in 8.1 million deaths.
- ➡ 99% of the world's population lives in places with unhealthy levels of PM2.5 pollution.



### GS- I - GEOGRAPHY

- ➡ Chief of Defence Staff released country's first Joint Doctrine for Cyberspace Operations
- ➡ It offers conceptual guidance to commanders of armed forces, staff, and practitioners for planning and conducting operations in cyberspace.
- ➡ It promotes integration of Army, Navy and Airforce and works hand in hand with national security strategies.



### GS- III - AGRICULTURE

- Recently the Prime Minister granted certificates to Krishi Sakhis under Krishi Sakhi Convergence Program (KSCP).
- Krishi Sakhis are practising farmers and trained para extension professionals in agriculture at grass root level.
- The primary objective of the programme is to enhance the skills of rural women in agriculture.



### GS- II - EDUCATION

- The Union Government has notified the Public Examinations (Prevention of Unfair Means) Act, 2024 to punish organised cheating in Govt. exams.
- It has provision for up to five years' imprisonment and a fine of up to ₹1 crore for malpractices and organised cheating in government recruitment exams.
- The Act mentions punishments for leakage of question paper or answer key, directly or indirectly assisting the candidate, tampering with the computer network, creation of fake website and fake admit cards, manipulation in seating arrangements etc.



### GS- II - INTERNATIONAL RELATIONS

- A report has been published on the "Two Decades of the Quad: Diplomacy and Cooperation in the Indo-Pacific."
- Quadrilateral Security Dialogue, is a strategic forum between the United States, Japan, Australia, and India aimed at addressing regional and global issues.
- The Quad nations account for 24% of the global population, 35% of the world's GDP, and 18% of global trade.
- Major initiatives undertaken by QUAD include Quad Climate Change Adaptation and Mitigation Package (Q-CHAMP), Quad Cybersecurity Partnership, Quad Health Security Partnership.
- Recently, 2nd meeting of the U.S.-India Initiative on Critical and Emerging Technology (iCET) was held in New Delhi.
- It is a framework for cooperation on Critical and Emerging Technologies (CET) in sectors such as space, semiconductors, telecommunications, clean energy, biotechnology, and more.
- Key outcomes included Space-Tech cooperation on launching NISAR (NASA-ISRO Synthetic Aperture Radar), cooperation in 6G technologies, launch of "Bio-X" initiative to promote cooperation in biotechnology and promoting co-investment in lithium resource project in South America and rare earths deposit in Africa.

## CHERRYPICKS OF THE WEEK

### EXCHANGE TRADED FUNDS (ETF)

- Exchange Traded Funds (ETFs) are investment funds that are traded on stock exchanges, much like individual stocks. They typically hold assets such as stocks, commodities, or bonds, and their value is based on the net asset value of the underlying assets they represent.

### SECURITY TRANSACTION TAX (STT)

- Exchange Traded Funds (ETFs) are investment funds that are traded on stock exchanges, much like individual stocks. They typically hold assets such as stocks, commodities, or bonds, and their value is based on the net asset value of the underlying assets they represent.

### PURCHASING MANAGER'S INDEX (PMI)

- It is an economic indicator that measures the activity level of purchasing managers in the manufacturing and services sectors. It provides valuable insights into the health and direction of an economy by surveying purchasing managers on factors such as new orders, production, employment, supplier deliveries, and inventories.

### INITIAL PUBLIC OFFERING

- It refers to the process through which a private company offers shares of its stock to the public for the first time. This allows the company to raise capital from public investors.