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UPSC Mains 2021 Anthropology Paper 1

Year-wise PYQ pack · WRAP model answers with canonical links

Official UPSC stems in exam order. Each live answer sits on one WRAP URL; this PDF is the year pack, not a second copy of the article. Open the link under a question for the full page.

<https://wrapexams.com/upsc/mains/anthropology/gs-1/2021/>

Q1(a) · 10 marks

Animism and Deep Ecology

Anthropology GS 1 · 2021 · Religion

Revision summary

Tylor's animism is belief in spiritual beings as the minimum of religion.

Later work reads animism as relating to animals and places as persons.

Naess's Deep Ecology gives nature intrinsic worth beyond human use.

The two meet as critiques of a dead, owned environment.

They are not the same theory and must not revive Tylor's ladder.

Introduction

Animism and Deep Ecology both refuse a dead nature. One is a classical theory of religion. The other is an ecological ethic that anthropology now reads beside indigenous personhood.

Body

Animism

- **E. B. Tylor** defined animism as belief in spiritual beings. Souls, ghosts, and nature-spirits were, for him, the minimum of religion.
- Later ethnography, from **Irving Hallowell** on Ojibwa other-than-human persons to Amazonian work, treated animism as a relational ontology, not a childish error.
- **Andaman** islanders and many forest peoples address animals and places as persons. The point is social relation, not a museum of superstition.

Deep Ecology

- **Arne Naess** coined Deep Ecology. Nature has intrinsic worth, not only use-value for humans.
- The platform rejects shallow conservation that saves a park for tourism. It asks for biospheric equality.
- **Link and limit:** animist personhood can support Naess's ethic, but Tylor's evolutionary ladder must not be smuggled back in.

Flow diagram

Nature as person or worth -> Tylor animism

Nature as person or worth -> Naess Deep Ecology

Tylor animism -> Other-than-human persons

Naess Deep Ecology -> Intrinsic value

Conclusion

Tylor named soul-belief. Naess named an ethic of intrinsic nature. Anthropology joins them only as two refusals of a resource-only world, not as one creed.

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Q1(b) · 10 marks

Marriage Regulations and Alliance Theory

Anthropology GS 1 · 2021 · Family

Revision summary

Marriage regulations forbid and prefer categories of spouse.

Alliance theory reads marriage as exchange that constitutes society.

Lévi-Strauss contrasted restricted and generalised exchange.

Kachin and Dravidian systems illustrate positive alliance.

Weiner's Trobriand work shows women as givers, not only gifts.

Introduction

Marriage regulations say who may marry whom. Alliance theory, after Lévi-Strauss, reads those rules as the exchange that makes society, not as a private romance.

Body

Regulations

- Incest prohibition, exogamy, endogamy, and preferred cousin marriage are the usual toolkit. **Morgan** tabulated kinship terms; the rules sit inside those terms.
- Positive rules name a category of spouse, as in Dravidian cross-cousin marriage. Negative rules only forbid.
- **Louis Dumont** showed how Indian alliance and hierarchy interlock. Marriage can rank houses, not only join two persons.

Alliance

- **Claude Lévi-Strauss treated the woman-as-gift as the elementary structure: restricted exchange between two groups, or generalised exchange in a circle, as among Kachin** discussed by **Edmund Leach**.
- **Annette Weiner** and Trobriand ethnography stressed that women also give and that valuables return. Alliance is not only men swapping sisters.
- The theory explains why a rule persists. It does not excuse treating women as objects.

Flow diagram

Marriage rules -> Incest exogamy endogamy

Marriage rules -> Alliance exchange

Alliance exchange -> Levi-Strauss

Alliance exchange -> Kachin Trobriand

Conclusion

Regulations are the grammar. Alliance theory is the claim that marriage weaves groups. Trobriand, Kachin, and Dumont's India remain the teaching cases.

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Q1(c) · 10 marks

Historical Particularism and Franz Boas

Anthropology GS 1 · 2021 · Historical particularism (Boas)

Revision summary

Historical particularism treats each culture as a unique historical product.

Boas rejected Morgan-Tylor unilinear stages.

Diffusion and invention must be proved, not assumed from similarity.

Race, language, and culture are independent.

Heirs used culture areas and texts; the risk is trait-listing.

Introduction

Historical particularism is Boas's refusal of one ladder of culture. Each people has a history of borrowing, invention, and environment that must be reconstructed on its own evidence.

Body

Boas's claim

- **Franz Boas** attacked unilinear evolution of **Morgan** and **Tylor**. A similar trait need not mean the same stage.
- Diffusion, independent invention, and local meaning must be sorted by fieldwork, language, and museum series, as in his Northwest Coast and Baffin work.
- Culture is plural. Race, language, and culture do not travel as one package. That is the Boasian charter.

Method and heirs

- Intensive fieldwork, texts in the native language, and caution with grand laws defined the school.
- **Kroeber**, **Lowie**, **Sapir**, and **Benedict** carried particularism into culture areas, linguistics, and patterns.
- The limit is that history can become a pile of traits. Later process and power theories had to return.

Flow diagram

Boas -> Historical particularism
Historical particularism -> Fieldwork language museum
Historical particularism -> No unilinear ladder
Boas -> Race language culture split

Conclusion

Boas made anthropology a historical science of particular cultures. The method still blocks lazy evolutionism, if it does not refuse comparison altogether.

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Q1(d) · 10 marks

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

Anthropology GS 1 · 2021 · Biological Anthropology.

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.

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WRAP Exams

Q1(e) · 10 marks

Thermoluminescence (TL) dating.

Anthropology GS 1 · 2021 · Principles of Prehistoric Archaeology. Chronology

Revision summary

TL measures light from trapped electrons when a mineral is heated.

The clock starts at the last firing or sunlight bleach.

Pottery, hearths, and burnt flint are the main archaeological samples.

The age is equivalent dose divided by annual dose rate.

Water, fading, and incomplete zeroing are the chief errors.

Introduction

Thermoluminescence dating ages fired clay, burnt flint, and some sediments by measuring trapped electrons released as light when the sample is heated.

Body

Principle

- Ionising radiation from uranium, thorium, and potassium fills traps in the crystal. Heat or strong light empties them. The last firing or bleaching is the clock's zero.
- In the laboratory the sample is heated, light is counted, and the equivalent dose is divided by the annual dose rate.
- Range is roughly a few hundred years to several hundred thousand years, useful where carbon is scarce.

Use in anthropology

- Pottery, hearths, and burnt flint at palaeolithic and Neolithic sites, including Near Eastern early farming contexts such as **Jericho** sequences when ceramics appear, can be dated.
- Indian applications include pottery and burnt clay at Harappan and later sites, and burnt flint in some palaeolithic debates.
- **Limits:** anomalous fading, incomplete zeroing, and water-content error. TL is a clock, not a culture name.

Flow diagram

Natural radiation -> Electron traps
Firing or lab heat -> Luminescence
Luminescence -> Equivalent dose / dose rate

Conclusion

TL dates the last heating or bleaching of mineral grains. It is a workhorse for ceramics and burnt stone when the zero event is well understood.

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Q2(a) · 20 marks

What are the physical and cultural characteristics of *Homo erectus*? Discuss its phylogenetic status

Anthropology GS 1 · 2021 · *Homo erectus*

Revision summary

Erectus combines a keeled, torused skull with a modern body plan.

Nariokotome shows long legs and endurance walking.

Acheulian tools and a wide **Old World range** mark the culture.

Java and Zhoukoudian are classic Asian fossils; Africa is often called *ergaster*.

- **Phylogeny:** stem cosmopolitan *Homo*, with splitters keeping several names.

Introduction

Homo erectus is the first hominin with a long-legged, large-bodied build, a thick skull, and a wide **Old World range**. Culture and anatomy travel together. Phylogeny is still argued.

Body

Physical characters

- Brain size commonly 750-1100 cc, well above australopiths, below later sapiens. The vault is low, with a supraorbital torus, nuchal torus, and sagittal keeling in many Asian fossils.
- The face is prognathic but less so than habilines. Teeth are smaller than australopiths. The mandible lacks a chin.
- Postcrania, from **Nariokotome** (KNM-WT 15000) and related finds, show long legs, narrow pelvis, and endurance-walking build. Sexual dimorphism is reduced relative to robust australopiths.
- African fossils often labelled ***Homo ergaster*** are thinner-boned. **Java** (Trinil, Sangiran) and **Zhoukoudian** show the classic thick Asian pattern. **Dmanisi** is smaller-brained and variable.

Cultural characters

- **Acheulian** handaxes and cleavers dominate African and western Eurasian sites. East Asia often shows Mode 1 cores and flakes, the old Movius line debate.
- Controlled use of fire is argued at some caves; hearths are clearer later. Systematic hunting and scavenging of large mammals appear with the long-legged body.
- Out-of-**Africa range** by about 1.8 million years, from Africa to **Java** and the Caucasus, is itself a cultural-ecological fact: tools, meat, and social care of a slow-growing child.

Phylogenetic status

- *Erectus* is widely treated as a chronospecies on the line toward later *Homo*, ancestral to **Heidelbergensis** and then sapiens and Neanderthals in many textbooks.
- Splitters keep ***ergaster***, ***erectus*** sensu stricto, ***antecessor***, and *Dmanisi* as separate. Lumpers keep one polytypic *erectus*.
- It is not a failed side-branch like robust australopiths. It is the first cosmopolitan *Homo*. Whether every Asian *erectus* left descendants is open.

Flow diagram

Homo erectus -> Thick vault long legs
Homo erectus -> Acheulian fire range
Homo erectus -> Stem Homo
Stem Homo -> Heidelbergensis sapiens
Stem Homo -> Asian erectus Java

Conclusion

Erectus is a thick-skulled, long-legged, Acheulian-bearing hominin of Africa and Asia. Phylogenetically it is the stem cosmopolitan Homo, whether one species or a grade.

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Q2(b) · 15 marks

Elucidate the concept of "thick description" of Clifford Geertz with a suitable example

Anthropology GS 1 · 2021 · Symbolic and interpretive theories (Turner, Schneider and Geertz)

Revision summary

Thick description names the meaning of an act in its cultural code.

Ryle's wink shows why a twitch is not a signal.

Geertz's Balinese cockfight reads status, kinship, and masculinity in a fight.

Java work used the same interpretive method on religion and market.

The limit is underplaying power; the gain is refusing empty behaviourism.

Introduction

Clifford Geertz treated culture as public meaning. Thick description is the ethnographer's job of saying what an act meant in that web of signs, not only what the muscles did.

Body

The concept

- In **Thick Description**, Geertz borrowed **Gilbert Ryle's** wink. A twitch, a wink, a fake wink, and a parody of a wink look alike as eyelid motion.
- **Thin description records the twitch. Thick description names the code:** conspiracy, mockery, rehearsal.
- Culture is an acted document. The anthropologist interprets interpretations, as a literary critic reads a text, not as a chemist reads a law.

Example

- Geertz's **Balinese cockfight** is the teaching case. Betting, kin factions, and status are at stake. The cock is a male word and a political proxy.
- A thin note would say men gamble on birds. A thick note says the fight is a story the Balinese tell themselves about pride and the danger of animality.
- **Java**, where Geertz also worked on religion and bazaar, shows the same method: ritual and market as readable forms, not as raw function.

Limit

- Critics said Geertz underplayed power and political economy. **Marxian** and practice theorists wanted thinner, causal claims as well.
- **The method still trains the eye:** ask what the wink meant before you count winks.

Flow diagram

Eyelid or cockfight -> Thin motion
Eyelid or cockfight -> Thick meaning
Thick meaning -> Geertz text of culture
Geertz text of culture -> Bali Java

Conclusion

Thick description is interpretation of public meaning, classically the wink and the Balinese cockfight. It is ethnography as reading, not as stopwatch alone.

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WRAP Exams

Q2(c) · 15 marks

Describe the features of early farming cultures and Neolithic of the Near East

Anthropology GS 1 · 2021 · Neolithic

Revision summary

Near Eastern Neolithic grows from Natufian sedentary harvest.

PPNA and PPNB villages add plaster houses, ritual skulls, and herds.

Jericho's tower and Çatalhöyük's crowded houses are type sites.

Founder crops and sheep-goat define the package; pottery comes later.

Childe named a revolution; current work stresses a long, mosaic process.

Introduction

The Near Eastern Neolithic is the first durable package of cereals, pulses, sheep, goat, and village life. It is a long process, not a single invention day.

Body

From Natufian to Pre-Pottery

- Late Epipalaeolithic **Natufian** hamlets harvested wild cereals with sickles and stored grain. Sedentism began before full domestication.
- **Pre-Pottery Neolithic A and B** (PPNA/PPNB) in the Levant and upper Tigris-Euphrates show lime-plaster houses, skull curation, and expanding herds.
- **Jericho** (Tell es-Sultan), excavated by **Kathleen Kenyon**, has a PPNA tower and wall. It is a type site of early village defence and ritual, not yet a metal city.

Villages and plants

- Founder crops include einkorn, emmer, barley, lentil, pea, and flax. Sheep and goat follow, then cattle and pig in neighbouring zones.
- **Çatalhöyük** on the **Konya plain**, reported by **James Mellaart** and later **Ian Hodder**, is a crowded Neolithic town of roof entry, wall painting, and cattle symbolism.
- Other nodes include **Abu Hureyra**, **Ain Ghazal**, **Jarmo**, and **Ali Kosh**. Irrigation and pottery come in stages; pottery is not the definition of this Neolithic.

Reading the change

- **V. Gordon Childe**'s oasis and urban-revolution stories set the exam language. Later work stresses climatic pulses after the Younger Dryas and social ritual, not only hunger.
- The Near East is a mosaic of farming cultures, not one tribe that invented agriculture and marched.

Flow diagram

Natufian harvest -> PPNA PPNB villages
PPNA PPNB villages -> Jericho tower
PPNA PPNB villages -> Catalhoyuk
PPNA PPNB villages -> Cereals pulses sheep goat

Conclusion

Near Eastern early farming is Natufian sedentism, PPN villages, founder crops, and sites such as Jericho and Çatalhöyük. It is a regional process that later feeds Europe and beyond.

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WRAP Exams

Q3(a) · 20 marks

How do political organisations of simple societies establish power, authority and legitimacy?

Anthropology GS 1 · 2021 · Political Organization and Social Control

Revision summary

Power is capacity; authority is recognised right; legitimacy is accepted ground.

Bands use consensus and fission; Nuer segments mediate without a king.

Trobriand chiefs and Kachin gumsa convert food and marriage into rank.

Melanesian big-men build personal followings that do not outlive the giver.

Weber's traditional and charismatic types explain legitimacy better than statute.

Introduction

Simple societies are not without politics. They produce compliance through kinship, ritual, oratory, and feud, even when they lack a king or a police. Power, authority, and legitimacy must be named separately.

Body

The three terms

- **Power** is the ability to make others act, by force, gift, or threat. **Yanomami** village leaders and Amazon headmen often have little command power.
- **Authority**, after **Max Weber**, is the recognised right to command. A **Nuer** leopard-skin chief has ritual office more than a sword.
- **Legitimacy** is why people accept that right: descent, blessing, success in raid, or the sense that custom is as it should be.

How organisation works

- **Bands**, as among many **Andaman** and foraging groups, use consensus, ridicule, and fission. Leadership is situational hunting or ritual skill.
- **Tribes** use segmentary lineage. **Evans-Pritchard's** Nuer show opposition of segments, prophets, and leopard-skin mediators rather than a pyramid.
- **Chiefdoms** concentrate redistribution. **Malinowski's** Trobriand chiefs convert yams and kula into rank. **Leach's Kachin** gumsa chiefs claim hereditary prestige that can collapse into gumlao equality.
- **Big-man** systems, as **Marshall Sahlins** described in Melanesia, build power by giving pigs and speeches. Authority dies with the man's network.

Sources of legitimacy

- Kinship and first-come myths. Ritual and oracles. Success in war and feast. **Weber's** traditional and charismatic types fit better than legal-rational bureaucracy.
- **Pierre Clastres** argued that Amazon polities work to prevent a separate state. Refusal of surplus command is itself a political act.
- Colonial and missionary offices later recoded legitimacy. Simple does not mean outside history.

Flow diagram

Simple politics -> Power force gift
Simple politics -> Authority office
Simple politics -> Legitimacy custom charisma
Authority office -> Nuer Trobriand Kachin

Conclusion

Simple polities establish power through gifts, feud, and ritual; authority through named offices and oratory; legitimacy through kinship, custom, and charisma. The state is not the only political form.

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Q3(b) · 15 marks

Explain the genetic mechanisms of micro and macro evolution

Anthropology GS 1 · 2021 · Synthetic theory of evolution

Revision summary

Microevolution is allele-frequency change in a population.

The forces are mutation, selection, drift, gene flow, and non-random mating.

Macroevolution is speciation and higher-level pattern in deep time.

Punctuated equilibrium and regulatory genes are debated extras, not magic.

Hominin splits and isolate drift show both scales in anthropology.

Introduction

Microevolution is change in allele frequencies within a breeding population. Macroevolution is the origin of higher taxa, species, and long-term trends. The same genetic mechanisms scale up, with debate about extra rules.

Body

Microevolutionary mechanisms

- **Mutation** supplies new alleles. Most are neutral or harmful; a few are useful, as in lactase persistence.
- **Natural selection** changes frequencies by differential survival and fertility. **Sickle-cell** and malaria is the human classroom case.
- **Genetic drift**, including founder effect and bottleneck, is strong in small groups. **Andaman** and other island isolates illustrate drift and founder sampling.
- **Gene flow** mixes populations. Migration prevents full local fixation.
- **Non-random mating**, including inbreeding and assortative mating, changes genotype frequencies and can raise homozygosity.

To the macro scale

- **Speciation** is the hinge. Allopatric isolation, then reproductive barriers, turns micro change into new species. Hominin fossils show this as splitting lineages, not one file.
- **Macroevolution** adds origin of bauplans, mass extinction, and adaptive radiation. **Gould** and **Eldredge** argued punctuated equilibrium: long stasis, then geologically rapid change, still built from genetic processes.
- Chromosomal rearrangements and regulatory (Hox) shifts can produce larger morphological jumps than a single point mutation. They remain genetic mechanisms.

Unity and caution

- The Modern Synthesis treated macro as accumulated micro. Palaeontology adds time, extinction, and development. Anthropology uses both for fossils and living variation.

Flow diagram

Microevolution -> Mutation selection drift flow mating

Microevolution -> Speciation

Speciation -> Macroevolution taxa trends

Macroevolution taxa trends -> Fossil hominin splits

Conclusion

Mutation, selection, drift, flow, and mating rules drive microevolution. Speciation, radiation, and developmental-genetic change carry those mechanisms into macroevolution.

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Q3(c) · 15 marks

Discuss the salient features of different traditions of European Mesolithic

Anthropology GS 1 · 2021 · Mesolithic

Revision summary

European Mesolithic traditions are regional, not one culture.

Maglemosian is a northern forest-lake toolkit with bone points and canoes.

Azilian follows Magdalenian with painted pebbles and small harpoons.

Tardenoisian is inland geometric microliths.

Asturian and Ertebølle add coastal middens; Lepenski Vir shows fisher sedentism.

Introduction

The European Mesolithic is the post-glacial foraging world of microliths, canoes, and cemeteries. Traditions differ by coast, forest, and the nearness of the coming Neolithic.

Body

Maglemosian

- **Maglemosian** of the **North European plain**, named from Mullerup in Zealand, is a forest-and-lake culture of the early Holocene.
- Bone and antler leister points, axes, and dugout canoes show a wetland economy. Dogs and hazel nuts sit with pike and aurochs.
- Settlements such as **Star Carr** in Britain are cousins of this northern forest Mesolithic.

Azilian

- **Azilian**, after Mas d'Azil in the French Pyrenees, follows Magdalenian art with painted pebbles and small flat harpoons.
- It is a southern, often cave-mouth tradition of deer hunting as reindeer worlds closed.
- Microliths appear, but the painted pebble is the type-fossil of the school textbooks.

Tardenoisian and others

- **Tardenoisian** of France and neighbouring lands is a microlith tradition of geometric armatures on inland sands and plateaux.
- **Asturian** of the Iberian coast stresses shell middens and heavy picks. **Ertebølle** of the Baltic adds pottery and oysters before full farming.
- **Lepenski Vir** on the Danube shows sedentary fishers with sculpted boulders, a Mesolithic complexity at the Neolithic door.

Shared features

- Microlith composite tools, seasonal camps, and rising cemeteries. No single tribe; several ecological traditions.

Flow diagram

European Mesolithic -> Maglemosian wetlands

European Mesolithic -> Azilian pebbles

European Mesolithic -> Tardenoisian geometrics

European Mesolithic -> Ertebolle middens

Conclusion

Maglemosian wetlands, Azilian painted pebbles, and Tardenoisian geometrics are regional answers to a warming Europe. The Mesolithic is plural, not a thin gap before farms.

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Q4(a) · 20 marks

Elaborate the scope of anthropology and elucidate its uniqueness in the field of other social sciences

Anthropology GS 1 · 2021 · Social-cultural Anthropology.

Revision summary

- **Scope is four-field:** body, tools, language, and social life.

It includes fossils, villages, and cities, not tribes alone.

Uniqueness is holism plus long fieldwork and comparison.

Sociology, economics, and history each drop a piece that anthropology keeps.

The charter is connection across fields, not one scholar doing everything.

Introduction

Anthropology is the comparative study of humankind as organism, maker, speaker, and social being. Its scope is four-field. Its uniqueness is that combination, plus fieldwork among living people and deep time.

Body

Scope

- **Biological anthropology** covers primates, fossils, genetics, growth, and variation. **Homo erectus** and living high-altitude **Tibetan** physiology sit in one file.
- **Archaeology** covers tools, sites, and extinct ways of life, from Maglemosian camps to **Jericho**.
- **Linguistic anthropology** covers structure, meaning, and speech in society.
- **Socio-cultural anthropology** covers kinship, economy, religion, and politics, from **Nuer** and **Trobriand** to cities.
- Applied, medical, and development work extend the same holism into policy, without dropping comparison.

Uniqueness among social sciences

- **Sociology** often starts from modern industrial society and the survey. Anthropology starts from any human group and from participant observation, as **Malinowski** and **Boas** set the craft.
- **History** uses texts of the literate. Anthropology adds prehistory, oral worlds, and the body.
- **Economics** and **political science** abstract the market and the state. Anthropology embeds those in kinship and ritual, after **Polanyi**, **Weber**, and **Marx** read in the field.
- **Psychology** models the individual mind. Anthropology treats mind as public culture, as **Geertz** argued, and as a primate brain with an evolutionary past.
- **The uniqueness is holism plus the other:** the discipline is licensed to study bones and bridewealth in one argument, and to take the **Andaman** camp as seriously as a parliament.

Limit

- No person does all four fields in one career. Uniqueness is the charter of connection, not a claim of omniscience.

Flow diagram

Anthropology -> Biological
Anthropology -> Archaeology
Anthropology -> Linguistic
Anthropology -> Socio-cultural
Anthropology -> Holism fieldwork comparison

Conclusion

Anthropology's scope is humankind in all times and places. Among social sciences it is unique in joining biology, deep time, language, and intensive ethnography.

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Q4(b) · 15 marks

Mention the major branches of linguistic anthropology and discuss language use in social and cultural settings

Anthropology GS 1 · 2021 · Linguistic Anthropology.

Revision summary

Branches cover structure, historical reconstruction, ethnolinguistics, and sociolinguistics.

Hymes asked for an ethnography of speaking, not only a grammar.

Labov showed class and style in variation.

In settings, language does kinship, ritual, and rank.

Code-switching and ideology show language as a social resource.

Introduction

Linguistic anthropology studies language as a social practice. Its branches split structure, history, and use. Use is never only grammar in the head.

Body

Major branches

- **Descriptive and structural linguistics** record phonology, morphology, and syntax. **Boas**, **Sapir**, and **Bloomfield** made this the first professional kit.
- **Historical linguistics** reconstructs families and contact. It is the time depth of words, as in Indo-Aryan and Dravidian in India.
- **Ethnolinguistics and the Sapir-Whorf problem** ask how categories of grammar relate to thought and culture. Strong determinism is rejected; influence is still researched.
- **Sociolinguistics**, after **Labov**, maps class, gender, and style in variation. **Dell Hymes'** ethnography of speaking asks who may speak, in which code, to whom.
- **Pragmatics, discourse, and linguistic ideology** study speech acts, narrative, and beliefs about language, including Sanskrit prestige or colonial English.

Language in social and cultural settings

- Kinship terms, honorifics, and taboo words do social structure. A Trobriand or Nuer address term is a political act.
- Ritual speech, oratory, and silence organise **authority**. A chief's speech and a woman's lament are different settings.
- Code-switching in Indian bazaars and courts shows class and identity. Language is a resource, not a mirror of a frozen tribe.
- **Geertz's** thick description of a **Java** slametan or a Balinese fight needs the local words; meaning lives in use.

Flow diagram

Linguistic anthropology -> Structure history
 Linguistic anthropology -> Sociolinguistics Hymes
 Sociolinguistics Hymes -> Honorific ritual code-switch
 Honorific ritual code-switch -> Identity authority

Conclusion

The branches run from structure and history to speaking in society. Language in setting is how people do kinship, rank, ritual, and identity.

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WRAP Exams

Q4(c) · 15 marks

"Chromosomal aberrations can play havoc with the human body and mind." Explain with suitable examples

Anthropology GS 1 · 2021 · Numerical and structural aberrations (disorders).

Revision summary

Aberrations are numerical or structural changes of chromosomes.

Down syndrome is trisomy 21 with body and cognitive effects.

Turner is 45,X; Klinefelter is 47,XXY; both alter gonads and sometimes learning.

Deletions and unbalanced translocations can be as severe as extra chromosomes.

Outcomes vary; counselling and care matter as much as the karyotype name.

Introduction

Chromosomal aberrations are changes in number or structure of chromosomes. They can alter development of body and brain because many genes move together.

Body

Numerical change

- **Down syndrome** (trisomy 21) produces distinctive facies, hypotonia, heart defects, and a range of intellectual disability. Maternal age raises risk of nondisjunction.
- **Turner syndrome** (45,X) affects females: short stature, ovarian dysgenesis, and sometimes spatial and social-cognitive difficulties. Intelligence is often near typical range, but the body is marked.
- **Klinefelter syndrome** (47,XXY) affects males: taller stature, hypogonadism, infertility, and a raised rate of language and learning problems.
- Other aneuploidies, such as trisomy 13 and 18, are often lethal early. Sex-chromosome aneuploidy is more survivable because of X inactivation.

Structural change

- Deletions, duplications, inversions, and translocations can be balanced in a parent and havoc in the child. Cri-du-chat (5p deletion) affects larynx and cognition.
- Reciprocal translocations explain some recurrent miscarriage and, if unbalanced, malformation syndromes.

Body and mind

- **The phrase in the question is clinical:** heart, gonad, stature, and language networks are all gene-rich. Havoc is variable, not a single fate.
- Counselling uses karyotype, now often microarray and NGS, plus pedigree. Anthropology adds stigma, schooling, and care, not a racial reading of the karyotype.

Flow diagram

Chromosomal aberration -> Aneuploidy

Chromosomal aberration -> Deletion translocation

Aneuploidy -> Down Turner Klinefelter

Down Turner Klinefelter -> Body and mind phenotype

Conclusion

Aneuploidy and rearrangements can disrupt growth, gonads, heart, and cognition. Down, Turner, and Klinefelter are the teaching examples. Severity is a spectrum, not a sentence.

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WRAP Exams

Q5(a) · 10 marks

Human adolescent growth spurt

Anthropology GS 1 · 2021 · Factors affecting growth and development

Revision summary

The adolescent growth spurt is a rapid height-weight rise at puberty.

Girls peak earlier than boys on Tanner velocity curves.

Hormones drive it; nutrition and class time it.

Menarche follows the height peak.

Human life history pairs long childhood with this late acceleration.

Introduction

The adolescent growth spurt is a rapid rise in height and weight at puberty. Among primates it is marked in humans and is a bio-cultural event, not only a hormone graph.

Body

Pattern

- **J. M. Tanner** plotted velocity curves. Peak height velocity comes earlier in girls than in boys, which is why girls may be taller at twelve and shorter as adults.
- Sex steroids, growth hormone, and IGF-1 drive the spurt. The pelvis, fat, and muscle take sex-specific paths.
- Menarche follows the height peak. Spermatarche is less visible. Both lock fertility to a body that is still finishing.

Bio-cultural meaning

- Nutrition, class, and disease shift timing. Secular trend toward earlier puberty appears in well-fed populations.
- **Inuit**, high-altitude **Tibetan**, and chronically undernourished groups may show delayed or blunted spurts.
- The long human childhood plus a sharp spurt is part of the slow life-history that **Washburn** and later life-history theorists tied to learning and brain growth.

Flow diagram

Childhood -> Adolescent spurt
Adolescent spurt -> Tanner velocity
Adolescent spurt -> Earlier peak in girls
Adolescent spurt -> Nutrition class climate

Conclusion

The adolescent spurt is a human-typical velocity peak shaped by hormones and by food, class, and climate. Tanner's curves remain the teaching tool.

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Q5(b) · 10 marks

The losses and gains of erect posture

Anthropology GS 1 · 2021 · Characteristics of Primates

Revision summary

Erect posture frees the hands for tools and carrying.

It favours endurance walking and a high visual field.

Costs include lumbar strain, difficult birth, and venous problems.

The obstetric dilemma pits a narrow pelvis against a large brain.

Selection kept the bargain because making and ranging paid.

Introduction

Bipedal erect posture is the hominin hallmark. It freed the hands and strained the spine, pelvis, and birth canal. Gains and losses are one design.

Body

Gains

- Hands free for tools, carrying, and gesture. **Washburn** and **Darwin** already tied bipedalism to culture.
- A high, scanning eye-line and endurance walking, later used by **Homo erectus** on open landscapes.
- **Thermoregulation in savanna sun is argued:** less surface to noon radiation, more sweating skin.

Losses

- Lumbar lordosis, slipped discs, and osteoarthritis of the lower back and knees.
- **A narrow pelvic inlet versus a large neonatal brain:** the obstetric dilemma, with rotational birth and risk to mother and child.
- Inguinal hernia, varicose veins, and haemorrhoids from vertical viscera and valves.
- Foot arches and fallen arches; a locked knee that saves energy but fails in injury.

Balance

- Natural selection kept the posture because foraging and making paid more than a perfect back.

Flow diagram

Bipedalism -> Hands tools endurance

Bipedalism -> Spine pelvis veins feet

Spine pelvis veins feet -> Obstetric dilemma

Conclusion

Erect posture bought tools, range, and a scanning stance. It cost backs, births, and veins. The human body is that bargain.

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WRAP Exams

Q5(c) · 10 marks

Is race a valid and biologically meaningful concept?

Anthropology GS 1 · 2021 · The Nature of Culture

Revision summary

Classical races are not valid biological taxa.

Boas split race from language and culture and showed plasticity.

Most genetic diversity lies within groups, not between colour boxes.

Clines and local ancestry are biologically meaningful.

Social race is real as discrimination, not as subspecies.

Introduction

Race as a few fixed human types is not a valid biological taxonomy. Human variation is real. It does not form the classical races of textbooks.

Body

Why classical race fails

- **Franz Boas** showed that cranial form changes with environment. Race, language, and culture do not coincide.
- Most genetic variation is within so-called races, as **Richard Lewontin** stressed. Clines of skin colour and blood groups cross the old maps.
- **Ashley Montagu** and later AAA statements treated race as a social myth with biological pretence.

What remains meaningful

- Local populations, ancestry, and clinal traits matter for medicine, forensic estimation, and evolutionary history.
- Sickle-cell tracks malaria, not a Black race. Lactase tracks dairying, not a White race.
- Social race is brutally meaningful in discrimination. That is sociology and history, not a Linnaean subspecies.

Verdict

- Race as four or five types is invalid. Biological variation is meaningful as clines, populations, and ancestry, not as those types.

Flow diagram

Human variation -> Clines populations

Human variation -> Classical races

Classical races -> Invalid types

Clines populations -> Medicine history

Conclusion

Classical race is not a good biological concept. Human biological diversity is real and is badly boxed by colour labels.

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WRAP Exams

Q5(d) · 10 marks

Descent Groups

Anthropology GS 1 · 2021 · Kinship

Revision summary

A descent group is recruited by a rule of ancestry.

Unilineal clans and lineages are corporate; kindreds are often not.

They organise exogamy, property, office, and feud.

Nuer lineages and Trobriand sub-clans are type cases.

Descent is not the same thing as the domestic family.

Introduction

A descent group is a body of kin recruited by a rule of ancestry. It owns names, rights, and often land. It is not the same as a household.

Body

Types

- **Unilineal** groups are patrilineal or matrilineal. **Nuer** lineages and Trobriand dala are classic cases.
- **Cognatic** and bilateral kindreds, common in the West and among some hill peoples, recruit through both sides but often lack a single corporate estate.
- Clans, lineages, moieties, and phratries are scales of the same idea. A clan may be totemic and exogamous.

Functions

- They regulate marriage through exogamy, as **Lévi-Strauss** and **Dumont** read alliance between groups.
- They hold property, office, and feud. **Evans-Pritchard** made the lineage the political unit of the Nuer.
- Ancestors and ritual legitimate the group. **Morgan** earlier mistook clan for a stage of the family; the group is a jural corporation, not a household type.

Limit

- People also live in houses and networks. Descent is one idiom of belonging, not the whole of kinship.

Flow diagram

Descent group -> Unilineal
Descent group -> Cognatic
Unilineal -> Marriage property feud
Marriage property feud -> Nuer Trobriand

Conclusion

Descent groups recruit by ancestry, hold rights, and marry out. Nuer, Trobriand, and Indian gotra-clan talk remain the teaching set.

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WRAP Exams

Q5(e) · 10 marks

Modes of Subsistence.

Anthropology GS 1 · 2021 · Meaning, Scope and development of Anthropology.

Revision summary

Modes of subsistence are organised food economies.

Foragers, horticulturalists, pastoralists, and farmers are the core set.

Andaman, Yanomami, Nuer, Inuit, and Tibetan cases teach the range.

Marx stressed property and labour; Sahlins stressed forager plenty.

Modes mix; they are not racial stages.

Introduction

Modes of subsistence are the organised ways people get food and materials. They shape density, mobility, and politics, without being a unilinear ladder.

Body

The usual set

- **Foraging (hunting, gathering, fishing):** **Andaman** islanders, many San, and **Inuit** sea-mammal economies. Bands, sharing, and low density are common, not universal.
- **Horticulture and shifting cultivation:** **Yanomami** gardens of plantain and manioc with hunting. Villages, fission, and limited surplus.
- **Pastoralism:** herd mobility, as on the **Tibetan plateau** and among Nuer cattle keepers. Wealth on the hoof, raid, and alliance.
- **Agriculture and irrigation:** **peasant and state surplus, from Near Eastern Jericho** fields to plough India. Stratification becomes likely.
- **Industrial** wage food is a further mode, not the end of anthropology.

Reading

- **Marx** named modes of production with property and labour. **Sahlins** warned that foragers need not be poor.
- A people may mix modes. Subsistence is an economy, not a racial type.

Flow diagram

Subsistence -> Forage
 Subsistence -> Horticulture
 Subsistence -> Pastoralism
 Subsistence -> Agriculture

Conclusion

Forage, garden, herd, and plough are the teaching modes. They constrain politics and density, and they mix in real lives.

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Q6(a) · 20 marks

What is acclimatization? Discuss adaptive responses to high altitude and cold climate

Anthropology GS 1 · 2021 · Concepts and methods of Ecological Anthropology: Bio-cultural Adaptations

Revision summary

Acclimatization is reversible adjustment within a lifetime.

It is not the same as genetic adaptation, though they combine.

Altitude responses are ventilation, heart rate, and later haematology.

Tibetans and Andeans solve hypoxia by different mixes of physiology and genes.

Cold responses are shivering, vasoconstriction, diet, and Arctic clothing.

Introduction

Acclimatization is a reversible, physiological adjustment to an environment within an individual's life. It is not a genetic adaptation of a population, though the two can work together.

Body

Acclimatization defined

- **Short-term change:** sweating in heat, hyperventilation on a climb, vasoconstriction in wind.
- It differs from **habituation** (less notice of a stimulus) and from **genetic adaptation** (allele change across generations).
- Developmental acclimatization, as in chest growth at altitude, sits between a holiday trip and a gene.

High altitude

- Hypoxia is the stress. Immediate responses include raised ventilation and heart rate. Later, more red cells and 2,3-DPG shift oxygen delivery.
- **Andean** populations often show high haemoglobin. **Tibetan plateau** people more often raise ventilation and use different haemoglobin-oxygen patterns, with EPAS1 and related alleles as genetic partners of the same stress.
- **Limits:** chronic mountain sickness, low birth weight, and the need for slow ascent. Culture adds coca, tea, pacing, and pastoral mobility.

Cold

- **Immediate:** shivering, vasoconstriction, and a rise in metabolic heat.
- **Inuit** and other Arctic peoples show well-studied combinations of insulation (fat, clothing), high-calorie fat diets, and circulatory patterns in hands that reduce frostbite in some tests.
- **Lewis** hunting reaction (cyclic rewarming of fingers) is a short-term acclimatization. Bergmann and Allen rules are population-shape correlations, not the same as one person's acclimatization.
- **Technology is part of the adaptive response:** parkas, igloos, and night fires are as real as brown fat.

Bio-cultural point

- **High altitude and cold are textbooks of the hallmark in 01d:** body, gene, and practice in one loop.

Flow diagram

Acclimatization -> High altitude hypoxia
Acclimatization -> Cold
High altitude hypoxia -> Tibetan ventilation alleles
Cold -> Inuit insulation diet gear

Conclusion

Acclimatization is reversible physiology. At altitude it is ventilation and blood; in cold it is heat, vessels, and clothing. Tibetan and Inuit cases show genes and gear beside the same stresses.

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Q6(b) · 15 marks

How are the cases of disputed paternity solved? Discuss the recent techniques

Anthropology GS 1 · 2021 · Applications of Anthropology

Revision summary

Older tests excluded alleged fathers with blood groups and HLA.

STR DNA profiling can strongly include a man as biological father.

Y-STRs track the male line; mtDNA does not decide paternity.

Prenatal tests can use fetal DNA in maternal blood.

Kinship still distinguishes social pater from genitor.

Introduction

Disputed paternity is a legal and kinship claim about who the genitor is. Anthropology already knew social fatherhood. Recent techniques name a biological probability.

Body

The older kit

- Blood groups (ABO, Rh) could exclude a man. They could not prove him. **Landsteiner** made the first serological exclusions.
- HLA and protein polymorphisms raised the power of exclusion but still left many men unexcluded.
- Kinship systems already split genitor and pater, as in older **Nayar** visiting husbands or Trobriand beliefs about conception. The lab does not erase the social father.

Recent techniques

- **DNA profiling**, after **Alec Jeffreys**, uses STRs (short tandem repeats). A child must match one allele at each locus from the alleged father, barring mutation.
- Multiplex STR kits, used in Indian forensic labs, yield paternity indices and very high probabilities when the mother is tested too.
- **Y-chromosome STRs** follow the paternal line. **Mitochondrial DNA** follows the mother and does not decide paternity.
- SNP arrays and sequencing can work on degraded samples. Non-invasive prenatal paternity tests use fetal DNA in maternal blood.
- **Limits:** twins, close relatives as alternative fathers, mutations, and chain-of-custody. Ethics of consent and of revealing incest or infidelity sit with the result.

Anthropological caution

- A probability is not a kinship system. **Malinowski's** Trobriand pater remains a jural person even when a lab names another genitor.

Flow diagram

Disputed paternity -> Blood group exclusion

Disputed paternity -> STR STR DNA probability probability

STR DNA probability -> Court index

Disputed paternity -> Pater vs genitor

Conclusion

Exclusion began with blood groups. STR DNA now assigns high probability to a biological father. Social paternity and laboratory paternity must still be named apart.

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Q6(c) · 15 marks

Critically evaluate Lewis Morgan's classification of family

Anthropology GS 1 · 2021 · Classical evolutionism (Tylor, Morgan and Frazer)

Revision summary

Morgan ranked families from group marriage to Victorian monogamy.

He linked terms, property, and a three-age history of culture.

No ethnography confirms consanguine or punaluan stages.

Boas, Lévi-Strauss, and feminist work dismantled the ladder.

Keep his comparative kinship method, not his timetable.

Introduction

Lewis Henry Morgan ranked families from promiscuity to monogamy as stages of progress. The scheme organised a vast kinship vocabulary. As history and as ethnography it fails.

Body

What he classified

- In **Ancient Society** and **Systems of Consanguinity**, Morgan moved from the consanguine family (sibling group marriage) through the punaluan (group of brothers marrying a group of sisters), syndyasmian pairing, patriarchal, and the monogamian family.
- He tied these to savagery, barbarism, and civilisation, and to Malayan, Turanian, and Aryan kinship terms.
- **Engels** took the scheme into a Marxist history of the family and private property.

Critical evaluation

- Fieldwork found no consanguine or punaluan stage as a real household. **Trobriand**, **Nuer**, and **Andaman** families are not rungs on that ladder.
- **Boas** and historical particularism rejected unilinear family history. Terms can be classificatory without proving group marriage.
- **Lévi-Strauss** shifted the problem to alliance and incest prohibition, not to Morgan's fossils of promiscuity.
- **Weiner** and feminist kinship showed that Morgan's endpoint-Victorian monogamy as the highest family was ethnocentric.
- What survives is the method of comparing kinship terms, the Iroquois case, and the insight that family form is social, not a natural given.

Verdict

- Use Morgan as a founder of kinship study. Do not use his five families as a timetable of humankind.

Flow diagram

Morgan -> Consanguine to monogamian
Consanguine to monogamian -> No field stages
Morgan -> Kinship terms comparison
Kinship terms comparison -> Later alliance descent

Conclusion

Morgan classified family as evolutionary stages ending in monogamy. The typology is historically false. The comparative study of terms and of property in the family is his lasting gift.

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Q7(a) · 20 marks

Critically evaluate different types of social stratifications with suitable examples

Anthropology GS 1 · 2021 · The Nature of Society

Revision summary

Stratification is durable structured inequality.

Egalitarian bands limit surplus; ranked chiefdoms give hereditary honour.

Class is relation to production (**Marx**) plus status and party (**Weber**).

Caste ranks endogamous groups by purity and occupation; estates are legal orders.

Slavery, social race, and gender are further axes; types mix in living societies.

Introduction

Social stratification is structured inequality that lasts beyond one lifetime. Types differ by how rank is inherited, justified, and closed. Simple societies are not all equal, but they are not all caste.

Body

Egalitarian and ranked

- **Egalitarian** bands, as among many foragers including parts of **Andaman** life, limit accumulation by sharing and ridicule. Age and sex still differentiate.
- **Ranked** societies give hereditary prestige without sharp economic classes. Trobriand chiefs and **Kachin** gumsa nobles sit above commoners. **Sahlins** contrasted this with Melanesian big-men who earn followings.

Class

- **Marx** defined class by relation to the means of production: owners and labourers. Peasant and landlord, factory owner and worker, are class types.
- **Weber** added status honour and party power. A poor Brahmin may have status without class wealth. Class is not only income.

Caste and estate

- **Caste** in India, as **Dumont** read in Homo Hierarchicus, ranks groups by purity and occupation, with endogamy and hereditary status. **Srinivas** stressed mobility through Sanskritisation and dominant caste, against a frozen book-view.
- **Estates** of feudal Europe (clergy, nobility, commoners) were legal ranks. They are a closed, law-written type, not the same as Indian jati.

Slavery, race, and gender

- Slavery and serfdom are extreme closed strata. **Race** as a social hierarchy, in colonial and American colour lines, stratifies without being a biological caste of genes.
- Gender and age stratify inside every type. **Yanomami** village rank and **Nuer** age-sets show that inequality need not be a state class system.

How types mix

- Modern India shows caste, class, and party together. A type is an analytic pole, not a people with only one inequality.

Flow diagram

Stratification -> Egalitarian band
Stratification -> Rank chiefdom
Stratification -> Class Marx Weber
Stratification -> Caste Dumont
Stratification -> Slavery race gender

Conclusion

Stratification runs from sharing bands to rank, class, caste, estate, and slave systems. Examples from Trobriand, Kachin, Nuer, India, and industrial class show the range. Weber and Dumont name different axes of the same fact of rank.

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Q7(b) · 15 marks

Discuss the bio-social determinants of fertility and fecundity

Anthropology GS 1 · 2021 · Biological and socio-ecological factors influencing fecundity, fertility, natality and mortality.

Revision summary

Fecundity is biological capacity; fertility is realised births.

Age, nutrition, lactation, and some chromosomal syndromes shape fecundity.

Marriage, taboos, class, and contraception shape fertility.

Davis and Blake listed the intermediate variables between society and births.

High-altitude and foraging ecologies add stress to the same loop.

Introduction

Fecundity is the biological capacity to conceive. Fertility is the actual production of live births. Bio-social determinants sit on both words.

Body

Fecundity

- Age, nutrition, disease, and endocrine health set the window. Menarche and menopause bound female fecundity; sperm quality bounds male.
- Adolescent spurt timing, lactation amenorrhoea, and sexually transmitted infection change capacity.
- Chromosomal conditions such as **Turner** and **Klinefelter** syndromes can abolish or sharply cut fecundity.

Fertility

- Marriage rules, age at union, and widow remarriage, as **Dumont** and Indian demography show, decide how much fecundity is used.
- **Malthus** stressed checks. **Davis and Blake** listed intermediate variables: intercourse, conception, and gestation.
- Breastfeeding, postpartum taboos, and polygyny alter spacing. **Yanomami** and many horticultural groups show long birth intervals with nursing.
- Class, caste, education, and women's work, in **Weber**'s status sense as well as **Marx**'s labour sense, shape desired family size.
- State policy, contraception, and son preference are social. High-altitude **Tibetan** and hard **Inuit** seasons add ecological stress to births and infant loss.

The loop

- Fertility is never only a uterus. Fecundity is never only a custom. Anthropology measures both.

Flow diagram

Fecundity capacity -> Age nutrition disease

Fertility births -> Marriage labour policy

Fecundity capacity -> Fertility births

Marriage labour policy -> Fertility births

Conclusion

Fecundity is capacity; fertility is births. Age, body, and disease set the first. Marriage, labour, lactation, and policy set the second.

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Q7(c) · 15 marks

What is Anthropometry? Discuss its role in assessing the nutritional status and sports capability of a person

Anthropology GS 1 · 2021 · Applications of Anthropology

Revision summary

Anthropometry is standardised body measurement.

Nutrition uses height, weight, arm circumference, and z-scores.

Stunting and wasting separate chronic from acute lack.

Sport uses somatotype and proportions as one input beside physiology.

Boas's plasticity warning still forbids racial misuse.

Introduction

Anthropometry is the standardised measurement of the human body. It is a cheap, repeatable tool for nutrition and for the morphology of sport, not a return to racial typing.

Body

Method

- Height, weight, sitting height, circumferences, and skinfolds follow **Martin** landmarks and **Tanner** growth logic.
- Indices include BMI, waist-hip ratio, and mid-upper-arm circumference. In children, z-scores against WHO or ICMR references flag stunting and wasting.
- **Boas** already used anthropometry to show plasticity. That is the opposite of a fixed race chart.

Nutritional status

- Stunting (low height-for-age) records chronic lack. Wasting (low weight-for-height) records acute lack. Underweight mixes both.
- Skinfolds and arm muscle area estimate fat and protein stores. High BMI can hide micronutrient lack.
- Community surveys in India still rely on these measures because they travel to the village.

Sports capability

- Somatotypes after **Sheldon**, later Heath-Carter, sort endomorphy, mesomorphy, and ectomorphy. Sprinters and weightlifters cluster differently from distance runners.
- Limb length, sitting-height ratio, and grip or reach help selection. They do not replace VO2 max, skill, or training.
- Population means, as in some **Inuit** or high-altitude chests, are starting points, not destiny. Nutrition in childhood writes the adult athlete as much as a gene.

Ethic

- Use anthropometry for health and performance. Do not revive it as a ladder of peoples.

Flow diagram

Anthropometry -> Stunting wasting BMI

Anthropometry -> Somatotype limb ratios

Stunting wasting BMI -> WHO ICMR charts

Somatotype limb ratios -> Training skill physiology

Conclusion

Anthropometry assesses growth, undernutrition, and sport build through standardised sizes. It is a bio-cultural instrument when references and training are named, not a race science.

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Q8(a) · 20 marks

Discuss various tools of data collection in conducting anthropological research

Anthropology GS 1 · 2021 · Tools of data collection

Revision summary

Participant observation is the socio-cultural core, after Malinowski.

Genealogies, maps, and interviews structure the field diary.

Linguistic texts and speech events are data, not extras.

Biological anthropology adds measures and genetics; archaeology adds dig and date.

Triangulation and ethics decide whether the toolkit is science or extract.

Introduction

Anthropological data are gathered by watching, asking, measuring, and reading. The toolkit is four-field. No single tool is the discipline.

Body

Fieldwork core

- **Participant observation**, after **Malinowski** in the **Trobriands**, is long residence, daily talk, and a diary of the obvious. It is still the socio-cultural spine.
- **Census, genealogy, and mapping** of houses and gardens, as **Rivers** and later village studies did, give structure to the diary.
- **Interview**: informal, structured, life history. **Geertz** in **Java** and Bali needed talk that could be thickly described, not only a schedule.

Specialised social tools

- **PRA/PLA**, case study, and focus group for applied work. Photography and film, with consent.
- **Linguistic tools: texts, elicitation, and recording of speech events after Hymes.**
- Comparative reading of archives and myths, as **Lévi-Strauss** and **Dumont** used, is data, not a substitute for the village.

Biological and archaeological tools

- **Anthropometry**, blood, and now DNA, with ethics. Pedigrees for genetic counselling.
- Excavation, survey, and dating (**TL**, radiocarbon) for past subsistence and sites such as **Jericho**.
- Primatology adds observation schedules that look like ethnography of another species.

Quality

- Rapport, triangulation, and reflexivity. **Boas** demanded texts in the native language. Colonial power still shapes who speaks.
- Quantification is a tool, not a higher truth. A **Nuer** genealogy and a haemoglobin survey answer different questions.

Flow diagram

Data tools -> Participant observation
Data tools -> Interview genealogy
Data tools -> Anthropometry DNA
Data tools -> Survey excavation dating

Conclusion

The tools are observation, genealogy, interview, language texts, measures, and excavation. Anthropology is the disciplined combination, seated in a place and a question.

Open WRAP page — <https://wrapexams.com/upsc/mains-answers/anthropology-gs-1/2021/discuss-various-tools-of-data-collection-in-conducting-anthropological-research/>

Q8(b) · 15 marks

Discuss the physiological and evolutionary theories of aging

Anthropology GS 1 · 2021 · Ageing and senescence. Theories and observations

Revision summary

Physiological theories include oxidative damage, telomeres, and endocrine decline.

Hayflick limits and repair failure describe cells, not purpose.

- **Medawar:** late harmful mutations accumulate.
- **Williams:** genes good early can be bad late.
- **Kirkwood:** the soma is disposable once reproduction is served.

Introduction

Aging is the rise of mortality and the loss of function after maturity. Physiological theories name what breaks. Evolutionary theories name why selection allowed the break.

Body

Physiological theories

- **Wear and tear** and rate-of-living ideas treat the body as a machine that rusts. They are intuitive and too simple.
- **Free radical** and oxidative stress theories, after **Harman**, blame mitochondrial leaks. Antioxidant evidence in humans is mixed.
- **Telomere shortening** and cellular senescence limit division. **Hayflick** showed cells do not divide forever.
- **Endocrine and immunological** aging: less growth hormone and sex steroid, more inflammation, weaker vaccine response.
- Protein cross-links, DNA repair failure, and stem-cell exhaustion are further cellular accounts. They describe mechanism, not why the clock exists.

Evolutionary theories

- **Medawar's** mutation accumulation: late-acting harmful alleles hide from selection because most ancestors had already reproduced.
- **Williams' antagonistic pleiotropy:** a gene that helps youth can harm age. Selection prefers the youth effect.
- **Kirkwood's disposable soma:** energy goes to reproduction over perfect repair, a life-history bargain.
- Grandmother hypotheses argue that post-menopausal life can still be selected if it raises kin fertility, as in some forager demography.
- Humans live long beside a large brain and late adolescent spurt. Aging is not a failure of **erect** living alone; it is scheduled by life history.

Together

- Evolution explains the schedule. Physiology names the rust. Neither is a complete gerontology without nutrition and class.

Flow diagram

Aging -> Damage telomere endocrine

Aging -> Medawar Williams Kirkwood

Medawar Williams Kirkwood -> Life history reproduction vs repair

Conclusion

Physiological theories track damage, telomeres, and hormones. Evolutionary theories-Medawar, Williams, Kirkwood-explain why selection did not delete old age. Human longevity still sits in a social environment.

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Q8(c) · 15 marks

Explain the structural analysis of kinship as proposed by Levi-Strauss

Anthropology GS 1 · 2021 · Structuralism (Lévi-Strauss and E. Leach)

Revision summary

Kinship is treated as a system of exchange, not a biological family stage.

The incest rule creates alliance between groups.

Restricted exchange is two-sided; generalised exchange is a circle.

Kachin and Dravidian systems are teaching models; Dumont extended the method.

Feminist critique, after Weiner, refuses women as mere signs.

Introduction

Claude Lévi-Strauss analysed kinship as a system of communication. The units are relations and exchanges, not biological households in Morgan's stages.

Body

The argument

- In **The Elementary Structures of Kinship** the incest prohibition forces men to give sisters and daughters. Society begins as alliance.
- **Restricted exchange** is two-group, often symmetric cross-cousin marriage. **Generalised exchange** is a circle of groups, as in Kachin-type systems that **Leach** also treated politically.
- Kinship terms are a language. Binary oppositions-inside/outside, own/affine-organise the field, as in his later myth work.

Method

- The anthropologist seeks the hidden grammar, not the native's first explanation alone. A Trobriand or Dravidian map is a transformation of one structure.
- **Alliance** is the positive rule of whom to marry. Descent theory, associated with **Fortes** and British Africanists, had stressed the lineage corporation instead.
- **Dumont** carried structural analysis into Indian hierarchy and Dravidian alliance, a productive heir, not a copy.

Critique

- **Weiner** and feminist readers rejected the woman-as-sign. Trobriand women give cloth and wealth; they are not only messages between men.
- History, inequality, and emotion drop out if structure is too clean. **Geertz** wanted thick local text, not only a combinatory grid.
- What remains is the shift from family stages to rules of exchange, still the cleanest attack on Morgan's ladder.

Flow diagram

Levi-Strauss -> Incest prohibition

Incest prohibition -> Alliance exchange

Alliance exchange -> Restricted two-group

Alliance exchange -> Generalised circle Kachin

Conclusion

Lévi-Strauss made kinship a grammar of alliance and incest. Restricted and generalised exchange, Kachin and Dravidian cases, are the core. The method lasts; the silent woman as gift does not.

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Compiled answer key

Last pages of this pack. Each question links to the WRAP model answer on wrapexams.com.

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Q1(a) 10 marks	Q1(b) 10 marks	Q1(c) 10 marks	Q1(d) 10 marks
Q1(e) 10 marks	Q2(a) 20 marks	Q2(b) 15 marks	Q2(c) 15 marks
Q3(a) 20 marks	Q3(b) 15 marks	Q3(c) 15 marks	Q4(a) 20 marks
Q4(b) 15 marks	Q4(c) 15 marks	Q5(a) 10 marks	Q5(b) 10 marks
Q5(c) 10 marks	Q5(d) 10 marks	Q5(e) 10 marks	Q6(a) 20 marks
Q6(b) 15 marks	Q6(c) 15 marks	Q7(a) 20 marks	Q7(b) 15 marks
Q7(c) 15 marks	Q8(a) 20 marks	Q8(b) 15 marks	Q8(c) 15 marks

Question-wise key

Q1(a) · 10 marks Solution

Q1(b) · 10 marks Solution

Q1(c) · 10 marks Solution

Q1(d) · 10 marks Solution

Q1(e) · 10 marks Solution

Q2(a) · 20 marks Solution

Q2(b) · 15 marks Solution

Q2(c) · 15 marks Solution

Q3(a) · 20 marks Solution

Q3(b) · 15 marks Solution

Q3(c) · 15 marks Solution

Q4(a) · 20 marks Solution

Q4(b) · 15 marks Solution

Q4(c) · 15 marks Solution

Q5(a) · 10 marks Solution

Q5(b) · 10 marks Solution

Q5(c) · 10 marks Solution

Q5(d) · 10 marks Solution

Q5(e) · 10 marks Solution

Q6(a) · 20 marks Solution

Q6(b) · 15 marks Solution

Q6(c) · 15 marks Solution

Q7(a) · 20 marks Solution

Q7(b) · 15 marks Solution

Q7(c) · 15 marks Solution

Q8(a) · 20 marks Solution

Q8(b) · 15 marks Solution

Q8(c) · 15 marks Solution

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