ANTHROPOLOGY NEWS DIARY

(AND)

27.04.2021

FOR UPSC CSE MAINS

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

1. Fingerprint Found on Neolithic Pottery
   **Context:** A fingerprint has been found on a 5,000-year-old piece of pottery at the Ness of Brodgar, a Neolithic complex of buildings located in northern Scotland on the island of Orkney.
   **Highlights:**
   - The potter’s print was spotted by ceramics specialist Roy Towers of the University of the Highlands and Islands, and confirmed with reflectance transformation imaging technology, which uses computer software to compile multiple photographs taken with different controlled light sources.
   - The resulting model produced by the team was then closely examined and lit from all angles.
   - Further examination of the print may reveal the sex and age of the potter.
   - Although finding the fingerprint impression won’t hugely impact our work, it does give us a highly personal, poignant connection to the people of Neolithic Orkney, 5,000 years ago.

   ![Fingerprint Image]

   **Reference:**

2. Archaeologists find Oldest Home in Human History.
   **Context:** Archaeologists have found the oldest home in hominin history. It is a cave: Wonderwerk Cave in the Kalahari Desert.
   **Highlights:**
   - Meaning "miracle" in Afrikaans, Wonderwerk Cave has been identified as potentially the earliest cave occupation in the world and the site of some of the earliest indications of fire use and tool making among prehistoric humans.
   - It has been occupied more or less continuously for two million years. Through most of that time, modern humans didn’t even exist.
   - Wonderwerk is unique among ancient Oldowan sites, a tool-type first found 2.6 million years ago in East Africa, precisely because it is a cave and not an open-air occurrence.
   - The team were able to successfully establish the shift from Oldowan tools (mainly sharp flakes and chopping tools) to early hand axes over 1 million years ago, and to date the deliberate use of fire by our prehistoric ancestors to 1 million years ago, in a layer deep inside the cave.
● Wonderwerk contained a full array of fire remnants: burnt bone, sediment and tools as well as the presence of ash.

● Dating cave deposits is one of the greatest challenges in paleo-anthropology, aka the study of human evolution. To overcome this challenge, the team analyzed a 2.5-meter thick sedimentary layer that contained stone tools, animal remains and fire remnants using two methods: paleomagnetism and burial dating.

● The findings at Wonderwerk are an important step towards understanding the tempo of human evolution across the African continent.

● With a timescale firmly established for Wonderwerk Cave, it is possible to continue studying the connection between human evolution and climate change, and the evolution of our early human ancestors' way of life.

Reference:
https://www.eurekalert.org/pub_releases/2021-04/thuowba042621.php

B. BIOLOGICAL ANTHROPOLOGY

1. DNA Day

Context: Every year, April 25 is observed as DNA Day to commemorate the day in 1953 when the paper explaining the structure of DNA was published by James Watson and Francis Crick. It also celebrates the completion of the Human Genome Project (HGP) in April 2003.

Highlights:

● The DNA sequence of a gene is the code that instructs the cell to make proteins. These proteins in turn affect all bodily functions.

● Any variations in the sequence of DNA can disrupt the protein it encodes and put us at greater risk of acquiring certain diseases.

● Sometimes, when two defective copies of the gene come together in a fetus, the bodily function is disrupted and can lead to the demise, malformation, and mental disabilities of the unborn baby.

● One of the major goals of “DNA Day” is to increase awareness of the latest progress in the domain of genomics.

● Currently, as the world is battling Covid it is the use of Next Generation Sequencing technology developed in the aftermath of HGP that has helped us sequence the genetic material of the virus and develop the RT-PCR tests that we are using for testing and the data that is used in designing the vaccines against Covid 19.

● Genetic testing has been around for a while but due to the pandemic, it has come to the centre stage of diagnostics.

● The results from a genetic test can significantly help doctors understand the cause of disease and to predict an individual's risk of developing certain diseases.
• It can tell if one could pass the disease to their children and help in choosing the best treatment that can be tailored for an individual.

Reference:
https://www.indiatoday.in/information/story/dna-day-2021-why-do-we-need-to-celebrate-it-1795005-2021-04-26

2. Homo Sapiens’ Shadow Species
• Carl Sagan observed that the frontal lobe of the human brain, comprising more than two-thirds of our brain mass, is where “matter is transformed into consciousness.
• An extraordinary discovery in 2017 suggests, when paleoanthropologists demonstrated that the species Homo naledi existed in southern Africa between 236,000 and 335,000 years ago—potentially the same time that modern humans first emerged in Africa.
• This discovery presented a puzzle for scientists, who long held that there was only one species in Africa at this late time period – Homo sapiens.
• A 2018 study suggests that naledi’s behavior may have reflected the shape and structure of the brain more than its size.
• The small brains of Homo naledi raise new questions about the evolution of human brain size (image above).
• Big brains were costly to human ancestors, and some species may have paid the costs with richer diets, hunting and gathering, and longer childhoods. But that scenario doesn’t seem to work well for Homo naledi, which had hands well-suited for toolmaking, long legs, humanlike feet, and teeth suggesting a high-quality diet.
• According to study coauthor John Hawks, a paleoanthropologist at the University of Wisconsin–Madison. “Naledi’s brain seems like one you might predict for Homo habilis, two million years ago. But habilis didn’t have such a tiny brain—naledi did.”
• The research shows that the more complex structural features of brains may not solely be a consequence of size, and it suggests that modern humans, Neanderthals and Homo naledi may have a common ancestor. A humanlike brain organization might mean that naledi shared some behaviors with humans despite having a much smaller brain size.
• The recognition of Naledi’s small but complex brain will also have a significant impact on the study of African archaeology.

  Reference:

C. TRIBAL AFFAIRS

1. 4G and 5G for American Tribes

  Context: NOKIA DEPLOYS 4G AND 5G PRIVATE NETWORKS FOR American TRIBES

  Highlights:
  • The company recently released details of its plan to use Digital Automation Cloud (DAC) private wireless technology to provide 4G and 5G network connectivity. It will provide this network to multiple native American communities living on American tribal territories.
  • According to estimates by the Federal Communications Commission (FCC), 628,000 tribal families in the United States cannot use standard broadband.
  • This expansion started in early 2020 when the FCC offered the unused Educational Broadband Service spectrum to Native American tribes.
  • Four hundred federally recognized tribes applied for and won the use of the spectrum, representing 12,000 square miles and more than 30,000 people.
  • The tribes will use Nokia's NDAC solution to expand access, which can be deployed gradually and doesn't require a million-dollar investment to get started.

  Reference:
  https://www.techrepublic.com/article/3-native-american-tribes-use-nokia-tech-to-bring-4g-and-5g-to-remote-towns-in-four-states/

2. Mizos and Myanmarese

  Context: The Mizos and Myanmarese share deep cultural bonds that go beyond the citizen-refugee divide

  Highlights:
  • The India-Myanmar border stretches over 1,600 km, of which roughly 400 km runs along Mizoram, and then it snakes north along Manipur, Nagaland and Arunachal Pradesh.
  • The sudden and large influx of Myanmarese people sent alarm bells ringing in New Delhi, and the Ministry of Home Affairs (MHA) sent a note on March 10 to the four States asking their governments to stop people crossing the border and to deport anyone who had found their way in.
  • What Raisina Hill had overlooked was the rich fabric of religious, linguistic and ethnic ties that binds people in these border regions. This is especially true of Mizoram, which has seen the greatest number of Myanmarese refugees.
• The MHA’s stance drew flak from the Mizo government and people, and K. Vanlalvena, the lone Rajya Sabha member from the State, reacted sharply, saying the Mizo people could not act against their own brothers and sisters.
• The Chins of Myanmar and the Mizos come from the same ethnic roots and fall within the broad ethnic grouping, Zo.
• They speak the same Tibeto-Burman languages and are bonded by the same customs, cultures and traditions.
• These ties are manifest in all the Chin-Kuki-Mizo tribes living in Myanmar, India and Bangladesh.
• The Mizos have long believed that the people of Bangladesh’s Chittagong Hill Tracts, Myanmar’s Chin Hills, and India’s Mizoram and Assam States are one ethnic group, divided into three nations by the British.

Reference:

UPSC Previous year questions based on today’s concept:
1. DNA Technology in Medicines (10 Marks - 2015)
2. New Archaeology (20 Marks - 2009)

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. Applications of forensic anthropology in archeology and criminology (20 Marks)