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**1. What is PM SHRI, the 'showcase' schools scheme? Why some States are not ready to implement this scheme? How is Centre pressurizing the States to implement the same?****Why in News?**

The Centre has stopped funding for the umbrella program for school education in three opposition-ruled states that have refused to implement its PM SHRI scheme. The Samagra Shiksha Scheme, for which funding has been stopped in West Bengal, Punjab, and Delhi, supports implementation of the Right of Children to Free and Compulsory Education (RTE) Act, 2009.



Samagra Shiksha funds for the third and fourth quarters of 2023-24 and the first quarter of 2024-25, amounting to Rs 330 crore, Rs 515 crore, and Rs 1,000 crore for Delhi, Punjab and West Bengal respectively, have not been released.

While the Education Ministry has given no official explanation, a senior official told that states cannot receive Samagra Shiksha funds without implementing PM SHRI (PM Schools for Rising India), which is part of the program.

**PM SHRI scheme**

The scheme, approved in 2022, seeks to develop 14,500 schools to "showcase" the National Education Policy (NEP), 2020, and be "exemplars" for other schools in their region. The scheme is for existing elementary, secondary, and senior secondary schools run by the central government and state and local governments around the country.

The PM SHRI dashboard online currently lists 10,077 schools, of which 839 are Kendriya Vidyalayas and 599 Navodaya Vidyalayas, both run by the Centre. The remaining 8,639 schools are run by state or local governments.

The Centre had declared a total project cost of Rs 27,360 crore for five years until 2026-27, of which the Centre would bear Rs 18,128 crore. At the end of the five-year period, states and Union Territories (UTs) would be required to "continue to maintain the benchmarks achieved by these schools".

**Selection of schools**

UP has the most PM SHRI schools (1,865) followed by Maharashtra (910) and Andhra Pradesh (900). No state or local government-run schools in the non-BJP states of Punjab, Delhi, Tamil Nadu, Kerala, West Bengal, and Bihar, as well as Odisha, which got a BJP government only last month, have been included in the scheme.

PM SHRI schools are selected through the “challenge mode” — schools that meet certain minimum benchmarks (including a pucca building in good condition, barrier-free access ramps, at least one toilet each for boys and girls) can apply online.

They are evaluated on a set of parameters that include infrastructure, teaching staff, and learning outcomes. Schools in urban areas must score at least 70%; those in rural areas 60% to be selected. States are supposed to send a list of recommended schools to the Ministry, and an expert committee headed by the School Education and Literacy Secretary draws up the final list. Up to two schools — an elementary school and a secondary/ senior secondary school can be selected per block/ urban local body.

The state, UT, or Kendriya Vidyalaya Sangathan/ Navodaya Vidyalaya Samiti is required to sign a Memorandum of Understanding (MoU) with the Ministry of Education committing to implement the provisions of the NEP “in entirety within the entire State/ UT”, and to prefix PM SHRI to the name of the selected school.

States/ UTs have to work to ensure zero dropout rates in all grades within two years of implementation, comply with norms for pupil-teacher ratio, and implement “innovative pedagogy” such as activity-based, sports-based, art-based, and toy-based learning.

### **Samagra Shiksha**

The PM SHRI scheme is to be implemented at the state/ UT level through the existing administrative structure available for Samagra Shiksha, which the government describes as “an overarching program for the school education sector...from pre-school to Class 12..., prepared with the broader goal of improving school effectiveness measured in terms of equal opportunities for schooling and equitable learning outcomes”.

Samagra Shiksha, which was proposed by the Union Budget of 2018-19, subsumed the erstwhile Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA), and Teacher Education (TE) schemes.

The scheme is funded in a 60:40 ratio by the Centre and states, barring the 11 Northeastern and Himalayan states, which have to bear only 10% of the cost.

### **Three outlier states**

Delhi and Punjab have declined to participate in PM SHRI because the Aam Aadmi Party governments in these states are already implementing similar schemes for exemplar schools called “Schools of Specialised Excellence” and “Schools of Eminence” respectively. West Bengal has objected to the requirement of prefixing PM SHRI to the names of the schools, especially since the state bears 40% of the cost.

The states that have not signed the PM SHRI MoU have not received funds from the Centre under the Samagra Shiksha scheme. After holding out initially, Kerala, Bihar, Tamil Nadu, and Odisha agreed to participate in the scheme in March this year.

Relevance: GS Prelims & Mains Paper II; Governance

Source: The Hindu

## 2. National Quantum Mission: Why India has a lot of catching up to do

### Why in News?

India launched the National Quantum Mission last year and became one of the few countries in the world to have a dedicated programme to harness the power of quantum technologies. However, A new report, surveying the existing capabilities of the country in this area, has found that countries like China and the United States have a huge head start over India. These countries have not just invested much more money in funding research, they also have more people working in this sector.

INDIA VS OTHER COUNTRIES IN QUANTUM TECHNOLOGIES				
Country	Investment (in bn \$)	Papers published (2000 to 2018)	Patents gained (2015 to 2020)	No. of graduating students*
India	0.75	1,711	339	82,110
China	15	12,110	23,335	57,693
United States	3.75	13,489	8,935	45,087
European Union	1.1	NA	NA	1,35,511

\*(in areas related to quantum science)  
Source: Landscape of Indian R&D in Quantum Technologies (Citing multiple external sources)

They have been publishing far greater numbers of scientific papers, and register many more patents as well.

But the good thing, as Indian science leaders have been emphasising, is that quantum technologies are still under development, and India is not exactly starting from zero. In fact, in some areas, Indian scientists are very much at the forefront of global research.

### The quantum mission

After several years of discussions, India in 2023 announced the setting up of the National Quantum Mission to build capabilities in quantum-related science and technology. The mission focuses on four key domains: computing, communications, sensors, and materials.

Quantum technologies try to make use of the fact that matter behaves in a very unexpected and counter-intuitive manner at its smallest scale. Sub-atomic particles such as electrons seemingly exist at multiple locations at the same time, and can influence the behaviour of a like-particle, with which they have had a prior interaction, over infinitely large distances.

These strange properties have been experimentally verified hundreds of times. However, it is only in recent years that scientists have acquired capabilities to put them to some beneficial uses. Some of these properties, like the ability to exist in multiple states at the same time — a phenomenon called superposition — can be used to perform real-life tasks that conventional technologies are unable to achieve.

Quantum computers are already a reality, though their capabilities are quite limited at this point. More mature quantum computers would be able to do calculations that would be either impossible for normal computers, or would take far too long to perform.

By overcoming the limits of current technologies, a quantum-enabled transformation can build the foundations of a new economy in a decade or two. This is why India wants to try and rapidly build its capabilities in these areas. Partnering in technology development would ensure early fruits of success, which can trigger rapid economic growth. It would also make leading technologies accessible to India.

### **A lot of ground to cover**

The National Quantum Mission, however, is just the first step and there is a lot of ground to cover, according to the Landscape of Indian R&D in Quantum Technologies report. The report has been prepared by itihaasa Research and Digital, a not-for-profit company that seeks to study the evolution of technology and business in India.

The Rs 6,000 crore (around \$0.75 billion) earmarked for the mission is impressive by Indian standards but it pales in comparison to what other countries are spending on quantum-related research, the report said. China is estimated to be investing \$15 billion in this effort, while the US is pumping in about \$3.75 billion. The United Kingdom has put in about \$4.3 billion and countries like Germany, South Korea, and France have all committed to spend more than \$2 billion

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express

### **3. Children die of suspected Chandipura virus infection in Gujarat: What is the disease, and what are its symptoms?**

#### **Why in News?**

The Gujarat government recent said that six children have died of suspected Chandipura virus (CHPV) infection in the state since July 10. So far, a total of 12 suspected cases have been reported. Two patients are from Rajasthan, and one is from Madhya Pradesh. They received treatment in Gujarat.

#### **What is CHPV infection and how is it transmitted?**

CHPV is a virus of the Rhabdoviridae family, which also includes other members such as the lyssavirus that causes rabies. Several species of sandflies like Phlebotomine sandflies and Phlebotomus papatasi, and some mosquito species such as Aedes aegypti (which is also the vector for dengue) are considered vectors of CHPV. The virus resides in the salivary gland of these insects, and can be transmitted to humans or other vertebrates like domestic animals



through bites. The infection caused by the virus can then reach the central nervous system which can lead to encephalitis — inflammation of the active tissues of the brain.

## **CHANDIPURA VIRUS**

Named after Chandipura village in Bhandara dist where it was first reported in 1965

### **HOW IS IT TRANSMITTED**

Human beings get the virus from sand fly which thrives in cattle sheds. It transmits



the virus when it bites humans during night

**Symptoms |** Acute fever during night, convulsions, gastro-intestinal disturbance causing vomiting

**Treatment |** No vaccine and hence the disease is treated symptomatically

### **What are the symptoms of CHPV infection?**

The CHPV infection presents initially with flu-like symptoms such as acute onset of fever, body ache, and headache. It may then progress to altered sensorium or seizures and encephalitis.

Retrospective studies from India have also reported other symptoms such as respiratory distress, bleeding tendencies, or anaemia.

The infection often progresses rapidly after encephalitis, which may then lead to mortality within 24-48 hours of hospitalization. Susceptibility has largely remained limited to children below 15 years.

### **How can the infection be managed?**

The infection can only be symptomatically managed as currently there is no specific antiretroviral therapy or vaccine available for treatment. As a result, it becomes crucial to manage brain inflammation to prevent mortality. Disease progression can be as rapid as a patient reporting high fever in the morning, and their kidneys or liver being

affected by the evening. This makes it harder to manage the symptoms.

### **Which are the worst affected regions in India?**

The CHPV infection was first isolated in 1965 while investigating a dengue/chikungunya outbreak in Maharashtra. However, one of the most significant outbreaks of the disease in India was seen in 2003-04 in states such as Maharashtra, northern Gujarat and Andhra Pradesh, with the three states reporting more than 300 deaths of children.

Gujarat, during the 2004 outbreak, saw a case fatality rate (CFR) of around 78% while CFR in Andhra Pradesh, during the 2003 outbreak, was pegged at around 55%.

The infection has largely remained endemic to the central part of India, where the population of CHPV infection-spreading sandflies and mosquitoes is higher.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

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