SHANKAR IAS ACADEMY

THE BEST IAS ACADEMY IN SOUTH INDIA SINCE 2004

GROUP II INTERVIEW CURRENT AFFAIRS CLASS

SCIENCE AND TECH

1.MALWARE

- Malicious software
- Delete files, access files, hijacking data
- Types: Virus, Trojan, Worms
- Why in news? – Koodankulan Nuclear Power Plant – Cyber Attack by

2.GAGANYAAN MISSION

- Indian Space flight mission
- December 2021
- Low earth orbit at 300 – 400 km
- 4- Indian Air Force Personal being trained

3. Cryptocurrency

- an internet-based medium of exchange
- to conduct financial transactions
- blockchain technology
- not controlled by any central authority
- Bit Coin, FB - Libra

4.Blackchain Technology

- Decentralization
- Transparency
- Immutability
- Distributed ledger technology (DLT) is a digital system **for recording the transaction of assets** in which the transactions and their details are recorded in multiple places at the same time.

5.SCIENCE EXPLORER

- Mobile Science Exhibition buses for ***Aspirational Districts***
- aim to create a scientific awareness among the rural children.

6.Akademik Lomonosov

- Russia launches world’s first floating nuclear reactor
- Nuclear Titanic
- Chernobyl on ice

7.lithium-ion batteries

- most common applications of lithium-ion batteries are:
  - Power backups/UPS
  - Mobile, Laptops, and other commonly used consumer electronic goods
  - Electric mobility
  - Energy Storage Systems
- Advantages:
  - High Energy Density
  - Low Self Discharge
  - Low to Minimum Maintenance
  - Available in all shapes

8. Malnutrition

- deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients
- **Undernutrition:** It includes
  - stunting (low height for age),
  - wasting (low weight for height),
  - underweight (low weight for age) and
  - micronutrient deficiencies (a lack of important vitamins and minerals).
- **Obesity:** It includes
  - overweight and
  - diet-related noncommunicable diseases (such as heart disease, stroke, diabetes, and cancer).
- Global Hunger Index – India rank – 102 - Severe

9.Nobel Prize

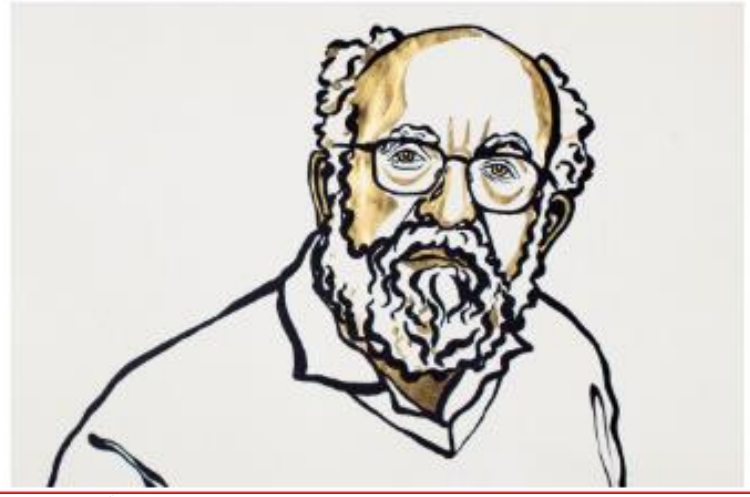
The Nobel Prize in Physics 2019

James Peebles

"for theoretical discoveries in physical cosmology"

Michel Mayor

"for the discovery of an exoplanet orbiting a solar-type star"



Didier Queloz

"for the discovery of an exoplanet orbiting a solar-type star"

9.Nobel Prize

The Nobel Prize in Chemistry 2019

John B. Goodenough

"for the development of lithium-ion batteries"

M. Stanley Whittingham

"for the development of lithium-ion batteries"

Akira Yoshino

"for the development of lithium-ion batteries"

9.Nobel Prize

The Nobel Prize in Physiology or Medicine 2019

William G. Kaelin Jr

"for their discoveries of how cells sense and adapt to oxygen availability"

Sir Peter J. Ratcliffe

"for their discoveries of how cells sense and adapt to oxygen availability"

Gregg L. Semenza

"for their discoveries of how cells sense and adapt to oxygen availability"

9.Nobel Prize

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The Nobel Peace Prize 2019

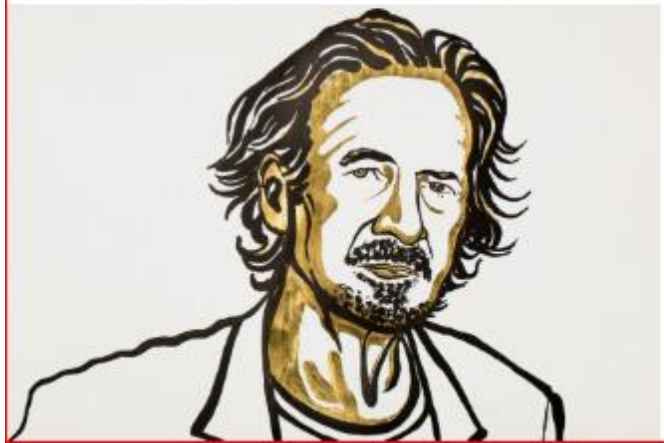
Abiy Ahmed Ali

"for his efforts to achieve peace and international cooperation, and in particular for his decisive initiative to resolve the border conflict with neighbouring Eritrea"

The Nobel Prize in Literature 2019

Peter Handke

"for an influential work that with linguistic ingenuity has explored the periphery and the specificity of human experience"



Horn of Africa

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9.Nobel Prize

The Prize in Economic Sciences 2019

Abhijit Banerjee

"for their experimental approach to alleviating global poverty"

Esther Duflo

"for their experimental approach to alleviating global poverty"

Michael Kremer

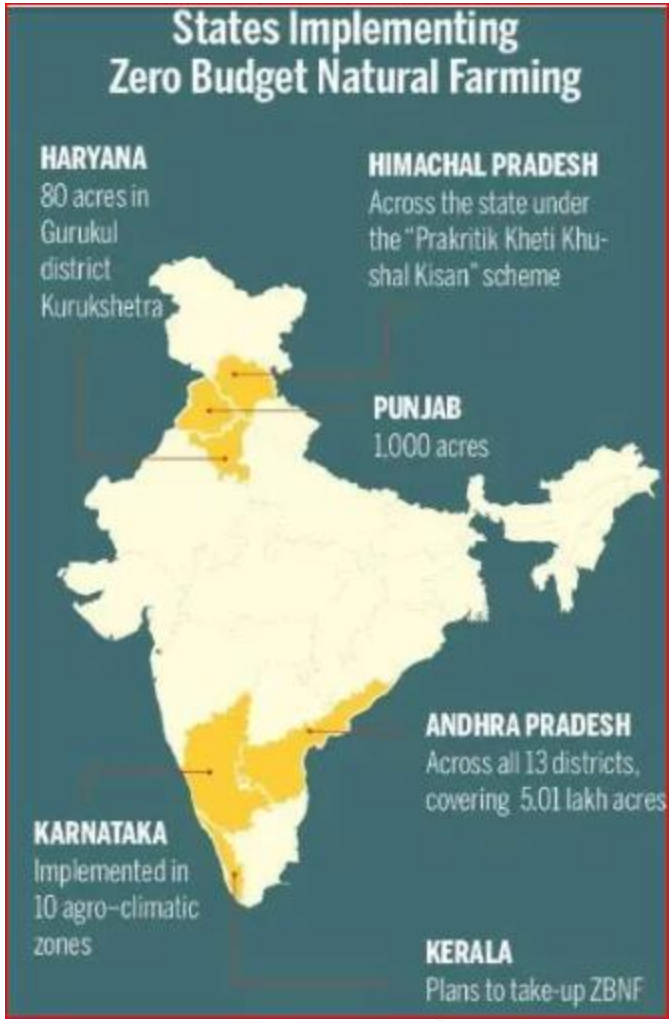
"for their experimental approach to alleviating global poverty"

9. List of Indian Nobel Laureates

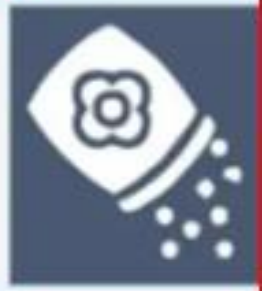
- **Rabindranath Tagore (1861-1941)**
  Rabindranath Tagore was awarded the Nobel Prize in **literature**. He was the first Asian to win a Nobel Prize. He was awarded the Nobel Prize for 'Gitanjali' in 1913.
- **C.V. Raman (1888-1970)**
  Chandrasekhara Venkata Raman was awarded the Nobel Prize in **Physics** in 1930 for 'Raman Effect'.
- **Hargovind Khorana (1922)**
  Hargovind Khorana was awarded the Nobel Prize in 1968 for his contribution in **medical sciences**. He carried out intensive research about genetic code and explained the importance of protein synthesis in genetic code.
- **Mother Teresa (1910-1997)**
  She was awarded the Nobel **Peace Prize** in 1979.
- **Subramaniam Chandrashekhar (1910-1955)**
  Subramaniam Chandrashekhar was awarded the Nobel Prize in **Physics** in 1983. He propounded the theory about the 'White Dwarf. He determined a limit for such celestial bodies which is known as the 'Chandrashekhar Limit'.
- **Amartya Sen (1933)**
  Amartya Sen was awarded the Nobel Prize in **Economics** in 1998 for his concepts about welfare economics.
- **Venkat Raman Ramkrisha (1952)**
  Venkantraman Ramkrishan won the Nobel Prize in **Chemistry** in 2009 along with two other scientists.
- **Kailash Satyarthi**
  Kailash Satyarthi was awarded the Nobel **Peace** Prize in 2014 along with Malala Yousufzai

10. Zero Budget Natural Farming

- growing crops in harmony with nature.
- pioneered by Shri. Subhash Palekar
- without adding any synthetic fertilisers and pesticides
- based on polycropping.
- net expenditure on the main crop is ‘zero’.
- Livestock integration in the form of *native breed of cows is stressed upon*.



FOUR PILLARS OF ZERO BUDGET NATURAL FARMING

FIRST WHEEL 1	Bijamrita (Seed treatment)	
SECOND WHEEL 2	Jiwamrita (No fertilizers No Pesticides)	
THIRD WHEEL 3	Mulching (Soil, straw & live)	
THIRD WHEEL 4	Waaphasa (Soil moisture)	

99 x 746

11. E-Cigerette

Article 47 reads: "Duty of the State to **raise the level of nutrition** and the **standard of living and to improve public health**.

The Union Cabinet approved the promulgation of the **Prohibition of Electronic Cigarettes (production, manufacture, import, export, transport, sale, distribution, storage and advertisement) Ordinance, 2019** with immediate effect.

Up in smoke

Wednesday's move follows an advisory by the government in 2018 to all States to consider banning e-cigarettes

- e-cigarettes are brought from China and other countries and are not manufactured in India. They are also available online
- WHO too urged member countries to take appropriate steps. It does not endorse e-cigarettes as cessation aids
- 16 States & one Union Territory have already banned them. The Indian Council of Medical Research, in a recent paper, had recommended a complete ban on them

- They are marketed as being safer than conventional cigarettes but this is false. Available literature suggests that they may act as gateway products to induce non-smokers to nicotine-use

Chandrayaan-1

- India’s first mission to the moon
- Chandra- Moon, Yaan-vehicle
- 1380 kg
- PSLV-C11 on October 22, 2008
- operational for 312 days till August 29, 2009.
- discovered traces of water on the moon - also discovered water ice in the North polar region
- detected Magnesium, Aluminium and Silicon

Chandrayaan-2

- India's second lunar expedition
- South Polar region
- comprises of an Orbiter, Lander (Vikram) and Rover (Pragyaan).
- weighs 3850 kg
- launched by GSLV MK-III M1 launch vehicle
- July 22, 2019
- Vikram lander on the Moon’s surface is likely to be on September 06, 2019

Orbiter

1. 2,379 kg
2. observe the lunar surface
3. relay communication between Earth and Chandrayaan 2's Lander — Vikram.
4. placed in a 100X100 km lunar polar orbit.
5. communicating with Indian Deep Space Network (IDSN) at Byalalu

Lander — Vikram

1. 1,471 kg
2. Named ***Vikram*** after Dr Vikram A Sarabhai
3. Designed to function for ***one lunar day***, which is equivalent to about ***14 Earth days***
4. capability to communicate with IDSN at Byalalu near Bangalore, as well as with the Orbiter and Rover

Rover — Pragyan

1. 27 kg
2. ***6-wheeled*** robotic vehicle named *Pragyan*
3. translates to 'wisdom' in Sanskrit.
4. can travel up to ***500 m*** (½-a-km)
5. leverages solar energy for its functioning.
6. can only communicate with the Lander.

- Vikram Ambalal Sarabhai (12 August 1919 – 30 December 1971) was an Indian scientist, physicist and astronomer
- 100TH YEAR ANNIVERSARY
- father of Indian space program
- Indian Institute of Management Ahmedabad

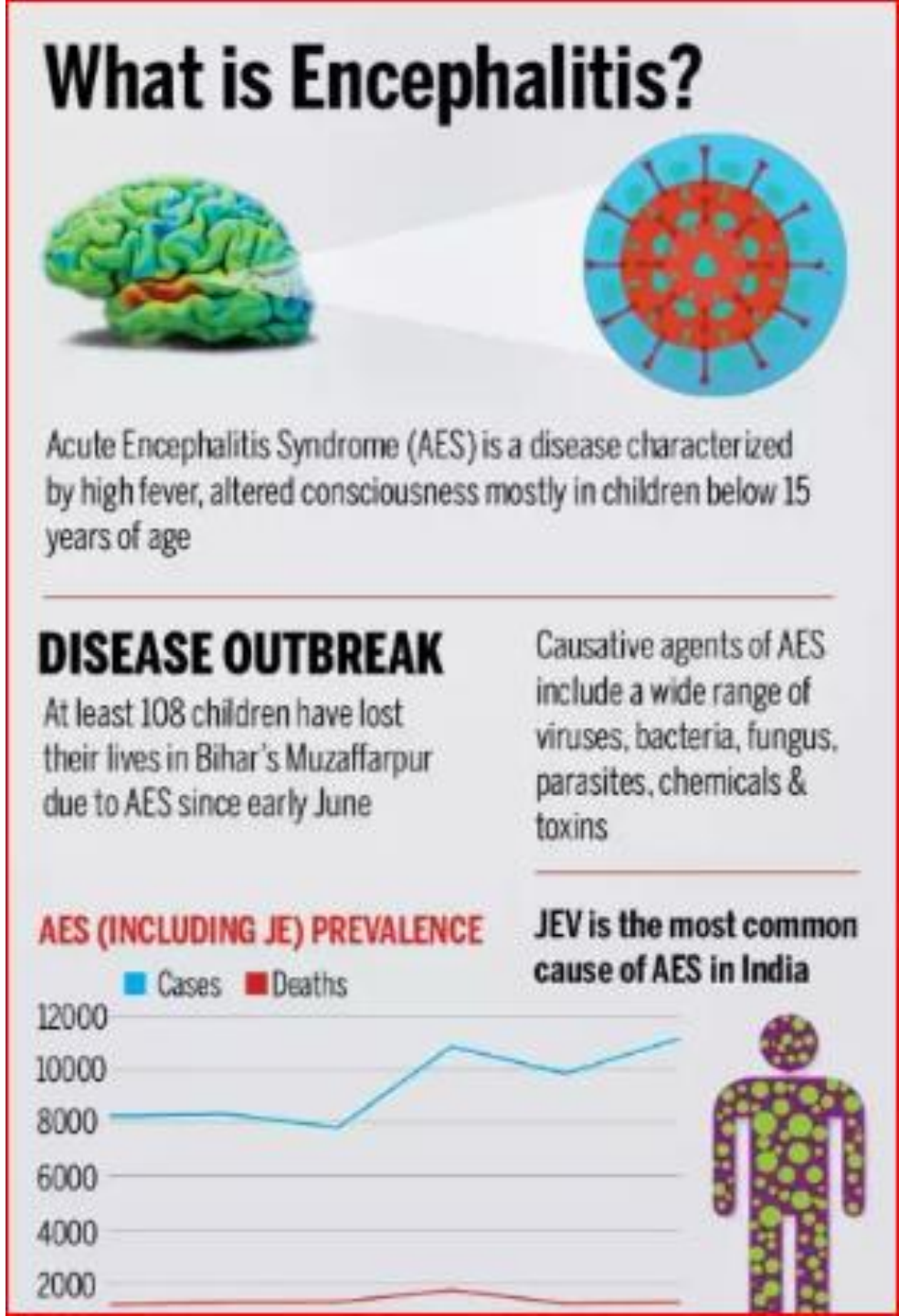
- YUVIKA-2019 - ***YUva VIgyani KAryakram***
- 3 middle school Students each from 29 States and 7 Union territories
- 2-week residential summer vacation programme
- Programme spread over 4 ISRO centres
- **UNNATI** (**UN**ispace **N**anosatellite **A**ssembly &**T**raining by **I**SRO) on Nanosatellites development

13. FAME II Scheme

- to encourage Faster adoption of Electric and hybrid vehicle by way of offering upfront Incentive on purchase of Electric vehicles and also by way of **establishing a necessary charging Infrastructure** for electric vehicles.

14.JEV

- **attributed to low blood sugar level (hypoglycaemia).**



15. MEV-1: 1st Satellite Servicing Spacecraft

- Mission Extension Vehicle-1
- By Russia
- to dock with aging spacecraft

16. FEDOR: Russia launches its 1st humanoid robot in space

17. TESS Mission

- **GJ 357 d**, a super-Earth planet located 31 light years away
- NASA
- Exoplanet

17. REPLACE Strategy

- eliminating Trans-fat from industrially produced global food supply by 2023
- worst form of fat in food
- coronary heart disease
- low-density lipoprotein (LDL) - bad cholesterol
- high-density lipoprotein (HDL) - good cholesterol.
- higher risk of developing type 2 diabetes.
- complete elimination of industrially-produced trans fats from the food supply by 2023

Eat Right India

- REPLACE is an abbreviation for WHO's six strategic actions as:
  - **Review** (dietary sources of industrially-produced trans fats)**,**
  - **Promote** (replacement of industrially-produced trans fats with healthier fats**,**
  - **Legislate** (enact regulatory actions to eliminate industrially-produced trans fats)**,**
  - **Assess** (trans fats content in the food supply)**,**
  - **Create awareness** (about negative health impact of trans fats) **and**
  - **Enforce** (compliance of policies and regulations).

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