This series provides compilation of daily CURRENT AFFAIRS of Anthropology. It is aimed at addressing the requirement of aspirants to add contemporary aspects of the subject to the answers.

It also helps in understanding the trends of anthropology across India and the world.

**NOTE**: Please attempt the questions given at the end of the document and can upload on the **telegram channel: Sosin for Anthropology Q&A**, for peer review.
INDEX

A. BIOLOGICAL ANTHROPOLOGY
1. Brain Cells..............................................................................................................................03
2. Genetic form of ALS ..................................................................................................................03
3. Viruses in Genes ......................................................................................................................04

B. TRIBAL ANTHROPOLOGY
1. Van Dhan Vikas Kendra.............................................................................................................04
2. Leveraging tech to foster tribal art forms ..................................................................................05

UPSC ANTHROPOLOGY PREVIOUS YEAR QUESTIONS.................................................................06
PRACTICE QUESTIONS FOR PEER REVIEW................................................................................06

Note - For convenience, the respective reference links have been dropped at the end of every topic.
A. BIOLOGICAL ANTHROPOLOGY

1. Brain Cells

Context:
Neurons, nerve cells in the brain, are central players in brain function. However, a key role for glia, long considered support cells, is emerging. A research group has now discovered two new types of glial cells in the brain, by unleashing adult stem cells from their quiescent state. These new types of glia may play an important role in brain plasticity and repair.

Highlights:
- The brain is malleable well into adulthood. Brain plasticity is not only due to the formation of new nerve connections.
- Stem cells present in the adult brain also generate new nerve cells. For more than a hundred years, scientists have concentrated on investigating different types of nerve cells.
- In the brain, however, another class of cells, called glia, are also essential for brain function.
- However, the importance of glial cells has been underestimated for decades. How many types of glia there are, how they develop and what roles they play are all still largely unexplored.
- In their study in the journal *Science*, Doetsch’s team identified a molecular signal that awakened the stem cells from their quiescent state, allowing them to uncover multiple domains that give rise to glial cells in this stem cell reservoir.
- The research team also found that both glial cell types were activated in a model of demyelination. These new glial cell types may therefore be a source of cells for repair in neurodegenerative diseases, such as multiple sclerosis or after injury.

Reference:
https://www.sciencedaily.com/releases/2021/06/210614110816.htm

2. Genetic form of ALS

Context:
A study conducted by an international team of researchers has discovered a new and unique form of amyotrophic lateral sclerosis (ALS). Unlike most cases of ALS, the disease began attacking these patients during childhood, worsened more slowly than usual, and was linked to a gene, called SPTLC1 that is part of the body's fat production system.

Highlights:
- ALS is a paralyzing and often fatal disease that usually affects middle-aged people. The study found that a genetic form of the disease can also threaten children.
- The results show for the first time that ALS can be caused by changes in the way the body metabolizes lipids.
- The team of researchers used advanced genetic techniques to solve some of the most mysterious childhood neurological disorders around the world.
- In this study, the team discovered that 11 of these cases had ALS that was linked to variations in the DNA sequence of SPTLC1, a gene responsible for manufacturing a diverse class of fats called sphingolipids.
- Dr. Bönnemann leads a team of researchers that uses advanced genetic techniques to solve some of the most mysterious childhood neurological disorders around the world.
- In this study, the team discovered that 11 of these cases had ALS that was linked to variations in the DNA sequence of SPTLC1, a gene responsible for manufacturing a diverse class of fats called sphingolipids.
The team created small interfering strands of RNA designed to turn off the mutant SPLTC1 genes found in the patients. Experiments on the patients’ skin cells showed that these RNA strands both reduced the levels of SPLTC1 gene activity and restored sphingosine levels to normal.

Reference:
https://www.sciencedaily.com/releases/2021/05/210531120926.htm

3. Viruses in Genes

Context:
New research shows that activation of distinct human endogenous retroviruses, which are part of our genome, impair brain development dramatically. The finding could help to advance research into therapies for neurodegenerative diseases.

Highlights:
• Since our ancestors infected themselves with retroviruses millions of years ago, we have carried elements of these viruses in our genes -- known as human endogenous retroviruses, or HERVs for short. These viral elements have lost their ability to replicate and infect during evolution, but are an integral part of our genetic makeup.
• In fact, humans possess five times more HERVs in non-coding parts than coding genes. So far, strong focus has been devoted to the correlation of HERVs and the onset or progression of diseases. This is why HERV expression has been studied in samples of pathological origin.
• Using CRISPR technology, the researchers activated a specific group of human endogenous retroviruses in human embryonic stem cells and generated nerve cells (neurons).
• These viral elements in turn activated specific genes, including classical developmental factors, involved in brain development. As a result, cortical neurons, meaning the nerve cells in our cerebral cortex, lost their function entirely.
• They developed very differently from healthy neurons in this brain region -- with much a shorter axon (nerve cell extension) that were much less branched. Thus, activation of one specific HERV group impairs cortical neuron development and ultimately brain development.
• In addition, the research findings provide important indications that epigenetic mechanisms keep viral elements under control in healthy brain development.

Reference:
https://www.sciencedaily.com/releases/2021/05/210520133706.htm

B. TRIBAL ANTHROPOLOGY

1. Van Dhan Vikas Kendra

Context:
Van Dhan Vikas Kendras playing a pivotal role in turning around the Rural tribal forest economy

Highlights:
• The empowerment of the tribal people is the main objective of TRIFED. All our efforts, be it in getting better prices for their produce, helping them add value to the basic produce, or enable them to get access to larger markets, are targeted at achieving this.
• The Van Dhan Yojana in particular is playing a transformational role in turning around the rural tribal economy.
• The International Conference on Rural Transformation: From Natural to Cultural has been organized by Center for Rural Development and Innovative Sustainable Technology (CRDIST),
Indian Institute of Technology (IIT) Kharagpur and is an online conference being held on May 5 and May 6, 2021. The themes being discussed in this two-day online conference include transforming rural livelihood generation; hard and soft infrastructure planning and implementation; convergence of traditional and modern technical knowledge for social well-being; sustainable natural resource (water, forest, land) planning and rural health and hygiene.

- The Van Dhan tribal start-ups programme or Van Dhan Yojana is a component of the ‘Mechanism for Marketing of Minor Forest Produce (MFP) through Minimum Support Price (MSP) & Development of Value Chain for MFP’ Scheme.
- A flagship scheme of the Ministry of Tribal Affairs, drawing its strength from The Forest Rights Act of 2005, it aims to provide remunerative and fair prices to tribal gatherers of forest produces, almost three times higher than would be available to them from middle men, trebling their incomes.
- The Van Dhan tribal start-ups, also a component of the same scheme, is a programme for value addition, branding & marketing of Minor Forest Produces by establishing Van Dhan Kendras to facilitate creation of sustainable livelihoods for the forest-based tribes. It further complements MSP beautifully as it has emerged as a source of employment generation for tribal gatherers and forest dwellers and tribal artisans.
- Over the past 18 months, the Van Dhan Vikas Yojana has gained tremendous ground with its quick adoption and robust implementation aided by the state nodal and implementation agencies across India.
- The beauty of the whole exercise is that it has managed to create market linkages. Many of these tribal enterprises are connected to markets.
- A wide array of products ranging from fruit candy (amla, pineapple, wild apple, ginger, fig, tamarind), jam (pineapple, amla, plum), juice & squash (pineapple, amla, wild apple, plum, Burmese grapes), spices (dalchini, turmeric, ginger), pickles (bamboo shoot, king chilly), processed giloy, all of which have been processed and packaged in Van Dhan Vikas Kendras have reached the market and are even being marketed on TribesIndia.com and through the Tribes India outlets.
- The North-East is leading the way with 80% of the established VDKVs. Maharashtra, Tamil Nadu, Andhra Pradesh are other states where the scheme has been adopted with overwhelming results.

Reference:

2. Leveraging tech to foster tribal art forms

Context:
Artisans of the Naikpod tribal community are all set to leverage technology to upgrade their skills and produce wooden miniature masks to foster their age-old art forms and tap a wider market for tribal handicrafts globally.

Highlights:
- Under the initiative of the Integrated Tribal Development Agency (ITDA), Bhadrachalam, a group of artisans of Naikpod tribal community formed Naikpod Tribal Arts & Crafts Society
and set up a Computer Numerical Control (CNC) router with 90% financial assistance at the ITDA campus in Bhadrachalam recently.

- The Rs. 32-lakh CNC Router facilitates the production of miniature masks of wood in impressive designs to serve as decorative artefacts,
- The artisans of Nakipod community are famous for their centuries-old craft traditions of painting and hand carved wooden masks of replicas of various tribal deities and mythological characters of “pandavas”.
- They were wooden masks during occasions and festivals
- “Lakshmi Devara” are the most revered by Nakipods
- The CNC router will help the Nakipod Artisans preserve their traditions.

**Reference:**
https://www.thehindu.com/news/national/telangana/leveraging-tech-to-foster-art-forms/article34297401.ece

---

**UPSC Previous year questions based on today’s concept:**

2. Oncogenes (15 Marks - 2010)

**DAILY PRACTICE QUESTION/S FOR MAINS 2021.**

Pl do not forget to upload your answer sheet for a peer review on the telegram channel:

**Sosin for Anthropology Q&A**

1. Impact of Forest Policies on tribal health. (20 Marks)