Civils Cafe
IAS Study Circle
Have fun. Achieve dreams.
Lead by IAS, IPS, IPoS officers

IMPORTANT CURRENT AFFAIRS FOR PRELIMS VOL 08

- H10N3 BIRD FLU
- GENOME SEQUENCING
- FEMALE LABOUR FORCE PARTICIPATION RATE
- AMBEDKAR CONTRIBUTION TO AGRICULTURE
- GM RUBBER
- ADMINISTRATOR OF UNION TERRITORIES
- RANKED CHOICE VOTING
- DRAGON MAN

SANSAD TV
AIR
INDIAN EXPRESS
pib
THE HINDU

SCAN TO EXPLORE

730 699 4905 ☎ 9048 073 888
www.thecivilscafeias.com
thecivilscafeias
civilscafeiassc

IMPORTANT CURRENT AFFAIRS

FOR PRELIMS VOL - 08

SCIENCE AND TECHNOLOGY

1. H10N3 BIRD FLU

IN NEWS: China reports first human case of H10N3 bird flu

ABOUT BIRD FLU:

- H10N3 is a subtype of influenza A virus which is commonly known as the bird flu virus.
- It spreads among birds but rarely among humans.
- It is a low pathogenic or relatively less severe strain of the virus in the poultry and the risk of it spreading on a large scale is very low.
- Infected birds shed avian flu in their saliva, mucus, and poop, and humans can get infected when enough of the virus gets in the eyes, nose, or mouth, or is inhaled from infected droplets or dust.

Different strains of bird flu:

H5N1 (since1997)
H7N9 (since2013)
H5N6 (since2014)
H5N8 (since2016)

There are four types of influenza viruses: A, B, C and D.

- Human influenza A and B viruses cause seasonal epidemics of disease (known as the flu season) almost every winter.

● Influenza type C infections generally cause mild illness and are not thought to cause human flu epidemics.

● Influenza D viruses primarily affect cattle and are not known to infect or cause illness in people.

2. GENOME SEQUENCING

IN NEWS:

INSACOG is a multi-lab agency which was established to monitor the genomic variations of COVID-19. Through this they understand how the virus evolves and spreads. The genomic sequencing is essential because it helps to understand the immune escape of the and how its infection increases.

ABOUT GENOME SEQUENCING:

Genome is a set of DNAs. Genomics is the study of the structure, evolution and function of these DNAs. Genome sequencing is finding the order of DNA.

NEED FOR GENOME SEQUENCING:

- Mapping the diversity of India's genetic pool will lay the bedrock of **personalised medicine** and put it on the global map.
- Considering the diversity of population in our country, and the disease burden of complex disorders, including diabetes, mental health, etc., once we have a genetic basis, it may be possible to take action before the onset of a disease.

HUMAN GENOME PROJECT:

● Human Genome Project is a publicly funded international collaborative research project aimed at determining the

sequence of chemical base pairs which make up human DNA, & identifying & mapping all of the genes of the human genome.

● A base pair (bp) is a unit consisting of two nucleobases bound to each other by hydrogen bonds.

● They form the building blocks of the DNA double helix & contribute to the folded structure of both DNA & RNA.

● Human Genome Project was formally launched in 1990, & finally declared complete in 2003.

● The mapping of the human genome involves sequencing multiple variations of each gene.

● The HGP has revealed that there are probably about 20,500 human genes.

GENOME INDIA PROJECT:

● Taking inspiration from Human Genome Project, the Department of Biotechnology initiated the ambitious Genome India Project in 2020.

● It aims to collect 10,000 genetic samples from citizen across India, to build a reference genome.

● Gene Mapping project involves 20 leading institutions of the country with the Centre for Brain Research of Indian Institute of Science (IISc) Bangalore as the nodal point.

INDIGEN: INDIA'S GENOME SEQUENCING PROJECT

- The Council of Scientific and Industrial Research (CSIR) concluded the six-month-long exercise of conducting a "whole- genome sequence" of a 1,008 Indians that beloged to diverse ethnicities.

- The project is part of a programme called "IndiGen" and is a precursor to Genome India Project" (GIP).

- The project involved the Hyderabad-based Centre for Cellular and Molecular Biology (CCMB) and the CSIR-Institute of Genomics and Integrative Biology (IGIB).

SIGNIFICANCE OF GENOME SEQUENCING

- Understands the Virus: The purpose of genome sequencing is to understand the role of certain mutations in increasing the virus's infectivity. Some mutations explain immune escape or the virus's ability to evade antibodies which have consequences for vaccines.

- Studying Efficacy: It helps in studying whether the vaccines developed so far are effective against such mutant strains of the virus and if can prevent reinfection and transmission.

- Tracing Mutations: Sequencing of the genomes of viral strains is important from a "know-thy-enemy" point of view as it becomes easier to trace the mutations. Scientists can find mutations much more easily and quickly.

- Developing Vaccines: Knowledge generated through vital research assists in developing diagnostics and potential therapeutics and vaccines now and for the potential diseases in the future.

● Vital Information: important information and findings can be derived from the Genome sequencing of those who tested positive for COVID.

Previous year questions

With reference to agriculture in India, how can the technique of `genome sequencing', often seen in the news, be used in the immediate future? (2017)

1) Genome sequencing can be used to identify genetic markers for disease resistance and drought tolerance in various crop plants.

2) This technique helps in reducing the time required to develop new varieties of crop plants.

3) It can be used to decipher the host-pathogen relationships in crops.

Select the correct answer using the code below:

a) 1 only

b) 2 and 3 only

c) 1 and 3 only

d) 1, 2 and 3

Answer: d

ECONOMY

3. FEMALE LABOUR FORCE PARTICIPATION RATE

IN NEWS: According to ILO estimate female labour force participation is 23.5%. But the pandemic situation has worsened the situation.

Female LFPR:

● According to Periodic Labour Force Participation Survey, Female LFPR among women aged above 15 years is low as 26.4% in rural and 20.4% in urban areas.

● The gender pay in India was 34% in India, that is, women get 34% less compared to men for performing the same job with same qualifications.

● In India, 95 per cent or around 195 million women are employed in the unorganized sector or in unpaid labour.

● Almost 75 per cent of rural women are still engaged in it. A patriarchal ideology and local socio-cultural traditions confine women to the village where agriculture continues to be their most important (but insufficient) source of food and income.

Reason for declining participation of women in employment:

- It appears that there are some **non-economic, social and cultural factors**. Due to the cultural factors, women leave the work to take care of the family.
- There are a lot of **crimes against children inside and outside house** so parents feel at least one parent should stay at home and being a patriarchal society, the burden comes to the women
- One **big factor is maternity.** Many women who join the workforce are unable to re-join after having a child.
- Concerns about safety and Harassment at work site, both explicit and implicit.
- **Higher Education levels of women** also allow them to pursue leisure and other non-work activities, all of which reduce

female labour force participation.

- **Structural transformation of Indian agriculture** due to farm mechanization results in a lower demand for female agricultural labourers.

HISTORY AND CULTURE

4. Ambedkar contribution to agriculture

IN NEWS: Recently Maharashtra state government is working on the recommendations of Dr B R Ambedkar on the agriculture sector to tackle the problems of small and marginal farmers in the state.

About:

● The government is pushing for the concept of "group farming" based on the agriculture model recommended by Ambedkar in his writings on the subject.

● There are four aspects related to Ambedkar's agriculture reforms. These are group farming, higher capital investments in the agriculture sector, intense cropping to double production and channelising the production with market linkages to ensure double farm income for farmers.

● Under the group or community farming module, small and marginal farmers with land holdings between 0.5 acre and 10 acres of land are being encouraged to come together for farming.

● Ambedkar had said the smallness and largeness of land holding is not determined by its physical extent but intensity of cultivation as reflected in the capital investments, including labour.

● He foresaw the importance of industrialisation to divest the surplus agriculture-dependent labour to other productive occupations.

Other contribution of Ambedkar:

● Chairman of the Constitution's drafting committee, he took meticulous measures to build a just society through liberty, equality and fraternity.

● As a member of the Bombay Assembly, Ambedkar opposed the introduction of the Industrial Disputes Bill, 1937, as it removed workers' right to strike.

● He also helped to establish the principle of "equal pay for equal work" irrespective of sex and maternity benefits.

● He played a significant role in the establishment of the National Power Grid System, Central Water Irrigation, Navigation Commission, Damodar Valley Project, Hirakund Project and Sone River Project.

● Thus Dr. Ambedkar's ideas on public finance and agriculture have vital relevance and still applicable in a current situation of India.

Previous year question

Which of the following parties were established by B. R. Ambedkar?

1) The Peasants and Workers Party of India
2) All India Scheduled Castes Federation
3) The Independent Labour Party

Select the correct answer using the codes given below:

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

Answer: B

ENVIRONMENT

5. GM Rubber

IN NEWS: Recently, the world's first genetically modified (GM) rubber plant developed by Rubber Research Institute was planted in Assam.

GM Rubber:

- The GM rubber has additional copies of the gene MnSOD, or manganese-containing superoxide dismutase, inserted in the plant.
- It is expected to tide over the severe cold conditions during winter—a major factor affecting the growth of young rubber plants in the region.
- The MnSOD gene has the ability to protect plants from the adverse effects of severe environmental stresses such as cold and drought.

Condition for growth of rubber:

- It is an equatorial crop, but under special conditions, it is also grown in tropical and sub-tropical region.
- **Temperature:** Above 25° C with moist and humid climate.
- **Rainfall**: more than 200cm
- **Soil:** Rich well drained alluvial soil
- Cheap and adequate supply of skilled labour is needed for the crop

Note: Top rubber producing states – Kerala>Tamil Nadu> Karnataka

POLITY

6.ADMINISTRATOR OF UNION TERRITORIES

IN NEWS: Recently Government of National Territory of Delhi (GNTD) Amendment Act, 2021 was passed. It has been extensively criticised as a retrograde law that backtracks on representative democracy.

ADMINISTRATOR OF UT:

Articles 239 to 241 in Part VIII of the Constitution deal with the union territories and there is no uniformity in their administrative system.

- Every union territory is administered by the President through an administrator appointed by him.
- Administrator of a union territory is an agent of the Central government and is not the head of state like a governor.
- The President can also appoint the governor of a state as the administrator of an adjoining union territory.
- Not all the UT's have an administrator, some are directly governed by president.

POWER OF PARLIAMENT TO MAKE LAWS:

- The Parliament can make laws on any subject of the three lists (including the State List) for the union territories.

- The President can make regulations for the peace, progress and good government of the Andaman and Nicobar Islands, Lakshadweep, Dadra and Nagar Haveli, and Daman and Diu.

- A regulation made by the President has the same force and effect as an act of Parliament

- The Parliament can establish a high court for a union territory

SUPREMACY OF Lt. GOVERNOR VS STATE LEGISLATURE

- SC was of the opinion that, democratically elected government has more powers than the nominated Lt. governor and Governor is bound by the recommendation of the Council of Ministers.

- In the case of difference of opinion between the lt. governor and his ministers, the lt. governor is to refer the matter to the president for decision and act accordingly.

- Supreme Court held that governance of Delhi cannot rest upon the whims of one functionary namely the Lieutenant-Governor as he cannot refer every matter of the Delhi Government to the President. This will create work paralysis.

PROVISION OF THE GNCT OF DELHI (AMENDMENT) ACT, 2021

- It states that the "government" in the National Capital Territory of Delhi meant the Lieutenant – Governor of Delhi

- It gives discretionary powers to the LG even in the matters where the legislative Assembly of Delhi is empowered to make law

● It seeks to ensure that the LG is "necessarily granted an opportunity" to give her or his opinion before any decision taken by the council of ministers is implemented.

● It bars the Assembly or its committees from making rules to take up matters concerning day to day administrations or to conduct inquiries in relation to administrative decisions.

By making it mandatory for the elected government to route all its files through the LG, the amendments will essentially take away the government's autonomy and the dream for full statehood for the state.

7. RANKED CHOICE VOTING

IN NEWS: Ranked choice voting made its debut in New York city's Mayoral polls.

RANKED CHOICE VOTING: The system is based on a simple premise: Democracy works better if people aren't forced to make an all-or- nothing choice with their vote.

HOW DOES THE SYSTEM WORKS?

● If someone gets 50% plus one after all the first-choice votes are couned, then the election is over and that candidate wins.

● But if no one gets 50% plus one, it's on to Round 2.

● The person with the lowest number of first-place votes is eliminated, and that candidate's voters' second choices get redistributed as votes for other candidates.

● This reallocation of votes goes on until someone reaches 50% plus one.

ADVANTAGES OF THE SYSTEM:

- **It means the winner gets a majority of the vote.** The usual system of "most votes win" can mean someone with only a plurality of the overall vote can be elected, not necessarily the person with majority support.
- **More moderate candidates.** It's less likely that extreme candidates who have a strong base of support but aren't liked more broadly could get through in a crowded primary.
- **Less negative campaigning.** The argument goes that candidates need a majority of voters to like them.
- **People can feel good about casting their vote.** Instead of holding their nose for that one choice they get, voters can express at least a first choice for the person they really like.

NEGATIVES OF THE SYSTEM:

● The system is tough to grasp. It requires voters to do a lot more research. It also makes races less predictable.

● Transparency and trust are also potential problems. Ordinarily, candidates, the public and news organizations can see votes coming in, precinct by precinct, and know exactly who is leading and where their support is coming from.

● Under the modern ranked choice system, the process of redistributing votes is done by computer. Outside groups will have a harder time evaluating whether the software sorted the ranked votes accurately.

● That's a headache for news organizations, like The Associated Press, that analyze vote tallies and attempt to report a winner before the count is complete.

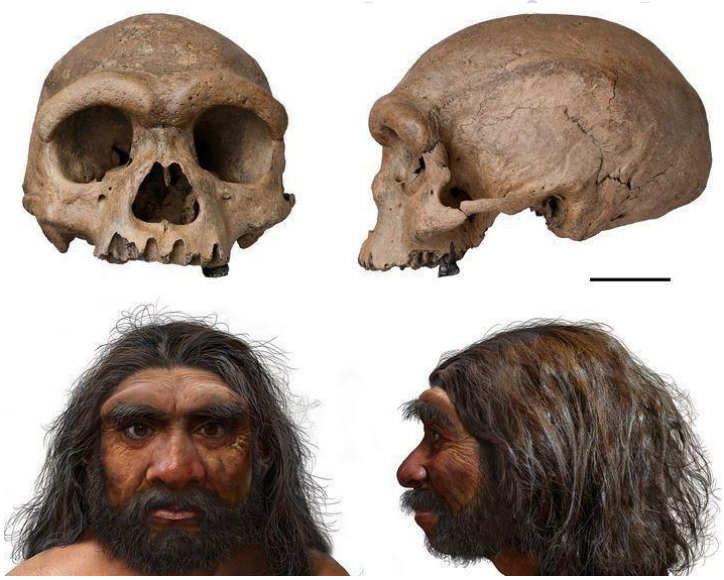
MISCELLANEOUS

8. DRAGON MAN

IN NEWS: Researchers from China have claimed to have found an ancient human skull that could belong to an altogether new species of human.

ABOUT DRAGON MAN:

- Dragon Man (Homo longi) is a species of archaic human.
- The complete skull found in Heilongjiang province of Northeast China.
- Dating to at minimum 146,000 years ago during the Middle Pleistocene.
- The skull was discovered in 1933, but, due to a tumultuous political atmosphere, it would not be brought to science until 2018, or named until 2021.
- The describers considered modern humans to be more closely related to H. longi than to the European Neanderthals, which may force a revision of the current scientific consensus.



SIGNIFICANCE OF THE DISCOVERY:

● It brings new knowledge about the evolution of Homo sapiens — which is to say that if the "Dragon Man" is indeed a new species, it might help to bridge the gaps between our ancient ancestors called Homo erectus and us.

● This knowledge is important because there is very little consensus in the scientific community about how different human species are related, and which species are our immediate ancestors.

Practice questions:

1. Who is the author of the work, The Evolution of Provincial Finance in British India: A study in the Provincial Decentralization of Imperial Finance?

a. Dadabhai Naoroji

b. Dr B R Ambedkar

c. M N Roy

d. Jawaharlal Nehru

Answer: B

2. cry1Ac' and 'cry2Ab' recently seen in news is related to:

a. genetically modified cotton

b. military doctrines of USA

c. newly developed cryogenic engine prototypes

d. India's first quantum computers

Answer: A