

**NATIONAL SOCIAL ISSUES- WOMEN, POPULATION, URBANISATION, EMPOWERMENT ETC**

**National Health Profile (NHP), 2019**

Health Minister Dr. Harsh Vardhan released the 14th National Health Profile (NHP), 2019 and its e-book in New Delhi.

**About:**

- The NHP is prepared by the Central Bureau of Health Intelligence (CBHI).
- This 14th edition of NHP is the continuation of the publication since 2005.
- It covers comprehensive information on demographic, socio-economic health status, health finance indicators, health infrastructure and health of human resources in the country.
- The NHP highlights substantial health information under major indicators viz.
  1. demographic indicators (population and vital statistics),
  2. socio-economic indicators (education, employment, housing and amenities, drinking water and sanitation) and
  3. health status indicators (incidence and prevalence of common communicable and non-communicable diseases and RCH) etc.

**INDIAN HERITAGE AND CULTURE, HISTORY**

**Assamese Bhaona**

Recently, the Bhaona performers made a foreign debut in Abu Dhabi.

- The initiative is supported by the Assam's Department of Culture to popularize Bhaona across the world in English language.
- Bhaona is a traditional form of entertainment.
- It was the creation of saint-reformer Srimanta Sankardeva (a Vaishnava saint born in 1449 A.D in Nagaon district of Assam. He started the neo-Vaishnavite movement).
  - Initially, he wrote his prose in Sanskrit but later used Assamese and Brajavali (a literary language limited to theatrical usage, in which Sankardeva wrote his songs and plays) to develop the following artforms:
    - Borgeet- a new form of spiritual music,
    - Bhaona- a mythology-based theatrical performance, and
    - Monastic dances that evolved into the classical Sattriya (a classical dance form which acts as a medium for propagation of the Vaishnava faith).
- A Bhaona involves dialogues, songs, and dances.
  - It usually involves 40-50 performers wearing costumes and ornaments including those playing heavy drums and cymbals.
  - The actors who perform it are known as Bhaoriya.

**INDIAN ECONOMY**

**Employment In India**

A new study, commissioned by the Economic Advisory Council to the Prime Minister (EAC-PM), and undertaken by Laveesh Bhandari of Indicus Foundation and Amaresh Dubey of Jawaharlal Nehru University, has highlighted the broad trends for employment in India between 2004 and 2018.

**About:**

- A key feature of this study is that instead of focusing on unemployment, it focuses only on the "employment" data.
- It does so by looking at three comparable surveys conducted by the National Sample Survey Organisation (NSSO) — the Employment-Unemployment Surveys (EUS) of 2004-05 and 2011-12, and the Periodic Labour Force Survey (PLFS) of 2017-18.

**Main findings of the study:**

- The total employment in the country grew by 4.5 crore in the 13 years between EUS 2004-05 and PLFS 2017-18. This represents a growth of just 0.8 per cent — less than half the rate at which the overall population grew, which was 1.7 per cent.
- Of the 4.5 crore increase in employment, 4.2 crore happened in the urban areas while rural employment either contracted (by 0.01 per cent between 2004 and 2011) or was stagnant (grew by 0.18 per cent between 2011 and 2017).
- Male employment grew by 6 crore but female employment fell by 1.5 crore.

- Youth employment (those between the ages of 15 and 24) has fallen from 8.14 crore in 2004 to 5.34 crore in 2017. However, employment in the 25-59 age group and the 60 years and above group has gone up.
- The share of organised sector in the total employed has risen from 8.9 per cent in 2004 to 14 per cent in 2017. The share of unorganised sector in the total employed has gone up from 37.1 per cent in 2004 to 47.7 per cent in 2017.
- Both these sectors – Organised and Unorganised – have grown at the expense of the agri-cropping sector, where employment has fallen from 21.9 per cent in 2004 to 17.4 per cent in 2017. In essence, those who are poor, illiterate, and unskilled are increasingly losing out on jobs.

## **ENVIRONMENT- CONSERVATION, BIO-DIVERSITY AND ISSUES**

### **Gill-Oxygen Limitation Theory (GOLT)**

In a new research paper, Scientists have explained the biological reasons why fish species will shift towards the poles due to impact of climate change. Scientists have described this with the Gill-Oxygen Limitation Theory (GOLT).

About:

- According to Gill-Oxygen Limitation Theory (GOLT), warming waters have less oxygen. Therefore, fish have difficulties breathing in such environments. Additionally, such warming, low-oxygen waters also increase fish's oxygen demands because their metabolism speeds up.
- This is because, as fish grow, their demand for oxygen increases. However, the surface area of the gills (two-dimensional) does not grow at the same pace as the rest of the body (three-dimensional). The larger the fish, the smaller its surface area relative to the volume of its body.
- So, the fish move to waters whose temperatures resemble those of their original habitats and that satisfy their oxygen needs.
- As the global sea surface temperature has increased by approximately 0.13°C per decade over the past 100 years, "suitable" waters are more and more found towards the poles and at greater depths.

### **Fridays For Future Movement**

Swedish climate activist Greta Thunberg has refused to accept an environmental award saying that the climate movement needed people to start to listen to science and not awards.

About:

- The young climate activist, who has rallied millions to her Fridays for Future movement, was honoured at a Stockholm ceremony held by the Nordic Council, a regional body for inter-parliamentary cooperation.
- Still only 16 years old, Thunberg rose to prominence after she started spending her Fridays outside Sweden's parliament in August 2018, holding a sign reading "School strike for climate".

Fridays for Future (FFF):

- Fridays for Future (FFF) is also known variously as the school strike for the climate, Youth for Climate, Climate Strike, Youth Strike for Climate.
- It is an international movement of school students who take time off from class to participate in demonstrations to demand action to prevent further global warming and climate change.
- Publicity and widespread organising began after Swedish schoolgirl Greta Thunberg staged a protest in August 2018 outside the Swedish Riksdag, holding a sign that read "School strike for the climate". A global strike on 15 March 2019 gathered more than one million strikers.
- In June 2019, Fridays for Future and Greta Thunberg were honoured with Amnesty International's Ambassador of Conscience award.

## **SCIENCE AND TECHNOLOGY- EVERYDAY SCIENCE, SPACE, NUCLEAR, DEFENCE ETC**

### **Edge Computing**

Nvidia, one of the biggest players in the manufacture of AI acceleration hardware, has just announced its EGX edge computing platform to help telecom operators adopt 5G networks capable of supporting edge workloads. According to the global research firm Gartner, by 2025, companies will generate and process more than 75% of their data at the "edge" of the cloud.

About:

- Edge computing enables data to be analysed, processed, and transferred at the edge of a network.
- The idea is to analyse data locally, closer to where it is stored, in real-time without latency, rather than send it far away to a centralised data centre.

- Experts believe the true potential of edge computing will become apparent when 5G networks go mainstream in a year from now. Users will be able to enjoy consistent connectivity without even realising it.

**Edge Computing vs Cloud Computing:**

- The basic difference between edge computing and cloud computing lies in where the data processing takes place. At the moment, the existing Internet of Things (IoT) systems perform all of their computations in the cloud using data centres.
- Edge computing, on the other hand, essentially manages the massive amounts of data generated by IoT devices by storing and processing data locally. That data doesn't need to be sent over a network as soon as it processed; only important data is sent — therefore, an edge computing network reduces the amount of data that travels over the network.

**Organoid**

Two neuroscientists have warned that fellow scientists are “perilously close” to crossing the ethical red line of growing mini-brains or organoids in the laboratory that can perceive or feel things.

**About:**

- Organoids are a group of cells grown in laboratories into three-dimensional, miniature structures that mimic the cell arrangement of a fully-grown organ.
- They are tiny (typically the size of a pea) organ-like structures that do not achieve all the functional maturity of human organs but often resemble the early stages of a developing tissue.
- Organoids are grown in the laboratory using stem cells or induced pluripotent stem cells (iPSC). Stem cells are provided with nutrients and other specific molecules to grow and become cells resembling a specific organ.
- Present status: Organoids of the brain, small intestine, kidney, heart, stomach, eyes, liver, pancreas, prostate, salivary glands, and inner ear to name a few have already been developed in the laboratory.
- Benefits: Since the organoids closely resemble mature tissues, they can be used for studying the complex arrangements of cells in three-dimension and their function in detail, and understanding how cells assemble into organs. Organoids can be used to study the safety and efficacy of new drugs
- Arguments against: Organoids do not have sensory inputs and sensory connections from the brain are limited. Isolated regions of the brain cannot communicate with other brain regions or generate motor signals. Thus, the possibility of consciousness or other higher-order perceptive properties emerging seems extremely remote.

**PRELIMS SPECIFIC- AWARDS, INDICES, DAYS ETC****Vyas Samman**

The 28th Vyas Samman for the year 2018 was conferred on well known Hindi writer Leeladhar Jagoori for his poetry collection- Jitne Log Utne Prem.

**About:**

- The Vyas Samman was started in 1991.
- it is given by K K Birla Foundation.
- it is given for an outstanding literary work in Hindi authored by an Indian citizen published during the last 10 years.
- It carries an award money of four lakh rupees along with a citation and plaque.

**QUOTE OF THE DAY**

**Energy and persistence conquer all things.**

## **DAILY ANSWER WRITING PRACTICE**

**Qns: What is Artificial Intelligence ? Discuss various application of Artificial Intelligence?**

AI is the science of building computers that can solve problems the way humans do. With intelligent machines enabling high-level cognitive processes like thinking, perceiving, learning, problem solving and decision making, coupled with advances in data collection and aggregation, analytics and computer processing power, AI presents opportunities to complement and supplement human intelligence and enrich the way people live and work.

### **Applications of Artificial Intelligence (AI)**

- **Self-driving Cars:** Advances in artificial intelligence have brought us very close to making the decades-long dream of autonomous driving a reality. AI algorithms are one of the main components that enable self-driving cars to make sense of their surroundings, taking in feeds from cameras installed around the vehicle and detecting objects such as roads, traffic signs, other cars, and people.
- **Digital assistants and smart speakers:** Siri, Alexa, Cortana, and Google Assistant use artificial intelligence to transform spoken words to text and map the text to specific commands. AI helps digital assistants make sense of different nuances in spoken language and synthesize human-like voices.
- **Translation :** For many decades, translating text between different languages was a pain point for computers. But deep learning has helped create a revolution in services such as Google Translate. To be clear, AI still has a long way to go before it masters human language, but so far, advances are spectacular.
- **Facial recognition:** Facial recognition is one of the most popular applications of artificial intelligence. It has many uses, including unlocking your phone, paying with your face, and detecting intruders in your home. But the increasing availability of facial-recognition technology has also given rise to concerns regarding privacy, security, and civil liberties.
- **Medicine:** From detecting skin cancer and analyzing X-rays and MRI scans to providing personalized health tips and managing entire healthcare systems, artificial intelligence is becoming a key enabler in healthcare and medicine. AI won't replace your doctor, but it could help to bring about better health services, especially in underprivileged areas, where AI-powered health assistants can take some of the load off the shoulders of the few general practitioners who have to serve large populations.
- **Agriculture Sector :** AI can be used to predict advisories for sowing, pest control, input control can help in ensuring increased income and providing stability for the agricultural community. Image classification tools combined with remote and local sensed data can bring a revolutionary change in utilisation and efficiency of farm machinery, in areas of weed removal, early disease identification, produce harvesting and grading.

- **Business Sector:** To take care of highly repetitive tasks Robotic process automation is applied which perform faster and effortlessly than humans. Further, Machine learning algorithms are being integrated into analytics and CRM platforms to provide better customer service. Chatbots being used into the websites to provide immediate service to customers. Automation of job positions has also become a talking point among academics and IT consultancies such as Gartner and Forrester.
- **Education Sector:** AI can make some of the educational processes automated such as grading, rewarding marks etc. therefore giving educators more time. Further, it can assess students and adapt to their needs, helping them work at their own pace. AI may change where and how students learn, perhaps even replacing some teachers.
- **Financial Sector:** It can be applied to the personal finance applications and could collect personal data and provide financial advice. In fact, today software trades more than humans on the Wall Street.
- **Legal Sector:** Automation can lead to faster resolution of already pending cases by reducing the time taken while analyzing cases thus better use of time and more efficient processes.
- **Manufacturing sector:** Robots are being used for manufacturing since a long time now, however, more advanced exponential technologies have emerged such as additive manufacturing (3D Printing) which with the help of AI can revolutionize the entire manufacturing supply chain ecosystem.
- **Intelligent Robots:** Robots can perform the tasks given by a human because of sensors to detect physical data from the real world such as light, heat, temperature, movement, sound, bump, and pressure. Moreover, they have efficient processors, multiple sensors and huge memory, to exhibit intelligence. Further, they are capable of learning from their errors and therefore can adapt to the new environment.
- **Gaming :** AI has a crucial role in strategic games such as chess, poker, tic-tac-toe, etc., where the machine can think of a large number of possible positions based on heuristic knowledge.
- **Cyber Security:** In the 20th conference on e-governance in India it was discussed that AI can provide more teeth to cyber security and must be explored.
- **Smart Cities and Infrastructure :** Use of AI to monitor patronage and accordingly control associated systems such as pavement lighting, park maintenance and other operational conditions could lead to cost savings while also improving safety and accessibility.

**DAILY CURRENT AFFAIRS MCQs**

1. 'Jitne Log Utne Prem' is famous literary work of which of the following writer?
  - (a) Prem Chand
  - (b) Prem Nayak
  - (c) Sudhir Ludhianvi
  - (d) Leeladhar Jagoori**
2. Friday For Future is in initiative dedicated to
  - (a) Climate Change**
  - (b) Gender Equality
  - (c) Labour Reforms
  - (d) Global Poverty Reduction
3. Consider the following statements:
  1. Edge computing is the practice of processing data near the edge of a network, instead of at a centralized data-processing center.
  2. The drawback of edge computing is that the process is time-consuming.
 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
4. Consider the following pairs:
 

<b>Art Form</b>	<b>Description</b>
1. Borgeet	- mythology-based theatrical performance
2. Bhaona	- new form of spiritual music.
3. Sattriya	- classical dance form

 Which of the pairs given above is/are correct?
  - (a) 1 and 3 only
  - (b) 2 only
  - (c) 1, 2 and 3
  - (d) 3 only**
5. With reference to the Organoids, consider the following statements:
  1. They are a group of cells grown in laboratories into three-dimensional, miniature structures that mimic the cell arrangement of a fully-grown organ.
  2. They are tiny organ-like structures that achieves all the functional maturity of human organs.
 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
6. With reference to the Gill-Oxygen Limitation Theory (GOLT), consider the following statements:
  1. According to Gill-Oxygen Limitation Theory (GOLT), warming waters have less oxygen.
  2. Fish have difficulties breathing in such environments.
 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