ANTHROPOLOGY NEWS DIARY

(AND)

13.10.2021

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.
INDEX

A. BIOLOGICAL ANTHROPOLOGY
1. Tissue Engineering ........................................................................................................03
2. Air Pollution & Pregnancy ..............................................................................................03
3. Race, Evolution & Science .............................................................................................04

B. TRIBAL ANTHROPOLOGY
1. Kudumbashree ..............................................................................................................05
2. Andaman & Nicobar tribes ............................................................................................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. Tissue Engineering
   - New research has demonstrated the viability of 3D-printed tissue scaffolds that harmlessly degrade while promoting tissue regeneration following implantation.
   - The scaffolds showed highly promising tissue-healing performance, including the ability to support cell migration, the 'ingrowth' of tissues, and revascularization (blood vessel growth).
   - The scaffolds have evenly distributed and interconnected pores that allow diffusion of nutrients from surrounding tissues.
   - The shape memory means this structure is retained when the scaffold is implanted into tissues, and this supports the infiltration of cells into the scaffold while encouraging tissue regeneration and revascularization.
   - The scaffolds were created using 3D printing resin 'inks' developed during a major programme of biomaterials research led by Professor Andrew Dove at the University of Birmingham and Warwick University.
   - The scaffolds showed several major advantages over current approaches used to fill soft tissue voids that remain after trauma or surgery, including sufficient elasticity to conform to irregular spaces, the ability to undergo compression of up to 85% before returning to their original geometry, compatibility with tissues, and non-toxic biodegradation.
   - The researchers showed that the materials were non-toxic to cells and they also performed mechanical testing to ensure the scaffolds could regain their shape, geometry and pore size after compression, and performed tests that showed the scaffolds can fill an irregular shaped void in alginate gel which was used as a mimic of soft tissue.
   - Laboratory studies demonstrated that the scaffold degrades by surface erosion into non-acidic products, which means the scaffold structure allows for slow, continuous tissue infiltration.
   - The findings were confirmed in a mouse model that simulates implantation into adipose (fat) tissue. These studies showed infiltration of adipocytes and fibroblasts and vascularisation at two months, and a tissue arrangement and macrophage presence that was indicative of normal tissue restoration rather than damaged, scarred tissue or an inflammatory response.

Reference: https://www.sciencedaily.com/releases/2021/07/210705094721.htm

2. Air Pollution & Pregnancy
   - Maternal exposure to air pollution during pregnancy has often been linked to adverse effects on the health of the newborn. However, there are very few studies on the subject. A study has just concluded that the stages most sensitive to air pollution are the early and late months of pregnancy.
   - Nitrogen dioxide (NO2) and fine particulate matter less than 2.5 micra in diameter (PM2.5) are two of the main pollutants related to air pollution and vehicle traffic. PM2.5 particles for example are very fine and easily enter the respiratory tract.
   - The results obtained in this study have revealed the direct relationship between exposure to fine particles during pregnancy and the level of thyroxine in newborns. However, we have not observed a clear link with exposure to nitrogen dioxide.
• These babies tend to have a lower level of thyroxine. As the pregnancy progresses, we found that this relationship gradually diminishes, i.e. the mother's exposure gradually becomes less important.
• In late pregnancy, however, this link becomes apparent again, but displays an opposite effect: as the concentration of these fine particles increases, we have seen that the level of thyroid hormones also increases, which has the opposite effect on the balance.
• The next task would be to study the mechanisms by which these fine particles cause opposing effects in early and late pregnancy. In fact, these particles are nothing more than small spheres made up of carbon, and it is not clear whether the effect these spheres exert is because they pass from the placenta to the baby, or whether other components attached to the particles are released once they have entered the body.

Reference:
https://www.sciencedaily.com/releases/2021/07/210702154327.htm

3. Race, Evolution & Science
• After a year of lockdown, museums, libraries and bookstores across America are reopening. This cultural reawakening’s beginning coincided with both the Juneteenth holiday and the one-year anniversary of the one of the largest protests in American history against racial injustice.
• The global scientific community overwhelmingly accepts that all living humans are of African descent. Most scientific articles about our African origins focus on genetics. The part of the story that is not widely shared is about the creation of human culture.
• We are all descended genetically, and also culturally, from dark-skinned ancestors. Early humans from the African continent are the ones who first invented tools; the use of fire; language; and religion.
• Under the guise of “religious freedom,” the legalistic wing of creationists loudly insists that their point of view deserves equal time in the classroom.
• Science education in the U.S. is constantly on the defensive against anti-evolution activists who want biblical stories to be taught as fact.
• At the heart of white evangelical creationism is the mythology of an unbroken white lineage that stretches back to a light-skinned Adam and Eve.
• Scientific findings about human origins have been slow to trickle down into books written for young people. This major omission reflects the outsize effect that science-denying voices have on the books that find their ways not just into classrooms, but also into libraries, bookstores and children's homes. Fear of economic punishment within the publishing industry creates a self-perpetuating lack of teaching materials about evolution.
• As we move forward to undo systemic racism in every aspect of business, society, academia and life, let’s be sure to do so in science education as well.
• Embracing humanity’s dark-skinned ancestors with love and respect is key to changing our relationship to the past, and to creating racial equity in the present. These ancient people made the rest of us possible. Opening our hearts to them and embracing them as heroic, fully human and worthy of our respect is part of the process of healing from our racist history.

Reference:
B. TRIBAL ANTHROPOLOGY

1. Kudumbashree

- With the second wave of the pandemic showing signs of subsiding, the Kudumbashree District Mission is all set to roll out its biggest ever project for the tribal community in Kuttampuzha panchayat in Ernakulam district.

- At an allocation of ₹16 lakh, the animal husbandry project, Aaduagramam (goat grazing), is the Kudumbashree’s largest ever for livelihood support for the tribal community in the district. The fund has already been allocated, and the project was delayed initially by the model code of conduct ahead of the Assembly elections and then by the second wave of the pandemic.

- The project is meant for Muthuvan and Mannaan tribal communities in Kuttampuzha. We have already completed training for the beneficiaries. With an approximate individual allocation of ₹30,000, nearly 60 members from the communities will benefit.

- There will be no direct cash transfer, but rather each beneficiary will be given three goats though the number depends on the weight.

- While cage for goats was also proposed under the project, the idea was dropped after it was found that it will restrict the number of allocation of goats, and the beneficiaries evinced interest in their indigenous cages made of bamboo.

- An agreement will be entered into with the beneficiaries based on a set of guidelines.

- There will be periodic monitoring, and the beneficiaries are not allowed to sell the goats for the first two years, as it has been widely found that in similar projects, the gullible beneficiaries are often exploited by unscrupulous elements who appropriate the animals for negligible price. However, as the goats procreate they will be free to transact the newborn kids.

Reference:

2. Andaman & Nicobar tribes

- The vulnerable tribal groups of the Andaman and Nicobar Islands are already on the verge of extinction. A proposal to develop one of the islands into a free trade zone would make things even worse.

- Today, the Particularly Vulnerable Tribal Groups (PVTG) of India’s Andaman and Nicobar Islands are at rock-bottom. Confined to the picturesque islands in the Bay of Bengal, with humans forcibly invading their habitat, transmitting viruses and diseases, their population is estimated at just 769.

- According to the latest census, from 2011, there are 44 Great Andamanese, 380 Jarawa, 101 Onge, 229 Shompen and 15 Sentinelse remaining in the Andaman and Nicobar Islands (ANI).

- “In the islands of the Little Andaman and Great Nicobar two new Greenfield Coastal Cities will be built. The cities will be developed as Free Trade Zones to compete with global cities like Hong Kong, Singapore, and Dubai,” says a vision document from the NITI Aayog, or National Institution for Transforming India, a government think tank.

- Zone 1 is the financial district and medi city along the eastern coast of the island with the airport as the catalytic anchor, Zone 2 is the leisure zone located on the southern area of the island [and] would house tourism attractive activities of entertainment and leisure such as casino strip, sports institutes, film city, water based recreation, etc. and Zone 3 is the nature
zone located on the western coast of the island with the exclusive forest resort, nature healing district, and west bay nature retreat

● In the late 1990s, the Jarawa tribe suffered two deadly outbreaks of measles. During the same period, the sexually transmitted disease syphilis spread through the largest tribal group, the Great Andamanese, bringing them to the brink of extinction.

● Referring to the diversion of forest land for sustainable development of Little Andaman Island envisaged by the NITI Ayog, the officer raised serious concerns about this proposed plan’s impact on the island’s fragile ecosystem.

● An anthropological impact assessment study may be conducted before the development activities are initiated.

● The reason the PVTG of the ANI are so rare today is because repeated outside interference has already brought them to the brink of extinction. Their nomadic lifestyle, the most ancient way of living known to mankind, makes them an easy target.

Reference:

UPSC Previous year questions based on today’s concept:

2. Ecological Anthropology  (S.N. -1991)

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. What are genetic markers? Explain their utility in studying humans.  (20 Marks)