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Q1(d)

"The bio-cultural approach is the hallmark of Biological Anthropology." Explain.

UPSC Civil Services Mains 2021 · Anthropology GS 1 · 10 marks · Biological Anthropology.

(b) Biological Anthropology.

Core demand of the question

- "The bio-cultural approach is the hallmark of Biological Anthropology." Explain
- Keep the note to a 10-mark length of about 150 words

Revision summary

Bio-cultural anthropology joins bodies to diet, work, climate, and social rule.

Lactase and sickle cell show culture as a selective environment.

Washburn moved the field from racial types to process.

Tibetan altitude and Inuit cold are teaching loops of physiology and practice.

The hallmark is interaction, not genetic reduction.

Introduction

Biological anthropology studies human variation, fossils, and primates. Its hallmark is that genes, bodies, and culture are not two separate files.

Body**What the approach is**

- A bio-cultural view treats diet, workload, climate, and social rule as environments that shape growth, disease, and gene frequencies.
- **Lactase persistence** follows dairying. **Sickle-cell** follows farming and malaria. Culture here is a selective regime.
- Growth studies, from **Tanner** to Indian ICMR series, show how class and nutrition write themselves on stature.

Why it is the hallmark

- A purely anatomical race typology, or a purely cultural essay, misses the loop. **Sherwood Washburn**'s new physical anthropology asked for process, not types.
- High-altitude **Tibetan** and Andean work, and **Inuit** cold studies, are bio-cultural because behaviour, technology, and physiology meet.
- The approach does not reduce culture to genes. It refuses to study the body as if history were noise.

Flow diagram

Bio-cultural -> Genes physiology
Bio-cultural -> Diet work climate rules
Genes physiology -> Phenotype health
Diet work climate rules -> Phenotype health

Conclusion

Biological anthropology is marked by the loop of organism and instituted life. That is the bio-cultural hallmark, not a slogan for genetic destiny.

Facts & figures

Washburn

Called for a new physical anthropology of function, behaviour, and evolution rather than static types.

Allison

Sickle-cell and malaria linked farming landscapes to a haemoglobin allele.

Tibetan plateau

High-altitude adaptation mixes ventilation, haemoglobin patterns, and pastoral-agricultural life.

Tanner

Growth standards made nutrition and class visible on the developing body.