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Holistic Progress Card

For Prelims: National Council for Educational and Research Training (NCERT), <u>Performance Assessment</u>, <u>Review, and Analysis of Knowledge for Holistic Development (PARAKH)</u>, <u>National Education Policy (NEP)</u> 2020.

For Mains: National Council for Educational and Research Training (NCERT), Government Initiatives Related to Educational Reforms.

Source: IE

Why in News?

Recently, the **National Council for Educational and Research Training (NCERT)** has introduced a new **'Holistic Progress Card' (HPC)**, which will measure, apart from academic performance, a child's progress in interpersonal relationships, self-reflection, creativity, and emotional application in classrooms.

Note

The HPCs have been devised by <u>Performance Assessment, Review, and Analysis of Knowledge for</u> <u>Holistic Development (PARAKH)</u>, a standard-setting body under the NCERT, for the foundational stage (Classes 1 and 2), preparatory stage (Classes 3 to 5) and middle stage (Classes 6 to 8), as per suggestions by the <u>National Education Policy (NEP) 2020.</u>

What is a Holistic Progress Card (HPC)?

- About:
 - The HPC is a new approach to evaluating students' academic performance that moves away from traditional reliance on marks or grades.
 - Instead, it adopts a comprehensive 360-degree evaluation system that takes into account various aspects of a student's development and learning experience.
- Features:
 - Under the HPC model, students are actively engaged in class activities where they are encouraged to apply a range of skills and competencies, demonstrating their understanding of concepts.
 - The difficulty level they encounter while performing tasks is also considered in the assessment process.
 - Teachers play a crucial role in assessing students' strengths and weaknesses across different dimensions, such as collaboration, creativity, empathy, attention, and preparedness.
 - This allows teachers to identify **areas where students may need additional support** or guidance.
 - One distinctive feature of the HPC is that it involves students in the evaluation

process.

- Students are encouraged to assess their own performance as well as that of their peers, providing insights into their learning experiences and the learning environment.
- Moreover, the HPC integrates parents into the assessment process by soliciting their input on various aspects of their child's learning, including homework completion, classroom participation, and balancing screen time with extracurricular activities at home.
- Need:
 - Departing from the traditional emphasis on memorisation, the HPC prioritises the evaluation of higher-order skills, including analysis, critical thinking, and conceptual clarity among students.
 - Aligned with the NEP's directives, the National Curriculum Framework for School Education (NCF-SE) was introduced in 2023, advocating for a shift towards
 - assessing student progress through the systematic collection of evidence.
 Additionally, the NCF SE promotes peer and self-assessment methods to empower students in monitoring their own learning journey.
 - To gain a comprehensive understanding of students' core competencies, the NCF SE suggests incorporating diverse classroom assessment methods, such as projects, debates, presentations, experiments, investigations, and role plays. The design of HPC is in harmony with these recommendations.

What is PARAKH?

- About:
 - PARAKH has been launched as part of the implementation of the <u>National Education</u> <u>Policy (NEP), 2020</u> that envisaged a standard-setting body to advise school boards regarding new assessment patterns and latest research, and promote collaborations between them.
 - It will act as a constituent unit of the NCERT.
 - It will also be tasked with **holding periodic learning outcome tests** like the National Achievement Survey (NAS) and State Achievement Surveys.
 - It will **work on three major assessment areas:** large-scale assessments, school-based assessment, and examination reforms.

Objective:

- **Uniform Norms & Guidelines:** Setting norms, standards and guidelines for student assessment and evaluation for all recognised school boards of India.
- **Enhance Assessment Pattern:** It will encourage and help school boards to shift their assessment patterns towards meeting the skill requirements of the 21st century.
- **Reduce Disparity in Evaluation:** It will bring uniformity across the state and central boards which currently follow different standards of evaluation, leading to wide disparities in scores.
- Benchmark Assessment: The benchmark assessment framework will seek to put an end to the emphasis on rote learning, as envisaged by the <u>National Education Policy (NEP)</u> 2020.

What is NCF for School Education?

About:

- The National Curriculum Framework for School Education (NCF-SE) is developed based on the vision of the NEP 2020, and to enable its implementation.
- The formulation of NCF-SE will be undertaken by the NCERT. The NCFSE document shall henceforth be revisited and updated once every 5-10 years, considering the frontline curriculum.
- Objectives:
 - The NCF-SE serves as a guideline for developing syllabi, textbooks, and teaching practices in India.
 - Its objectives include shifting from rote (memorization by repetition) learning, connecting education to real-life situations, making examinations more flexible, and enriching the

curriculum beyond textbooks.

• The NCFSE also aims to **make learning enjoyable, child-centred,** and self-reliant, and promote democratic values. It provides guidelines for counseling secondary school students and is mandated for all age groups.

What are the Legal and Constitutional Provisions Related to Education in India?

- Legal Provisions:
 - The government has implemented the <u>Sarva Shiksha Abhiyan (SSA)</u> as part of the <u>Right</u> to Education (<u>RTE</u>) Act for the primary level (6-14 years).
 - Moving to the secondary level (age group 14-18), the government has extended the SSA to secondary education through the <u>Rashtriya Madhyamik Shiksha Abhiyan</u>.
 - Higher education, encompassing undergraduate (UG), postgraduate (PG), and MPhil/PhD levels, is addressed by the government through the <u>Rashtriya Uchhattar Shiksha</u> <u>Abhiyan (RUSA)</u> to meet the requirements of higher education.
 - All these schemes have been subsumed under the umbrella scheme of <u>Samagra</u> <u>Shiksha Abhiyan.</u>
- Constitutional Provisions:
 - <u>Article 45</u> of the <u>Directive Principles of State Policy (DPSP)</u> initially stipulated that the government should ensure free and compulsory education for all children up to the age of 14 within 10 years of the Constitution's commencement.
 - Furthermore, an amendment to Article 45 broadened its purview to include early childhood care and education for children under six years old.
 - Due to the non-fulfillment of this goal, the <u>86th Constitutional Amendment Act of 2002</u> introduced <u>Article 21A</u>, elevating elementary education to the status of a fundamental right instead of a directive principle.

What are the Government Initiatives Related to Educational Reforms?

- <u>National Programme on Technology Enhanced Learning</u>
- Samagra Shiksha Abhiyan
- PRAGYATA
- Mid Day Meal Scheme
- Beti Bachao Beti Padhao
- PM SHRI Schools

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims:

Q. Which of the following provisions of the Constitution does India have a bearing on Education? (2012)

- 1. Directive Principles of State Policy
- 2. Rural and Urban Local Bodies
- 3. Fifth Schedule
- 4. Sixth Schedule
- 5. Seventh Schedule

Select the correct answer using the codes given below:

Ans- (d)

<u>Mains:</u>

Q1. Discuss the main objectives of Population Education and point out the measures to achieve them in India in detail. **(2021)**

Q2. How have digital initiatives in India contributed to the functioning of the education system in the country? Elaborate on your answer. **(2020)**

Coal Logistics Plan and Policy

For Prelims: Coal Logistics Plan and Policy, <u>Coal Sector in India</u>, Types of Coal, <u>Coking Coal</u>, <u>Greenhouse gas emissions</u>, <u>COP28</u>, <u>Carbon capture and storage</u>

For Mains: Challenges Related to Coal for India, Coal as a Cornerstone of India's Energy Sector

Source: PIB

Why in News?

India has taken a groundbreaking step in its <u>coal sector</u> with the unveiling of the "Coal Logistics Plan and Policy," a transformative initiative aimed at modernising coal transportation.

What is the Coal Logistics Plan and Policy?

- Background: Coal logistics has long been a persistent issue in India, particularly during the summer months when power plants face shortages of coal amid rising electricity demand.
 - **Transportation of coal** has frequently posed challenges, leading to the need for railways to implement special measures to prevent supply disruptions.
- About: The Coal Logistics Plan and Policy aims to enhance coal logistics by making it more affordable, efficient, and environmentally friendly.
 - It encompasses various aspects such as storage, loading, unloading, and delivery of coal to power plants, steel mills, cement factories, and washeries.
 - It proposes a strategic shift towards a railway-based system in First Mile Connectivity (FMC) projects, aiming for a 14% reduction in rail logistic costs, and an annual costsaving of Rs 21,000 Crore.
- **Expected Outcomes:** It is expected to minimise air pollution, alleviate traffic congestion, and reduce carbon emissions by approximately 100,000 tonnes per annum.
 - Moreover, a **10%** saving in the average turnaround time of wagons nationwide is expected.

What is the Status of the Coal Sector in India?

• **Coal**: Coal is a naturally occurring, combustible <u>sedimentary rock</u> composed primarily of carbon,

along with hydrocarbons.

- It forms through the accumulation and decomposition of plant material over millions of years. Under pressure and heat, this organic matter undergoes physical and chemical changes, transforming into coal.
- Coal Reserves in India: India's coal reserves are concentrated in the eastern and central parts of the country.
 - The major coal-producing states are Odisha, Chhattisgarh and Jharkhand, along with parts of Madhya Pradesh, and they account for 75% of domestic raw coal dispatches in India.
- Types of Coal and Clusters in India:
 - Anthracite: With a carbon content ranging from 80% to 95%, it is present in limited quantities primarily in Jammu and Kashmir.
 - **Bituminous coal:** Containing between **60% to 80% carbon,** it is predominantly found in regions such as Jharkhand, West Bengal, Odisha, Chhattisgarh, and Madhya Pradesh.
 - Lignite: It is characterised by its carbon content of 40% to 55% and high moisture levels, and is primarily found in areas including Tamil Nadu, Puducherry, Gujarat, Rajasthan and Jammu & Kashmir.
 - **Peat:** With a **carbon content below 40%,** it represents the earliest stage of the transformation from organic matter, such as **wood, into coal.**
- Significance of Coal for India: Coal is the most important and abundant fossil fuel in India. It accounts for 55% of the country's energy needs.
 - The country's industrial heritage was built upon indigenous coal. Currently, **70%** of India's power demand is met by thermal power plants, which are mostly powered by **coal**.
 - Over the past four decades, commercial primary energy consumption in India has surged by approximately **700%**.
 - Current per capita consumption stands at around **350 kilograms of oil equivalent per year**, still lower than developed countries.
- Coal Imports in India: Present import policy allows for the unrestricted import of coal under Open General License.
 - Consumers, including the steel, power, and cement sectors, as well as coal traders, can import coal based on their commercial requirements.
 - Steel sector primarily imports coking coal to supplement domestic availability and improve quality.
 - Other sectors like power and cement, along with coal traders, import **non-coking coal** to meet their respective needs.

What are the Challenges Related to Coal for India?

- Environmental Impact: Coal mining and combustion contribute to air and water pollution, greenhouse gas emissions, deforestation, and habitat destruction. Addressing these environmental impacts while ensuring energy security is a significant challenge.
- Health Risks: Exposure to coal dust, particulate matter, and harmful emissions from coalfired power plants poses health risks to communities living near coal mines and power plants, leading to respiratory diseases and other health issues.
- Land Acquisition and Rehabilitation: Acquiring land for coal mining projects often involves displacement of communities and disruption of livelihoods.
 - Proper rehabilitation and resettlement of affected populations remain a challenge, with many communities facing social and economic hardships.
- Technological Constraints: Despite advancements in clean coal technologies, such as <u>carbon</u> <u>capture and storage (CCS)</u>, the widespread adoption of these technologies in India remains limited due to high costs and technical challenges.
- Transition to Renewable Energy: The coal sector in India faces challenges amidst the country's commitment to transitioning to renewable energy sources and reducing greenhouse gas emissions.
 - Finding a balance between ensuring energy security and meeting climate change mitigation objectives is a significant hurdle.
 - At <u>COP28</u>, India advocated for a <u>"phase down</u>" of coal power instead of a complete "phase out."

Why India Advocates for Phasing Down Coal Instead of Phasing Out?

- **Energy Security:** Coal currently plays a crucial role in India's energy security, providing a significant portion of the country's electricity generation.
 - Phasing out coal abruptly could lead to **disruptions in energy supply, impacting** industries, businesses, and households.
- **Economic Considerations:** <u>Coal mining</u> and related industries support millions of jobs and contribute significantly to India's economy.
 - A sudden shift away from coal could result in job losses and economic instability in coaldependent regions.
 - Also, currently, renewable energy sources like <u>solar</u> and <u>wind</u> are not as cost-effective as coal.
- Infrastructure Investment: India has made substantial investments in coal-based infrastructure, including power plants and associated facilities.
 - Phasing out coal prematurely would lead to **stranded assets and wasted investments**, adversely affecting the economy.

Way Forward

- Improving Energy Efficiency: Enhancing energy efficiency across the coal value chain, from mining and transportation to power generation and consumption, can reduce energy consumption and environmental impact.
 - Also, implementing high-efficiency, low-emission (HELE) technologies in coal-fired power plants can significantly reduce emissions in the coal value chain while enhancing energy efficiency.
- Diversification of Energy Sources: India should prioritise diversifying its energy mix by increasing investments in renewable energy sources such as solar, wind, hydro, and biomass.
 - This diversification will reduce reliance on coal and contribute to a more sustainable and resilient energy system.
- Transition to Clean Coal Technologies: Investing in research, development, and deployment of clean coal technologies, including carbon capture, utilisation, and storage, can help mitigate the environmental impact of coal-based power generation.
- Promoting Sustainable Mining Practices: Implementing environmentally sustainable mining practices, including land reclamation, water conservation, and <u>biodiversity conservation</u>, can minimise the environmental footprint of coal mining operations.
 - Strengthening regulations and enforcement mechanisms to ensure compliance with environmental standards is essential.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

<u>Prelims</u>

Q1. Consider the following statements: (2019)

- 1. Coal sector was nationalized by the Government of India under Indira Gandhi.
- 2. Now, coal blocks are allocated on lottery basis.
- 3. Till recently, India imported coal to meet the shortages of domestic supply, but now India is selfsufficient in coal production.

Which of the statements given above is/are correct?

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

Ans: (a)

Q2. Which of the following is/are the characteristic/characteristics of Indian coal? (2013)

- 1. High ash content
- 2. Low sulphur content
- 3. Low ash fusion temperature

Select the correct answer using the codes given below:

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

Ans: (a)

<u>Mains</u>

Q. Despite India being one of the countries of Gondwanaland, its mining industry contributes much less to its Gross Domestic Product (GDP) in percentage. Discuss. **(2021)**

Q. "In spite of adverse environmental impact, coal mining is still inevitable for development". Discuss. **(2017)**

Sangeet Natak Akademi Fellowships and Awards for 2022 and 2023

Source: PIB

Why in News?

Recently, the President of India presented **Sangeet Natak Akademi (SNA) Fellowships and Awards** for the years 2022 and 2023 in New Delhi.

What are the Sangeet Natak Akademi Fellowships and Awards?

Sangeet Natak Akademi Fellowship:

- The Sangeet Natak Akademi Fellowship (Akademi Ratna Sadasyata) is the most prestigious honour conferred by the SNA.
 - Established individuals in the fields of music, dance, and drama are considered for this fellowship. However, the criteria stipulate that individuals below the age of 50 are not ordinarily considered for this honour.
- The Akademi Fellowship includes purse money of Rs. 3.00 lakhs, a Tamrapatra (copper plaque), and an Angavastram (shawl).
 - Recommendations for the fellowship are received from the current fellows of the Akademi and members of the General Council of the Akademi.
- The fellowship initially had 30 seats until 2008. In 2010, the General Council amended the rules to add 10 more seats, to be filled over five years with two seats added annually.

Sangeet Natak Akademi Awards:

- The SNA Awards have a rich history spanning over 70 years. These awards aim to honour practitioners, gurus, and scholars in the field of music, dance, and drama, representing the nation's highest achievement in these art forms.
- The Awards in <u>Hindustani</u> **and** <u>Carnatic music</u> were instituted as early as 1951, even before the establishment of the Akademi.

- Initially known as the **Presidential Awards**, they were later incorporated into the **Sangeet Natak Akademi Awards** after the formation of the Akademi.
- Each award includes purse money of Rs. 1.00 lakh, a Tamrapatra (copper plaque), and an Angavastram (shawl).
- Currently, the number of awards to be conferred annually is 41, and till date, over 1298 artists have been honoured with the Sangeet Natak Akademi Awards.

Sangeet Natak Akademi

- The SNA, established in 1953, is the apex body in India dedicated to the preservation and promotion of the rich intangible heritage expressed through music, dance, and drama.
 - It was created by a resolution of the (then) Ministry of Education, Government of India, in 1952 with Dr P.V. Rajamannar as its first Chairman.
- The management of the Akademi is overseen by its General Council, with the Chairman appointed by the President of India for a five-year term.
- The registered office of the Akademi is located at Rabindra Bhavan, New Delhi. Operating as an autonomous body under the Ministry of Culture, the Sangeet Natak Akademi holds a significant position in promoting and preserving India's cultural heritage.
- The SNA gives the Ustad Bismillah Khan Yuva Puraskar to artists under 40 who have excelled in dance, music, and theatre. The award was introduced in 2006. The SNA's Chairman gives the winner a prize of Rs. 25,000 besides a Tamrapatra and Angavastram.
- More than 100 rare art forms that were on the verge of extinction are now being revived through training programmes under the name of 'Kala Deeksha' by the Akademi.

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UPSC Civil Services Examination, Previous Year Questions (PYQs)

<u>Prelims:</u>

Q. Consider the following statements: (2009)

- 1. The National School of Drama was set up by Sangeet Natak Akademi in 1959.
- 2. The highest honour conferred by the Sahitya Akademi on a writer is by electing him its Fellow.

Which of the statements given above is/are correct?

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

Ans: (c)

Bureau of Energy Efficiency

Source: PIB

Why in News?

The 22nd Foundation Day of the <u>Bureau of Energy Efficiency</u> was recently celebrated with the theme "Energy Transition through Electrification and Decarbonization in India" and the <u>State Energy</u> <u>Efficiency Index 2023</u> was released.

What is the State Energy Efficiency Index (SEEI) 2023?

- About:
 - It is the 5th edition of the index, developed by the Bureau of Energy Efficiency (BEE), a statutory body under the <u>Ministry of Power</u>, in association with the <u>Alliance for an</u> <u>Energy-Efficient Economy (AEEE).</u>
 - It evaluates the performance of 36 states and UTs across seven demand sectors using 65 indicators, including qualitative, quantitative, and outcome-based measures.
 - In **SEEI 2023**, states and UTs are classified as 'Front runner' (>=60), 'Achiever' (50-59.75), 'Contender' (30-49.75), and 'Aspirant' (<30) according to their total scores.
 - States and UTs are also classified into **four groups** based on their total final energy consumption (TFEC) **for peer-to-peer performance comparison:** Group 1 (>15 million tonnes of oil equivalent (MTOE)), Group 2 (5-15 MTOE), Group 3 (1-5 MTOE), and Group 4 (<1 MTOE).
 - The **top-performing states in each group are** Karnataka (Group 1), Andhra Pradesh (Group 2), Assam (Group 3), and Chandigarh (Group 4).



Framework for SEEI 2023

Key Findings of SEEI 2023:

- Front runner (>=60):
 - Seven states in 'Front runner' category in SEEI 2023: Karnataka (score 86.5), Andhra Pradesh (83.25), Haryana, Kerala, Maharashtra, Punjab, and Telangana.
- Achiever (50-59.75):
 - Two states, Assam and Uttar Pradesh are in the 'Achiever' category,
- Contender (30-49.75):

Three states, Goa, Jharkhand, and Tamil Nadu, are in the 'Contender' category.
Aspirant (<30):

- **Maharashtra and Haryana** most improved states, with score increases of 18.5 and 17 points, respectively.
- 15 states have improved their scores compared to SEEI 2021- 22.
- Substantial decline in score observed in Rajasthan, primarily attributed to lack of reported data.





Performance of states and UTs under SEEI 2023

Bureau of Energy Efficiency (BEE):

- <u>BEE</u> was established on 1st March 2002, under the provisions of the <u>Energy Conservation Act</u>, 2001, under the **Ministry of Power**.
- The mission of BEE is to assist in **developing policies** and strategies for energy efficiency with the primary objective of reducing the **energy intensity** of the Indian economy.
- Functions: It is responsible for regulatory and promotional functions outlined in the Energy Conservation Act, 2001.
- BEE has helped India reduce its energy consumption by around 3.5%.

UPSC Civil Services Examination, Previous Year Question:

<u>Prelims</u>

Q. On which of the following can you find the Bureau of Energy Efficiency Star Label? (2016)

- 1. Ceiling fans
- 2. Electric geysers
- 3. Tubular fluorescent lamps

Select the correct answer using the code given below:

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

Ans: (d)

Stalled Negotiations on Pancheshwar Multipurpose Project

Source: TH

Despite the recent signing of an agreement on long-term power sharing between India and Nepal, progress on the **Pancheshwar Multipurpose Project (PMP)** remains at a standstill.

- The impasse surrounding the PMP, particularly concerning the equitable distribution of benefits, poses a challenge to the advancement of relations between India and Nepal.
- In January 2023, India and Nepal signed a bilateral agreement for the export of 10,000 MW of power in the next 10 years.
- Pancheshwar Multipurpose Project (PMP) is a bi-national hydropower project to be developed on the Mahakali River bordering India and Nepal.
 - India and Nepal had signed a Treaty known as Mahakali Treaty in February, 1996. Implementation of the Pancheshwar Multipurpose Project is the centrepiece of the Mahakali Treaty.



IRIS: India's First AI Teacher Robot

Source: TOI



A school in Thiruvananthapuram, Kerala has unveiled a groundbreaking innovation in education with the introduction of **India's first** <u>Generative Artificial Intelligence(Al)</u> **teacher robot named 'Iris'.** Developed in collaboration with Makerlabs Edutech, Iris aims to transform traditional teaching methods through personalised learning experiences for students.

- Equipped with voice assistant and IRIS engages students in interactive learning activities.
- IRIS responds to user queries, provides explanations, and delivers educational content through personalised interactions.
 - With a 4-wheel chassis and 5 degrees of freedom (DoF) movements, IRIS can move freely and engage in hands-on learning activities.
- IRIS promises to enhance learning outcomes and inspire students in new ways, ushering in a future where AI complements traditional teaching methods.
 - Generative AI refers to deep-learning models that can generate high-quality text, images, and other content based on the data they were trained on.
- In August 2023, India inaugurated its first-ever Al school in Kerala.

Read more: Generative Artificial Intelligence

James Webb Telescope Spots Oldest Dead Galaxy

Source: DTE

The James Webb Space Telescope (JWST) has recently uncovered fascinating insights into the universe's history by capturing the oldest-known dead galaxy, which ceased star formation approximately 13 billion years ago, 700 million years after the **Big Bang event** that gave rise to the universe.

- The dead galaxy underwent a short but intense period of star formation between 30 and 90 million years, abruptly ceasing star formation between 10 and 20 million years before the JWST's observation.
 - Its mass is comparable to that of the Small Magellanic Cloud (SMC), a dwarf galaxy near the Milky Way.
- Insights suggest abundant gas cloud collapses in the early universe facilitated star formation, but internal factors like supermassive black holes or gas depletion can halt this process.
 - Gas depletion may result from rapid consumption without replenishment, leading to galaxies transitioning from star-forming to dormant states.
 - The dynamic nature of the early universe implies potential rejuvenation of dead galaxies, subject to further observations.
- JWST is an international collaboration between NASA, the European Space Agency (ESA) and the Canadian Space Agency which was launched in December 2021.
 - It is currently at a point in space known as the Sun-Earth L2 Lagrange point, approximately 1.5 million km beyond Earth's orbit around the Sun.
 - It's the largest, most powerful infrared space telescope ever built and is successor to the The Vision Hubble Telescope.

Read more: James Webb Telescope spots 6 Monster Galaxies

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