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UPSC Mains 2022 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-1/2022/>

Q1(a) · 10 marks

Debate between formalist and substantivist approaches

Anthropology GS 1 · 2022 · Economic Organization

Revision summary

Formalists treat scarcity and choice as universal.

Substantivists, after Polanyi, treat reciprocity, redistribution, and market as historical forms.

Kula and Nuer cattle show goods locked in kinship and prestige.

Spheres of exchange refuse one money.

- **Use both tools:** calculation inside an instituted process.

Introduction

The formalist-substantivist debate is about whether market price theory can travel into non-market economies. It is a debate about method, not only about trade.

Body

The two claims

- **Karl Polanyi** said the economy is instituted process. Reciprocity, redistribution, and market exchange are historically specific, so scarcity-maximising models do not fit the Trobriand kula or a temple granary.
- Formalists such as **Raymond Firth**, **Robbins Burling**, and **Scott Cook** answered that choice under scarcity is universal. A Trobriand gardener still allocates labour, even if he does not quote a rupee price.
- **George Dalton** and **Paul Bohannon** used African and Melanesian cases to show spheres of exchange. A cow, a brass rod, and a wife-wealth good are not one money.

Case and limit

- **Malinowski's** kula and **Evans-Pritchard's** Nuer cattle show prestige and kinship locking goods that a supermarket model would treat as substitutes.
- Later economic anthropology, from **Marshall Sahlins** to **Stephen Gudeman**, kept Polanyi's embeddedness but admitted calculation. The useful settlement is that formal tools need substantivist context.

Flow diagram

Economy -> Formalist choice

Economy -> Substantivist institution

Substantivist institution -> Polanyi reciprocity redistribution market

Formalist choice -> Firth Cook calculation

Conclusion

Formalism asks how people choose. Substantivism asks in which institution they choose. Anthropology needs both, and it must not treat the market as the only real economy.

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Q1(b) · 10 marks

Mesolithic rock art in Indian subcontinent

Anthropology GS 1 · 2022 · Mesolithic

Revision summary

Mesolithic paintings sit on Indian sandstone and granite shelters.

Bhimbetka, recorded by Wakankar, is the central cluster.

Scenes show hunt, dance, and early animal management.

Microlith floors tie the pictures to a foraging economy.

The art is ritual and record, not a later doodle.

Introduction

Mesolithic rock art in India is painted and engraved on sandstone and granite shelters. It records hunting, gathering, and early herding after the Pleistocene.

Body

Sites and style

- **Bhimbetka** in the Vindhya, notified by **V. S. Wakankar**, carries Mesolithic hunting scenes in red and white, later overpainted in historic layers.
- Other clusters include **Adamgarh, Pachmarhi, Mirzapur, Lakhudiyar** in Uttarakhand, and **Kurnool** and **Edakkal** in the south.
- **Figures are dynamic:** deer, boar, bison, dancers, and honey-gatherers. Superimposition shows long use of the same wall.

Meaning

- **D. H. Gordon** and later **Erwin Neumayer** read the art as a living record, not as idle decoration.
- Microliths, occupancy floors, and faunal bone at the same shelters link the pictures to a foraging economy that was already managing animals in some valleys.
- The art is evidence of cognition and group ritual. It is not a cartoon of the Neolithic.

Flow diagram

Mesolithic rock art -> Bhimbetka Wakankar

Mesolithic rock art -> Adamgarh Pachmarhi Lakhudiyar

Mesolithic rock art -> Hunt dance herd

Conclusion

Indian Mesolithic rock art is a shelter archive of hunt, dance, and early herd. Bhimbetka is the type site, but the style is subcontinental.

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Q1(c) · 10 marks

Radcliffe-Brown's ideas on status, role and institution

Anthropology GS 1 · 2022 · Functionalism (Malinowski)

Revision summary

Status is a recognised position in social structure.

Role is the rights and duties of that position.

Institution is the standardised behaviour that holds statuses together.

Andaman and Australian fieldwork supplied the cases.

The triad is useful if conflict and history are not treated as noise.

Introduction

A. R. Radcliffe-Brown treated society as a structure of positions. Status, role, and institution are the three words he used to show how persons fit that structure.

Body

The three terms

- **Status** is a socially recognised position, such as mother's brother among the **Andaman Islanders** or a Nuer leopard-skin chief.
- **Role** is the bundle of rights and duties that go with the status. The person acts the role; the structure is not the biography.
- **Institution** is a standardised mode of behaviour, marriage or a legal ritual, which keeps statuses in relation.

Use and limit

- His **Andaman** and **Australian** work showed kinship statuses knitting solidarity, which he called social statics.
- **S. F. Nadel** later tightened role analysis. **Evans-Pritchard** kept the words but put history and feud back in.
- The limit is that status can look too fixed. Persons switch roles, and conflict is not a pathology of structure alone.

Flow diagram

Status position -> Role rights duties
Role rights duties -> Institution
Institution -> Social solidarity

Conclusion

Radcliffe-Brown's triad is position, performance, and standardised relation. It is still the cleanest teaching kit for social structure, if history is not erased.

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Q1(d) · 10 marks

Pedigree analysis in genetic counselling

Anthropology GS 1 · 2022 · Genetic imprints in human disease, genetic screening, genetic counseling, human DNA profiling, gene mapping and genome study.

Revision summary

A pedigree uses standard symbols to show how a trait runs in a family.

Dominant, recessive, and X-linked patterns can be read from the chart.

Garrod linked such patterns to inborn errors of metabolism.

Counselling uses the chart for recurrence risk, especially with consanguinity.

Molecular tests refine, they do not replace, the family drawing.

Introduction

A pedigree is a family tree drawn with standard symbols so that a Mendelian pattern can be seen. Genetic counselling uses it before any laboratory test.

Body

How the chart works

- Squares are males, circles are females, shading marks the phenotype, and a double bar marks consanguinity.
- **Archibald Garrod** and later clinical geneticists used such charts for inborn errors. Anthropology still uses them for **PTC**, **albinism**, and **haemophilia**.
- Autosomal dominant traits appear every generation. Recessive traits skip. X-linked traits, as in European royal haemophilia, spare fathers-to-sons.

Counselling use

- The chart estimates recurrence risk for a couple, especially where cousin marriage is common, as in many Indian communities studied by **L. D. Sanghvi**.
- It cannot replace molecular tests for incomplete penetrance, but it still frames the interview and the ethics of disclosure.

Flow diagram

Pedigree -> Mendelian pattern
Mendelian pattern -> Recurrence risk
Recurrence risk -> Counselling

Conclusion

Pedigree analysis is the first Mendelian instrument of counselling. It turns a family story into a risk figure without pretending that genes are fate.

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Q1(e) · 10 marks

Participatory Rural Appraisal (PRA) and Participatory Learning and Action (PLA).

Anthropology GS 1 · 2022 · Tools of data collection

Revision summary

PRA lets villagers draw maps, seasons, and wealth ranks.

Chambers made facilitation the outsider's job.

PLA adds action-reflection loops in health and natural-resource work.

The method descends from participant observation.

Watch caste and gender capture of the exercise.

Introduction

PRA and PLA are field methods that treat villagers as analysts, not only as respondents. They grew from applied anthropology and rural development practice.

Body

Tools

- **Robert Chambers** popularised PRA: village maps, seasonal calendars, wealth ranking, and transect walks done by local people with the outsider as facilitator.
- PLA stresses cycles of action and reflection, used in health, forestry, and watershed projects.
- **Malinowski's** participant observation is the ancestor. PRA shortens it into a workshop without dropping local categories.

Caution

- Rank and gender can capture the map. A dominant caste may draw the well as public when Dalit access is blocked, a point **Beteille** and village ethnography already knew.
- Good PRA names who held the stick, who was silent, and what was done after the chart.

Flow diagram

PRA PLA PLA -> Maps calendars ranking

PRA PLA -> Local analysts

Local analysts -> Action

Conclusion

PRA and PLA turn appraisal into joint learning. They work when power in the meeting is watched as carefully as the map.

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Q2(a) · 20 marks

"Anthropology is the systematic, objective and holistic study of human kind in all times and places." Elaborate the argument

Anthropology GS 1 · 2022 · Tools of data collection

Revision summary

The definition blocks anecdote, presentism, and a West-only sample.

Boas and Malinowski made fieldwork and comparison the system.

Holism joins bones, tools, words, and institutions.

All times and places include fossils and Indian villages alike.

Objectivity is method, not innocence about colonial power.

Introduction

The sentence is a teaching definition of anthropology as one science of humans. Each adjective blocks a common reduction.

Body

Systematic and objective

- **Systematic** means comparison, genealogy, excavation, and measurement, not traveller's anecdote. **Franz Boas** made method the reply to armchair ranking.
- **Objective** here means controlled observation and the attempt to separate the ethnographer's values from the report. It does not mean a view from nowhere. **Malinowski's** Trobriand diary later showed the strain.
- **Emile Durkheim** and **Radcliffe-Brown** wanted social facts treated as things. Interpretive workers such as **Clifford Geertz** kept systematic description while reading public meaning.

Holistic, all times, all places

- **Holism** joins biology, language, archaeology, and social life. A palaeolithic flake, a kinship term, and a haemoglobin allele are one species' file.
- **All times** runs from **Australopithecus** and the Indian palaeolithic to the factory and the clinic.
- **All places** refuses a civilised-savage split. **Boas**, **Herskovits**, and **Srinivas** at Rampura treated every society as a full case.

Limits of the slogan

- Objectivity is an ethic of method, not a claim that culture has no power. Feminist and postcolonial critique, after **Talal Asad** and others, showed how colonial offices shaped the archive.
- Holism is a research programme. No monograph covers everything. The argument still holds as a refusal to study only the West, only the present, or only the gene.

Flow diagram

Anthropology -> Systematic method

Anthropology -> Disciplined observation

Anthropology -> Four-field holism

Four-field holism -> All times

Four-field holism -> All places

Conclusion

Anthropology is systematic comparison, an effort at disciplined observation, and a four-field holism across time and space. The slogan is a charter. Practice must still name power, history, and the observer.

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Q2(b) · 15 marks

Discuss different forms of primate social organisation

Anthropology GS 1 · 2022 · Characteristics of Primates

Revision summary

Primates are not all troop animals.

Orangutans disperse, gibbons pair, gorillas often keep one-male groups.

Macaques and baboons live in ranked multi-male troops.

Chimpanzees use fission-fusion parties, as at Gombe.

Ecology, predation, and kinship explain the spread.

Introduction

Non-human primates live in several stable grouping patterns. Form follows feeding, predation, and kinship, not a single ladder toward the human family.

Body

Main forms

- **Solitary and dispersed:** Orangutans show a female and young in a range, with males overlapping. This is not asocial life; it is a spacing system.
- **Monogamous pairs:** Gibbons and some titi monkeys hold a territory as a pair plus offspring. Pair-living is rare, not the primate default.
- **Polyandry:** Some **Callitrichids** (marmosets and tamarins) show one breeding female and several males who carry infants.
- **One-male groups:** Gorillas and some langurs, as **Sarah Blaffer Hrdy** discussed for infanticide, keep a silverback or resident male with females.
- **Multi-male-multi-female troops:** Baboons and macaques, including Indian **rhesus**, have ranked males and females and wide kinship networks. **Washburn** and **DeVore** made the baboon troop a teaching model.
- **Fission-fusion:** Chimpanzees, described by **Jane Goodall** at Gombe, split into parties that reunite. **Frans de Waal** stressed politics inside that fluidity.

Reading the variation

- **Robin Dunbar** linked group size to neocortex and grooming time. Ecology still decides whether a species can afford a crowd.
- Human bands and families are not copies of the gorilla harem or the gibbon pair. The lesson is flexibility plus kinship.

Flow diagram

Primate groups -> Solitary orangutan
Primate groups -> Pair gibbon
Primate groups -> One-male gorilla
Primate groups -> Multi-male macaque baboon
Primate groups -> Fission fusion chimp

Conclusion

Primate social organisation runs from dispersed orangutans to fission-fusion chimpanzees. Each form is an ecological and kinship solution, not a rung on a human ladder.

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WRAP Exams

Q2(c) · 15 marks

Discuss with suitable examples the typo-technological problems in Indian palaeolithic industry with reference to environmental hypotheses

Anthropology GS 1 · 2022 · Paleolithic

Revision summary

Foot's handaxes opened the Indian palaeolithic.

Soan choppers are often a raw-material or taphonomic problem, not a people.

Hungsi and Attirampakkam show Acheulian on local limestone and quartzite.

Monsoon and stone, not Alpine glaciation, set the environmental frame.

Use reduction sequences before importing European culture names.

Introduction

Indian palaeolithic tools were first sorted by European type-lists. Environment, raw stone, and local reduction sequences often refuse those labels.

Body

The typological problem

- **Robert Bruce Foot** at Pallavaram and Attirampakkam opened the Indian palaeolithic with handaxes. Later workers tried to fit **Oldowan**, **Acheulian**, and **Mousterian** names onto Indian assemblages.
- Many so-called chopper-chopping tools of the Soan, discussed by **de Terra** and **Paterson**, may be cores, river-rolled pieces, or raw-material expedients, not a separate culture.
- **H. D. Sankalia**, **V. N. Misra**, and **K. Paddayya** at **Hungsi-Baichbal** showed that one landscape can yield Acheulian cleavers and simpler flakes from the same limestone.

Environment and technology

- Monsoon rivers, laterite, and Deccan basalt change what can be knapped. Quartzite at **Attirampakkam** holds bifaces; small chert nodules in central India favour flakes.
- Climate hypotheses that equate glacial Europe with Indian 'cold' stages do not travel. Indian Pleistocene is monsoon and arid pulse, as **Attirampakkam** dates now show a long Acheulian.
- Typo-technology should therefore start from reduction sequence and habitat, not from a forced match to St Acheul or Le Moustier.

Flow diagram

Raw stone monsoon -> Reduction sequence
Reduction sequence -> Handaxe flake cleaver
European type list -> Mislabel Soan Mousterian

Conclusion

Indian palaeolithic industries are local answers to stone and monsoon. European type-names are a first sketch. They become a problem when they are treated as migrating tribes.

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WRAP Exams

Q3(a) · 20 marks

Discuss how the rules of descent contradict the principles of residence in matrilineal society, mentioning suitable examples?

Anthropology GS 1 · 2022 · Family

Revision summary

Matriliny assigns membership through women.

Residence may send the husband or the heir to another house.

Richards named this the matrilineal puzzle.

Nayar taravad, Trobriand avunculocality, and Khasi uxorilocality are the teaching cases.

Repairs include mother's-brother authority and visiting marriage, not a simple patriarchy.

Introduction

Matriliny traces group membership through women. Residence often still places husbands, brothers, and children in houses that pull against that rule. The contradiction is structural, not a mistake of the people.

Body

The mismatch

- **Descent** in a matrilineal system makes a child a member of the mother's clan. Property and office may pass to the sister's son, as **Malinowski** recorded for Trobriand chiefs.
- **Residence** after marriage may be avunculocal, duolocal, or even patrilocal. The husband then lives among his own or his wife's people, while the heir belongs to another house.
- **Audrey Richards** called this the matrilineal puzzle: men hold authority in the sister's group but live as husbands elsewhere.

Cases

- **Nayar** of Kerala, in the older **taravad** described by **Kathleen Gough**, had visiting husbands. Children belonged to the mother's house; genitor and pater were split.
- **Khasi** of Meghalaya are matrilineal and often uxorilocal. The youngest daughter keeps the house, yet men still seek political voice outside the hearth, which is why **Nongbri** and others stress gender politics inside matriliney.
- **Minangkabau** of Sumatra and **Ashanti** of Ghana show the same pull between the mother's lineage and the husband's compound.
- **Garos** and some **Nairs** after legal reform moved toward neolocal houses, which further splits descent from everyday residence.

What follows

- Contradiction does not mean chaos. Cross-cousin marriage, mother's-brother authority, and visiting marriage are working repairs.
- **Lévi-Strauss** read alliance as another logic. The ethnographic point remains: matriliney is not patriarchy, and residence can undo what descent writes.

Flow diagram

Matrilineal descent -> Child in mother group

Residence -> Husband in other house

Child in mother group -> Richards matrilineal puzzle

Husband in other house -> Richards matrilineal puzzle

Conclusion

In matrilineal societies, the child belongs to the mother-line while the married man often sleeps in another residential group. Trobriand, Nayar, and Khasi cases show the puzzle and its repairs.

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Q3(b) · 15 marks

Enumerate the evidence of animal domestication in Indian microlithic industry

Anthropology GS 1 · 2022 · Meaning, Scope and development of Anthropology.

Revision summary

Microliths are tools; domestication is a faunal and dung argument.

Bagor shows sheep and goat with a microlithic camp.

Adamgarh and Bhimbetka mix hunt with later stock.

Ganga Mesolithic bone is still largely wild.

Harappan villages complete the domestication story.

Introduction

Indian microlithic sites are mainly Mesolithic. Some of them already show managed animals beside hunt. The evidence is bone, dung, and settlement, not the bladelet alone.

Body

What counts as evidence

- A microlith is a small backed tool. Domestication needs age-sex profiles of fauna, pathology, dung, and a shift from wild size-ranges.
- **Bagor** (Rajasthan), excavated by **V. N. Misra**, yielded sheep and goat with microliths and copper in later levels, a pastoral overlay on a hunting camp.
- **Adamgarh** and **Bhimbetka** shelters mix hunted deer and boar with later herded stock in the sequence.
- **Sarai Nahar Rai**, **Mahadaha**, and **Damdama** in the **Ganga plains** show wild cattle, hog deer, and turtle. Claims of early cattle must stay cautious where bones are wild aurochs-size.
- **Langhnaj** in Gujarat and **Birbhanpur** add microliths with fauna that later Holocene villages clearly herd.

Reading the phase

- **Meadow** and Harappan work show full domestication in the Indus tradition. Microlithic India is a mosaic: foragers, herder-foragers, and contact with village stock.
- Rock art of herding at Bhimbetka supports the bone, but art alone is not a domestication date.

Flow diagram

Microlith sites -> Bagor sheep goat
Microlith sites -> Shelters Adamgarh Bhimbetka
Microlith sites -> Ganga Mesolithic wild heavy

Conclusion

Animal domestication in the Indian microlithic is patchy. Bagor sheep-goat and shelter sequences are the strongest field files. The bladelet industry does not by itself prove a herd.

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Q3(c) · 15 marks

Should we still distinguish between 'classic' and 'progressive' Neanderthals? Discuss the controversy surrounding Neanderthal's position in human evolution

Anthropology GS 1 · 2022 · Neanderthal man

Revision summary

Classic versus progressive was a European-versus-Levant type split.

Boule's La Chapelle cartoon inflated classic robustness.

Many Levant 'progressives' are early moderns plus contact.

Ancient DNA shows mixing, not a clean replacement without genes.

Denisovans break any two-box scheme.

Introduction

Older textbooks split Neanderthals into a robust 'classic' European type and a lighter 'progressive' Near Eastern type. Genetics and new fossils have made that split a poor evolutionary map.

Body

The old distinction

- **Classic** labels, built on **La Chapelle-aux-Saints** after **Boule**, pictured a bent, separate species.
- **Progressive** labels for **Tabun**, **Skhul**, and **Qafzeh** mixed Neanderthal and early modern traits and fed a story of evolution toward *Homo sapiens*.
- **Howell** and others used climate: cold Europe made the classic body; the Levant stayed gracile.

Why the split fails

- La Chapelle was arthritic. **Straus** and later workers unbent the cartoon.
- Levantine 'progressives' are now often early moderns with some Neanderthal contact, not a halfway species.
- **Svante Pääbo's** genomes show Neanderthals as a sister population that mixed with out-of-Africa moderns. Indian and Eurasian people still carry that ancestry.
- **Denisova** and **Jebel Irhoud** add more branches. A two-box classic/progressive scheme cannot hold them.

Position today

- Neanderthals are *Homo neanderthalensis* or a closely related form of *Homo sapiens* in a lumpers' language. The live question is admixture and culture, including **Shanidar** burial and **Châtelperronian** debate, not a racial grade inside Neanderthals.

Flow diagram

Neanderthals -> Classic cartoon Boule

Neanderthals -> So-called progressive Levant

Neanderthals -> Pääbo admixture

Pääbo admixture -> Living Eurasian ancestry

Conclusion

The classic-progressive split was a typological comfort. Neanderthals sit as a sister population that mixed with modern humans. Keep the fossils and the genomes; drop the two-type ladder.

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Q4(a) · 20 marks

Why Heath and Carter used anthropometric measurements instead of photographs of an individual to assess the somatotype? Elaborate their method

Anthropology GS 1 · 2022 · Ageing and senescence. Theories and observations

Revision summary

Sheldon's photoscopic somatotype depended on nude pictures and rater eye.

Heath and Carter used skinfolds, girths, bone breadths, height, and weight.

Three components are calculated, not guessed from a print.

The method fits sports and growth surveys.

It describes present shape, not race or temperament.

Introduction

William Sheldon photographed bodies and scored endomorphy, mesomorphy, and ectomorphy by eye. Heath and Carter replaced the photograph with callipers and a formula so that somatotype could be repeated in the field.

Body

Why not photographs

- Sheldon's atlas needed posed nudes and a trained rater. Bias, privacy, and poor repeatability followed, which **Hooton** and later sports scientists criticised.
- A photo cannot give true girths or skinfolds. Camera distance and posture change the apparent type.
- Anthropology in schools, armies, and villages cannot run a nude photo studio. **Heath and Carter** (1967 onward) needed a method that works with tape, stadiometer, and skinfold calliper.

The Heath-Carter method

- **Ten measurements are standard:** height, weight, four skinfolds, two bone breadths, and two limb girths.
- **Three components are calculated:** endomorphy from skinfolds, mesomorphy from bone and girth corrected for height, ectomorphy from height-weight ratio.
- The result is a three-number somatotype plotted on a somatochart. A wrestler and a distance runner separate without a photograph.
- **Carter** applied it to Olympic athletes. Indian physical anthropologists used it in growth and sports selection studies.

Limit

- Somatotype is a shape index, not a race or a character type. Sheldon's temperament claims are dropped.
- Fat and muscle change with training and diet, so the score is a present body, not a destiny.

Flow diagram

Sheldon photo rating -> Bias privacy

Heath Carter -> Skinfold girth bone height

Skinfold girth bone height -> Somatochart 3 numbers

Conclusion

Heath and Carter left the photograph because it was unethical, unrepeatable, and metrically weak. Their anthropometry turns somatotype into a field measurement of shape, not a moral portrait.

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Q4(b) · 15 marks

Discuss the historical and cultural contexts that led to superseding ethnocentrism with cultural relativism in anthropology

Anthropology GS 1 · 2022 · The Nature of Culture

Revision summary

Ethnocentrism judged others by a home ladder of civilisation.

Tylor-Morgan evolution and colonial display backed that habit.

Boas, Herskovits, Benedict, and Mead made local history the frame.

Post-war anti-racist science sealed the teaching shift.

Relativism is method; it is not silence about violence.

Introduction

Ethnocentrism judges other lives by one's home standard. Cultural relativism, as a method, asks that those lives be understood in their own terms first. The shift is a history of empire, science, and war.

Body

Ethnocentrism in context

- Unilinear evolutionists such as **Tylor** and **Morgan** ranked savagery, barbarism, and civilisation, which fitted colonial offices and mission schools.
- World fairs and racial anthropometry presented other peoples as exhibits. **Gobineau** and later racial science made hierarchy look natural.

The relativist turn

- **Franz Boas**, against **Spencer** and museum evolution, argued that each culture is a historical product. Language, myth, and body must be taken on their own terms.
- **Herskovits** named cultural relativism as a principle. **Ruth Benedict's** *Patterns of Culture* and **Mead's** *Samoa*, whatever the later debate, taught American readers that custom is not one ladder.
- The world wars and the Holocaust made ranking peoples as a scientific programme politically intolerable. UNESCO statements after 1950 used Boasian language against race doctrine.

Limit

- Relativism is a method of understanding, not a ban on judging cruelty. **Boas** still opposed racism. **Geertz** later warned against treating cultures as sealed islands.
- Indian anthropology after **Srinivas** used relativism in the village without denying law or reform.

Flow diagram

Ethnocentrism -> Unilinear rank empire
Boas Herskovits Benedict -> Cultural relativism
World war race science -> Cultural relativism

Conclusion

Ethnocentrism rode with empire and unilinear rank. Boasian fieldwork, anti-racist science, and the shock of racial war put cultural relativism in its place as a working ethic.

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WRAP Exams

Q4(c) · 15 marks

Critically examine various anthropological interpretations about the Kula Ring

Anthropology GS 1 · 2022 · Religion

Revision summary

Malinowski made kula a total social fact of the Massim.

Mauss generalised the gift from kula and potlatch.

Weiner restored women's wealth and rank.

Munn and others added fame and political economy.

The ring is historical, not a frozen primitive market.

Introduction

The kula is the ceremonial exchange of armshells and necklaces among Massim islands. Interpretations have moved from function to meaning, history, and power.

Body

Classic readings

- **Malinowski** in *Argonauts* treated kula as a total social fact: partnership, magic, canoe, and rank, not barter. Reciprocity explained the circling of mwali and soulava.
- **Marcel Mauss** used kula, with Northwest Coast potlatch, to theorise the gift as obligation to give, receive, and return.
- **Reo Fortune** and later **Annette Weiner** stressed women's wealth and the reproduction of rank, which Malinowski had underplayed.

Later critique

- **Nancy Munn** read Gawa kula as fame and spatiotemporal value. **Fred Damon** and **Jerry Leach** mapped regional political economy.
- Formalists tried to see delayed profit. Substantivists kept Polanyi's reciprocity. Both miss that kula names are political.
- Colonial and mission history changed routes. A timeless ring is an ethnographic postcard.

Balance

- Kula is still the best teaching case that exchange can be the constitution of society. It is not a fossil of primitive trade, and it is not only a poem of solidarity.

Flow diagram

Kula -> Malinowski total fact
Kula -> Mauss gift
Kula -> Weiner women wealth
Kula -> History power

Conclusion

Kula has been read as function, gift, female wealth, fame, and regional politics. Malinowski opened the file. Critique added gender, history, and power without deleting the ring.

Open WRAP page — <https://wrapexams.com/upsc/mains-answers/anthropology-gs-1/2022/critically-examine-various-anthropological-interpretations-about-the-kula-ring/>

WRAP Exams

Q5(a) · 10 marks

Balanced and transient genetic polymorphism

Anthropology GS 1 · 2022 · Concept of genetic polymorphism and selection, Mendelian population, Hardy-Weinberg law

Revision summary

Polymorphism is lasting allelic diversity at one locus.

Balanced polymorphism keeps alleles, classically by heterozygote advantage.

Sickle-cell and malaria is the human type case.

Transient polymorphism is a passing stage while one allele replaces another.

Lactase persistence is a human illustration of a sweep still in motion.

Introduction

Polymorphism means two or more alleles at one locus stay at frequencies that mutation alone cannot explain. Balanced and transient name two different fates of that variation.

Body

Balanced polymorphism

- Heterozygote advantage holds both alleles. **A. C. Allison** linked sickle-cell haemoglobin to malaria. AS people resist falciparum; SS is costly; A and S both remain.
- **E. B. Ford** and **R. A. Fisher** framed the idea. **PTC** tasting and some HLA alleles are taught as further human cases, with weaker proof than sickle cell.
- Frequency-dependent selection, as in some immune loci, is another balancing path.

Transient polymorphism

- A new advantageous allele rises and the older one falls. The population is polymorphic only while replacement is unfinished.
- Industrial melanism in **Biston betularia**, used by **Kettlewell**, is the animal textbook. In humans, lactase persistence alleles are still spreading in some dairying populations.

Distinction

- Balanced variation is maintained. Transient variation is a stage on the way to fixation or loss.

Flow diagram

Polymorphism -> Balanced heterozygote
Polymorphism -> Transient sweep
Balanced heterozygote -> Sickle malaria
Transient sweep -> Lactase rise

Conclusion

Sickle-cell malaria is balanced polymorphism. A sweeping advantageous allele is transient polymorphism. Both produce diversity, but only one is an equilibrium.

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Q5(b) · 10 marks

Genetic imprinting in human diseases

Anthropology GS 1 · 2022 · Applications of Anthropology

Revision summary

Imprinting silences one parental copy of a gene.

Haig tied the logic to parental conflict over growth.

Paternal versus maternal loss at 15q yields Prader-Willi or Angelman.

Beckwith-Wiedemann and Silver-Russell are growth-side examples.

Counselling must record which parent transmitted the region.

Introduction

Imprinting is parent-of-origin silencing of a gene. The same deletion can therefore cause two different diseases according to whether the chromosome came from the mother or the father.

Body

The mechanism

- Epigenetic marks, not a change of DNA letters, switch one parental copy off. **David Haig** linked this to parental conflict over foetal growth.
- Chromosome 15q is the teaching human region.

Disease pairs

- **Prader-Willi syndrome** follows loss of the paternal 15q contribution. **Angelman syndrome** follows loss of the maternal UBE3A copy.
- **Beckwith-Wiedemann** and **Silver-Russell** growth disorders involve imprinted loci on 11p.
- Hydatidiform moles and some cancers show imprinting errors. Pedigree counselling must ask which parent transmitted the chromosome.

Anthropological note

- This is non-Mendelian at the phenotype even though the deletion can be mapped. A simple dominant chart fails.

Flow diagram

Imprint -> Father copy on
Imprint -> Mother copy on
Father copy on -> Prader Willi
Mother copy on -> Angelman

Conclusion

Imprinting makes parent of origin a clinical fact. Prader-Willi and Angelman are the pair every counsellor names.

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Q5(c) · 10 marks

Stages of human pre-natal development

Anthropology GS 1 · 2022 · Factors affecting growth and development

Revision summary

Prenatal life is germinal, embryonic, then foetal.

Implantation occupies the first two weeks.

Organ formation in weeks 3-8 is the main teratogen window.

The foetal period is growth and maturation until birth.

Nutrition and infection in each stage leave different adult traces.

Introduction

Human prenatal life is divided by weeks into germinal, embryonic, and foetal stages. Anthropology uses the calendar to read teratogens, nutrition, and birth timing.

Body

The stages

- **Germinal (0-2 weeks):** fertilisation, zygote, morula, blastocyst, implantation. **Hertig** and later embryology mapped this in the uterus.
- **Embryonic (3-8 weeks):** gastrulation, neurulation, and organ primordia. This is the high-risk window for rubella, alcohol, and folate-sensitive neural-tube defects.
- **Foetal (9 weeks to birth):** growth, lung and brain maturation, and fat stores. **Tanner** and auxology treat this as the first growth phase.

Why it matters

- A 40-week obstetric calendar is a cultural as well as a biological fact. Prematurity and intrauterine growth restriction later show in adult stature studies.
- Prenatal stages are not a miniature adult. They are a sequence of sensitive periods.

Flow diagram

Germinal implant -> Embryo organs
Embryo organs -> Foetus growth
Embryo organs -> Teratogen window

Conclusion

Germinal, embryonic, and foetal stages are the working clock of human prenatal life. Risk and growth do not spread evenly across that clock.

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Q5(d) · 10 marks

Shaman, sorcerer and medicine man

Anthropology GS 1 · 2022 · Religion

Revision summary

A shaman uses trance and soul travel, as in Siberian cases Eliade used.

A sorcerer harms by learned rite, as Azande sorcery shows.

Witchcraft in Evans-Pritchard is a different, often inherited, accusation.

A medicine man treats with herbs and ritual skill.

Roles can overlap; the terms should not.

Introduction

These three figures heal, harm, and mediate spirits, but they are not one office. Ethnography keeps the words apart.

Body

Shaman

- **Mircea Eliade** stressed ecstasy and a soul journey. Siberian Tungus cases named the type. **Evans-Pritchard** would have called this a specialist who travels, not only a priest who prays.
- Amazonian and Himalayan specialists, including some **Bhotia** and **Naga** ritualists, fit when trance and retrieval of soul are central.

Sorcerer

- A sorcerer uses techniques, medicines, and spells to injure. **Evans-Pritchard's** Azande distinguished witchcraft as inherited substance from sorcery as learned rite.
- The sorcerer is often accused in feud, as in many Melanesian and African village studies.

Medicine man

- The medicine man or woman, in **North American** and African usage, diagnoses and treats with herbs, sucking, and song. **Rivers** already treated such healing as a social institution.
- One person may hold two roles. The analytic task is to name trance, malice, and therapy separately.

Flow diagram

Spirit specialists -> Shaman journey
Spirit specialists -> Sorcerer technique
Spirit specialists -> Medicine man therapy

Conclusion

The shaman journeys, the sorcerer attacks by art, and the medicine person treats. Azande and Siberian cases keep the triangle clear.

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Q5(e) · 10 marks

Household and domestic group.

Anthropology GS 1 · 2022 · Family

Revision summary

Household names common residence and consumption.

Domestic group names who actually cooks, earns, and cares.

Fortes showed the house as a cycle, not a fixed type.

Goody split production from reproduction.

Indian ghar studies include people the nuclear form leaves out.

Introduction

A household is a unit of common residence and consumption. A domestic group is the set of people who run that everyday economy. They are close, but they are not the same as a family or a lineage.

Body

Distinctions

- **Meyer Fortes** treated the domestic group as a developmental cycle: a house expands and splits as children marry.
- **Jack Goody** separated production, consumption, and reproduction. A joint kitchen may feed people who belong to different lineages.
- **Leela Dube** and Indian village studies showed that a ghar can include servants, widows, and visiting kin whom a census 'family' misses.

Why it matters

- Nayar taravad, Nuer cattle camps, and urban one-room rentals all break the nuclear-family default.
- Policy that counts only the married couple undercounts care and labour.

Flow diagram

Household hearth -> Domestic group labour
Domestic group labour -> Fortes developmental cycle
Family kin terms -> Domestic group labour

Conclusion

Household is residence-plus-hearth. Domestic group is the changing labour unit around that hearth. Family and clan are other maps.

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Q6(a) · 20 marks

Discuss the mechanism of social control in different kinds of political systems

Anthropology GS 1 · 2022 · Political Organization and Social Control

Revision summary

Social control matches political scale.

Foragers use gossip and fission.

Nuer feud and peacemakers show tribal control.

Chiefs add tabu and tribute.

States add law and legitimate force, while custom and caste still operate.

Introduction

Social control is how a public makes people keep rules. The mechanism changes with scale: band, tribe, chiefdom, and state do not use the same mix of shame, feud, and law.

Body

Uncentralised systems

- In bands, gossip, ridicule, and fission work. **Turnbull's** Mbuti and many forager ethnographies show walking away as a sanction.
- Tribal segmentary systems use feud and the leopard-skin peacemaker, as **Evans-Pritchard** showed for the **Nuer**. Age-sets and lineage councils, as among the **Maasai** or Indian **Naga** village morungs, bind youth.
- **Radcliffe-Brown** called this the maintenance of social structure. **Malinowski** stressed reciprocal obligation in the Trobriands more than a court.

Centralised systems

- Chiefdoms add ranked offices and tribute. Hawaiian and African chiefships used ritual tabu and redistribution.
- States add written law, police, and tax. **Weber's** monopoly of legitimate force is the extreme. Customary law may still sit under the code, as in Indian panchayats beside the IPC.

Cross-cutting tools

- Religion, witchcraft accusation, and caste ostracism control without a policeman. **Durkheim's** sanction and **Foucault's** discipline name two later readings of the same field.
- Modern NGOs and social media add new shame, but they do not erase kinship control in the village.

Flow diagram

Band shame fission -> Tribe feud council
 Tribe feud council -> Chiefdom rank tribute
 Chiefdom rank tribute -> State law force
 Witchcraft religion caste -> Tribe feud council
 Witchcraft religion caste -> State law force

Conclusion

Bands control by exit and shame, tribes by feud and council, chiefdoms by rank and rite, states by law and force. Anthropology studies the mix, not a single ladder of progress.

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WRAP Exams

Q6(b) · 15 marks

What is meant by health? Is the burden of life style diseases on the rise? Justify your answer with suitable examples

Anthropology GS 1 · 2022 · Epidemiological Anthropology

Revision summary

WHO health includes mental and social well-being, not only no germs.

Kleinman split disease from lived illness.

Diabetes, hypertension, and heart disease are rising with urban diets and sitting work.

Tribal and Pacific transitions show how fast metabolism follows food change.

Structure, not only willpower, explains the burden.

Introduction

Health is more than the absence of a named infection. WHO called it complete physical, mental, and social well-being. Anthropology adds that well-being is locally defined and unequally distributed.

Body

Meanings of health

- **Rivers** and later medical anthropologists treated sickness as both biology and meaning. **Kleinman** split disease, illness, and sickness.
- A pastoralist may call health the ability to walk with the herd. A factory index may call it blood pressure.

Lifestyle disease burden

- Urban diets, sitting work, tobacco, and alcohol raise **type 2 diabetes, hypertension, IHD**, and some cancers. ICMR and WHO India profiles show this rise beside unfinished infection.
- **Thrifty** hypotheses after **Neel** are debated, but the empirical rise in Indian metros and now in small towns is clear.
- Indigenous groups after ration rice and reduced walk, as in some Pacific and Indian tribal transitions, show rapid metabolic change.
- **The burden is not only personal choice.** Farmer would call it **structural**: oil, sugar, stress, and weak public sport.

Flow diagram

Health -> Body
Health -> Meaning
Health -> Social access
Lifestyle NCDs -> Diabetes IHD

Conclusion

Health is functioning in a social world, not a lab slip alone. Lifestyle diseases are rising in India because environments of food and work have changed faster than bodies and public systems.

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WRAP Exams

Q6(c) · 15 marks

Critically evaluate the reasons of reduction in age at menarche in human females over the successive generations

Anthropology GS 1 · 2022 · Relevance of menarche, menopause and other bioevents to fertility. Fertility patterns and differentials.

Revision summary

Many populations show a secular fall in age at menarche.

Tanner placed it with taller, earlier-maturing children.

Nutrition and fewer childhood infections are the main engines.

Genes cannot explain a century-scale drop.

The trend is uneven by class and has health costs when too early.

Introduction

Age at first menstruation has fallen across many industrial and urbanising populations. The trend is real, but the causes are mixed and the floor is not zero.

Body

The trend

- European historical series, and later Japanese and Indian urban data, show menarche moving from about 16-17 toward 12-13 years over a century.
- **Tanner** treated this as part of the secular trend in growth.

Reasons offered

- Better childhood nutrition and lower infection raise body fat and leptin signals that permit ovulation. This is the strongest bio-cultural case.
- Urban light, less heavy labour, and smaller family size travel with the same trend.
- Endocrine-disrupting chemicals are a hypothesis, not yet the whole story.
- Genetic change across three generations is too slow to explain the shift. Plasticity is the point.

Critique

- Rural and undernourished groups may not show the same fall. **Indian** ICMR and NFHS patterns still vary by wealth and caste.
- **Very early menarche has costs:** anaemia, school exit, and later metabolic risk. A falling mean is not an unqualified gain.
- Reporting error and school samples can exaggerate smoothness.

Flow diagram

Nutrition low infection -> Fat signals
Fat signals -> Earlier menarche
Urban light labour -> Earlier menarche

Conclusion

Falling menarche is mainly a nutrition and infection story of the secular trend. Chemicals and lifestyle may add, but genes do not sprint in a century.

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WRAP Exams

Q7(a) · 20 marks

Discuss the role of evolutionary forces in creating human diversity

Anthropology GS 1 · 2022 · Synthetic theory of evolution

Revision summary

Four genetic forces plus culture make human diversity.

Mutation invents; selection sorts; drift rumples small groups; flow mixes.

Malaria and dairying are gene-culture cases.

Indian data show both isolate drift and long-range mixture.

Races as types fail; clines and histories hold.

Introduction

Human diversity is patterned difference in genes, bodies, and, by extension, the cultural niches that change survival. Four forces of population genetics, plus culture, make that pattern.

Body

The four forces

- **Mutation** supplies new alleles. Most are neutral or harmful; a few, like lactase persistence or sickle-cell, matter.
- **Selection** retains what fits a niche. Malaria shapes haemoglobin. Ultraviolet light and diet shape pigmentation and stature clines, which **Livingstone** and later geneticists refused to treat as races.
- **Drift** is strong in small founder groups. Island and tribal isolates, including some Andaman and Himalayan populations, show this.
- **Gene flow** mixes. Indian caste and tribal history is a story of flow as much as of barrier, which **Sanghvi** and later autosomal studies mapped.

Culture as a force

- **Durham** and gene-culture coevolution: dairying selects lactase; yam farming and malaria select sickle cell in West Africa.
- Migration, marriage rules, and cousin preference change effective population size and inbreeding.

What diversity is not

- Typological races are not evolutionary units. Clines and clusters from history are.
- Language and caste are social. They can still structure mating and therefore genes.

Flow diagram

Mutation -> Diversity
Selection -> Diversity
Drift -> Diversity
Gene flow -> Diversity
Culture marriage -> Selection
Culture marriage -> Gene flow

Conclusion

Mutation, selection, drift, and flow, working through culture and marriage, create human diversity. The product is clines and local histories, not a few fixed types.

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Q7(b) · 15 marks

Write the historical development of field work tradition in anthropology till recent times

Anthropology GS 1 · 2022 · Fieldwork tradition in anthropology

Revision summary

Torres Strait and Boas ended armchair evolution as the only method.

Malinowski made long residence the classic.

African and Indian village studies expanded the map.

Reflexivity and multi-sited work named power and movement.

Digital and urban fields still owe the ethic of presence.

Introduction

Fieldwork became anthropology's mark of honour. The path runs from travellers and missionaries to year-long residence, teams, multi-sited work, and digital fields.

Body

Beginnings

- **Rivers** on the Torres Strait expedition (1898) and genealogical method made intensive field science possible.
- **Boas** on the Northwest Coast demanded language and texts. Armchair **Tylor** was left behind.

The classic year

- **Malinowski** in the Trobriands set tent, vernacular, and the native's point of view. **Radcliffe-Brown** in the Andamans added structural questions.
- **Mead, Benedict, and Evans-Pritchard** (Nuer, Azande) normalised long stays. Indian village work by **Srinivas, Dube, and Marriott** brought the method home.

Critique and after

- Reflexivity after the 1980s, **Clifford** and **Marcus**, showed the ethnographer in the text. Colonial archives were reread.
- Applied, medical, and development fieldwork used PRA beside the notebook.
- Recent work is multi-sited (**Marcus**), urban, laboratory, and online. The ethic of consent and the long stay remain the core, even when the 'village' is a chat group.

Flow diagram

Expedition Rivers Boas -> Malinowski year
Malinowski year -> Village Srinivas
Village Srinivas -> Reflexive multi-sited

Conclusion

Fieldwork grew from expedition lists to Malinowskian residence, then to reflexive and multi-sited practice. The tradition is still presence plus method, not a postcard.

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WRAP Exams

Q7(c) · 15 marks

Discuss the approaches of Leslie White, Julian Steward and Marshall Sahlins in the light of cultural evolution

Anthropology GS 1 · 2022 · Neo-evolutionism (Childe, White, Steward, Sahlins and Service)

Revision summary

White tied cultural evolution to energy capture.

Steward replaced one ladder with multilinear ecology.

Sahlins used Service's types, then the affluent forager and a turn to meaning.

None simply revived Morgan's three stages.

The debate is how far energy and habitat explain culture.

Introduction

After Boas blocked unilinear ladders, White, Steward, and Sahlins rebuilt evolution in different keys: energy, ecology, and then a critique of the West's own story.

Body

Leslie White

- Culture evolves as the amount of energy harnessed per capita. Tools and thermodynamics, not ideas alone, move stages.
- The scheme is neo-evolutionist and general. It underplays local history, which Boasians had prized.

Julian Steward

- **Multilinear evolution** and cultural ecology: similar environments can yield similar adaptations, as in irrigation states.
- The **patrilineal band** and **Great Basin** Shoshone work showed culture as a working relation with habitat, not a single ladder.

Marshall Sahlins

- Early **Sahlins** with **Elman Service** still used bands, tribes, chiefdoms, states. Stone Age Economics then stressed the original affluent society of foragers.
- Later Sahlins turned against crude materialism and, in Culture and Practical Reason, against treating economy as nature. Evolution became a question about meaning as well as surplus.

Together

- White gives a global energy metric. Steward gives local pathways. Sahlins first classifies, then warns that evolution stories are themselves cultural.

Flow diagram

White energy -> General evolution

Steward ecology -> Multilinear

Sahlins -> Types then critique

Conclusion

White measured energy, Steward mapped many paths, Sahlins first used neo-evolutionary types and then criticised the reduction of culture to calories. Cultural evolution after Boas is plural.

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WRAP Exams

Q8(a) · 20 marks

Discuss the contemporary population problems in the light of various socio-cultural demographic theories

Anthropology GS 1 · 2022 · Age, sex and population variation as genetic marker

Revision summary

Malthus and transition still frame public talk.

Caldwell links fertility fall to reversed wealth flows and schooling.

Boserup sees people as a force for agrarian intensification.

Son preference and sex ratio are socio-cultural, as Sen showed.

Ageing, migration, and slums are today's problems, not a single explosion.

Introduction

Contemporary population problems are not only too many births. They include ageing, migration, sex ratio, and urban crowding. Theories that ignore culture will misread all four.

Body

Older theories

- **Malthus** feared geometric mouths against arithmetic food. India's public debate still hears him, though Green Revolution and PDS changed the food term.
- **Marx** treated surplus people as a product of capitalist labour demand, not of nature.
- **Demographic transition** (Notestein and others) expected death rates to fall first, then births, after industrialisation.

Socio-cultural readings

- **Dumont** and Indian family studies linked fertility to joint household and son preference, not only to income.
- **Caldwell's** wealth-flow theory: births fall when children cost more than they return, a school-and-dowry story as much as a factory story.
- **Boserup** reversed Malthus: population can drive intensification. Indian irrigation and labour-intensive rice fit better than a famine script.
- **Sex-ratio problems, as in Amartya Sen's missing women, are cultural-technical:** ultrasound plus patriliney, not a Malthusian leftover.
- Ageing in Kerala and Europe is the late transition. Youth bulges and slum density are the middle.

Now

- Climate and displacement add a new Malthusian tone, but the mechanism is inequality of carbon and housing, which **Davis** on slums would stress.

Flow diagram

Malthus -> Scarcity anxiety

Transition -> Low death then low birth

Caldwell -> Wealth flow

Boserup -> Intensification

Sen -> Sex ratio

Conclusion

Read population through transition, wealth flows, Boserup, and gender. Malthus names anxiety. Culture and class name the actual Indian problems of sons, cities, and care of the old.

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Q8(b) · 15 marks

What do you understand by blood group systems? How is HLA system different from those based on red cell antigens?

Anthropology GS 1 · 2022 · Age, sex and population variation as genetic marker

Revision summary

A blood group system is a locus of cell-surface antigens.

ABO and Rh are red-cell systems for transfusion.

HLA is the MHC on leukocytes, used in graft matching.

HLA polymorphism dwarfs ABO.

Anthropology used both as population markers, not as races.

Introduction

A blood group system is a set of antigens on blood cells, inherited at one genetic locus or cluster, that can raise antibodies. ABO and Rh are red-cell systems. HLA is a white-cell system of a different biological job.

Body

Red-cell systems

- **Landsteiner** found ABO. Rh, MN, Duffy, and others followed. They sit on erythrocytes and matter in transfusion and haemolytic disease of the newborn.
- Anthropology used ABO maps, after **Hirszfeld** and **Boyd**, as population markers. They are poor race types.

HLA

- Human Leukocyte Antigen genes sit in the MHC on chromosome 6. They present peptides to T cells. Matching them matters in **graft** survival, not in ordinary packed-red-cell transfusion.
- HLA is vastly more polymorphic than ABO. That diversity is immune history, including pathogen pressure.
- Disease associations (ankylosing spondylitis and HLA-B27) have no ABO parallel in strength.

Contrast

- Red-cell groups are mostly carbohydrate or protein badges on the erythrocyte. HLA is an immune recognition system on leukocytes and tissues.
- Both are genetic polymorphisms. Only HLA is the transplant barcode.

Flow diagram

Blood groups -> Red cell ABO Rh

Blood groups -> MHC white cell

Red cell ABO Rh -> Transfusion

MHC white cell -> Transplant immunity

Conclusion

Blood group systems are inherited antigen families. Red-cell systems guide transfusion. HLA guides immunity and transplantation and is not a red-cell blood group in the Landsteiner sense.

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WRAP Exams

Q8(c) · 15 marks

Discuss how anthropological knowledge of the human body may be used in designing equipments and articles of human use

Anthropology GS 1 · 2022 · Applications of Anthropology

Revision summary

Ergonomics applies anthropometry to tools and spaces.

Percentiles of size, not an average man, should drive design.

Heath-Carter shape and climate physiology add further constraints.

Indian defence and school furniture are live cases.

Exclude women and the small at your ethical peril.

Introduction

Ergonomics is applied biological anthropology. Body size, sit, reach, and climate decide whether a tool fits or injures.

Body

What the body file gives

- Anthropometry supplies percentiles of stature, sitting height, hand length, and hip breadth. **Hooton** and wartime aviation studies already fitted cockpits to men. Today the sample must include women and older workers.
- Somatotype and fat-muscle distribution, after **Heath and Carter**, help sports kit and load carriage.
- **Physiological anthropology adds heat, cold, and altitude:** clothing, tents, and oxygen for Himalayan troops.

Cases

- **Defence:** rifle stock, helmet, and parachute harness fail if they are cut to a US male mean. DRDO and Indian army surveys exist for this reason.
- **Civil:** bus seats, kitchen platforms, and school desks in India often ignore local child growth data from **ICMR**.
- **Medical devices:** prosthetic sockets need stump anthropometry. Forensic and design labs share methods.

Ethic

- Design for the 5th to 95th percentile, and for left-handers. A 'universal' European dummy is a political choice.

Flow diagram

Anthropometry -> Design percentiles
Heat cold altitude -> Design percentiles
Design percentiles -> Kit vehicle desk

Conclusion

Know the living body, then cut the tool. Anthropology's measurements, climate physiology, and variation are the brief for equipment that does not maim.

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WRAP Exams

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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