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. BIOLOGICAL ANTHROPOLOGY

1. CRISPR Gene Technology for Cancer
   **Context:** KSQ Therapeutics uses technology created at MIT to study the role of every human gene in disease biology.

   ![CRISPR-Cas9](https://example.com/crispr-cas9.png)

   **Highlights:**
   - CRISPR’s potential to prevent or treat disease is widely recognized. But the gene-editing technology can also be used as a research tool to probe and understand diseases.
   - That’s the basic insight behind KSQ Therapeutics. The company uses CRISPR to alter genes across millions of cells. By observing the effect of turning on and off individual genes, KSQ can decipher their role in diseases like cancer. The company uses those insights to develop new treatments.
   - The approach allows KSQ to evaluate the function of every gene in the human genome.
   - KSQ’s gene evaluations include tens of millions of cells, a roadmap for finding cancer vulnerabilities.
   - KSQ’s lead drug candidate is in preclinical development. It targets a DNA-repair pathway and the drug could treat multiple ovarian cancers as well as a disease called triple-negative breast cancer. KSQ is also currently developing a cell therapy to boost the immune system’s ability to fight tumors.
   
   **Reference:**

2. Ancient Coronavirus
   **Context:** An ancient coronavirus may have infected the ancestors of people living in modern-day East Asia starting 25,000 years ago and for millennia afterward, according to a new study.

   **Highlights:**
   - Viruses are one of the main drivers of natural selection in human genomes.
   - That's because genes that increase people's chances of surviving pathogens are more likely to be passed on to new generations.

   ![Ancient Coronavirus](https://example.com/ancient-coronavirus.png)
● Using modern-day tools, researchers can detect the fingerprints of these ancient pathogens — by pinpointing how they drove natural selection — in the DNA of people living today. This information, in turn, could provide valuable insight to help predict future pandemics.

● When coronaviruses slip inside human cells, they hijack the cells' machinery in order to replicate. That means that a virus' success depends on its interactions with hundreds of different human proteins.

● The researchers zoomed in on a set of 420 human proteins known to interact with coronaviruses, 332 of which interact with SARS-CoV-2, the virus that causes COVID-19. Most of these proteins help the virus to replicate inside the cells, but some help the cell fight off the virus.

● The genes that code for those proteins constantly and randomly mutate, but if a mutation gives a gene an advantage — such as a better ability to fight off a virus — it will have a better chance of being passed down to the next generation, or selected for.

● Indeed, the researchers found that in people of East Asian descent, certain genes known to interact with coronaviruses had been selected for.

● This set of mutations likely helped the ancestors of this population become more resistant to the ancient virus by altering how much of these proteins were made by cells.

● The researchers found that gene variants that coded for 42 of the 420 proteins they analyzed started to increase in frequency around 25,000 years ago. The spread of advantageous variants continued until about 5,000 years ago, suggesting that the ancient virus continued to threaten these populations for a long time.

  Reference:

B. ARCHAEOLOGY

1. Indus Valley Civilization

Indus civilization, also called Indus valley civilization or Harappan civilization, the earliest known urban culture of the Indian subcontinent. The nuclear dates of the civilization appear to be about 2500–1700 BCE, though the southern sites may have lasted later into the 2nd millennium BCE.

  Highlights:
  ● The Indus civilization is known to have consisted of two large cities, Harappa and Mohenjo-daro, and more than 100 towns and villages, often of relatively small size.

  ● The two cities were each perhaps originally about 1 mile (1.6 km) square in overall dimensions, and their outstanding magnitude suggests political centralization, either in two large states or in a single great empire with alternative capitals, a practice having analogies in Indian history.
● The southern region of the civilization, on the Kathiawar Peninsula and beyond, appears to be of later origin than the major Indus sites.
● The civilization was literate, and its script, with some 250 to 500 characters, has been partly and tentatively deciphered; the language has been indefinitely identified as Dravidian.
● The Indus civilization apparently evolved from the villages of neighbors or predecessors, using the Mesopotamian model of irrigated agriculture.
● The civilization subsisted primarily by farming, supplemented by an appreciable but often elusive commerce. Wheat and six-row barley were grown; field peas, mustard, sesame, and a few date stones have also been found, as well as some of the earliest known traces of cotton.
● Domesticated animals included dogs and cats, humped and shorthorn cattle, domestic fowl, and possibly pigs, camels, and buffalo. The Asian elephant probably was also domesticated, and its ivory tusks were freely used.
● Minerals, unavailable from the alluvial plain, were sometimes brought in from far afield. Gold was imported from southern India or Afghanistan, silver and copper from Afghanistan or northwestern India, lapis lazuli from Afghanistan, turquoise from Iran (Persia), and a jadelike fuchsite from southern India.

Reference:
https://www.britannica.com/topic/Indus-civilization

2. Homo Erectus Stone tools
   Context: Archaeologists have discovered hundreds of stone tools in a goldmine where Homo erectus would have inhabited 700,000 years ago in the eastern part of the Sahara Desert, 70 km east of the modern city of Atbara in Sudan.
Highlights:
- Homo erectus (meaning “upright man”) is an extinct species of archaic human from the Pleistocene, with its earliest occurrence about 2 million years ago.
- Studies of surviving fossils suggest that the species had a humanlike gait and body proportions, and was the first human species to have exhibited a flat face, prominent nose, and possibly sparse body hair coverage.
- A gold rush in the eastern Sahara Desert has led to many open-cast mines being excavated in search of the valuable ore.
- The mining activity has allowed archaeologists to study exposed layers containing large tools with a transverse cutting edge, and almond-shaped tools with chamfered edges on both sides, which form a pointed tip at the junction.
- Archaeologists believe that the site was a workshop for the manufacturing of stone tools, evident by the discovery of associated flakes formed during their production.
- Based on the style of workmanship of the tools, it is believed that they may be over 700,000 years old, and perhaps even a million years old – similar to their counterparts in South Africa.
- The researchers suggest that the site is the oldest known example of tool manufacturing within the areas of Egypt and the Sudan that has a well-confirmed chronology.

Reference:

3. Mesolithic woman face reconstruction

Context: Experts reconstruct face of Mesolithic woman who lived 9,300 years ago

Highlights:
- Spanish experts have reconstructed the face of a Mesolithic woman who lived in the Galicia region some 9,300 years ago, revealing she likely had dark skin, brown eyes and dark hair — her appearance similar to her UK contemporary, Cheddar Man.
• The remains of Elba, meaning “the woman who comes from the mountains,” were found in the Chando Lindeiro cave in the northwestern region of Galicia, Spain, in 1996.
• The original discovery was difficult as the team of speleologists and archeologists had to go through a sinkhole caused by a collapse in the cave where the remains of Elba were found, along with three aurochs (an extinct species of large wild cattle).
• After examining Elba’s skull, researchers confirmed that it belonged to a homo sapien. The rest of Elba’s skeleton and the remains of the three aurochs were not unearthed until 2010, due to difficulties associated with accessing the part of the cave where they were found.
• The skull was analyzed by a forensic expert, who confirmed the remains belonged to a woman aged between 20 and 40 who was around 5 feet (1.5 meters) tall. The bones dated back 9,300 years, around the same age as the bones of the three aurochs.
• Elba also probably suffered from tooth pain, as a tooth found in the cave had a large cavity.
• After two types of bone analysis, researchers found that her maternal lineage descended from populations of hunter-gatherers, while the second tests helped them reconstruct the woman’s facial features.

Reference:

C. TRIBAL AFFAIRS

1. Baiga Tribe
Context: BHOPAL: Coronavirus virus has crept into the settlements of Baiga tribes in Madhya Pradesh.

Baiga Tribes:
• The Baiga (means sorcerers) is one of the Particularly Vulnerable Tribal groups (PVTGs).
• They mainly live in Chhattisgarh, Jharkhand, Bihar, Odisha, West Bengal, Madhya Pradesh and Uttar Pradesh.
Traditionally, the Baiga lived a semi-nomadic life and practised slash and burn cultivation. Now, they are mainly dependent on minor forest produce for their livelihood.

○ Bamboo is the primary resource.

● Tattooing is an integral part of Baiga culture, every age and body part has a specific tattoo reserved for the occasion.

Reference:

UPSC Previous year questions based on today’s concept:

1. Salient Features of Mesolithic Culture (10 Marks - 2017)
2. Homo Erectus (S.N. - 2007)
3. Comment in detail on the Socio - Cultural Life of the people of Indus Valley Civilization (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. Present an account of European Mesolithic. (20 marks)