

TEST CODE 7 3 1 0 5

FIAS | ANT 2024 | Batch 1 | Sectional Test #5

Time Allowed: 90 Minutes
समय: 90 मिनट

ForumIAS

Maximum Marks : 100
अधिकतम अंक : 100

Anthropology/ एंथ्रोपोलॉजी (नृविज्ञान)

Name Of Candidate परीक्षार्थी का नाम	ANANYA RANA		
Roll No./अनुक्रमांक	1910113870	Medium/माध्यम	English <input checked="" type="checkbox"/> हिंदी <input type="checkbox"/>
Center Code/परीक्षा केंद्र		Date/दिनांक	SEP 28, 2023

*Center Code : For Online - 1900 / Delhi : Karol bagh - 1901, ORN - 1902, Mukharji Nagar - 1903/ Patna : Boring Rd. - 2001 / Hyderabad : Jawahar Nagar - 2101

INDEX TABLE / अनुक्रमणिका			INSTRUCTION / अनुदेश	
Q. No. प्र.सं.	Max. Marks अधिकतम अंक	Marks Obtained प्राप्तांक	<p>1. Do furnish the appropriate details in the answer sheet (viz. Name, Roll No, Date). उत्तर पत्रक में उपयुक्त विवरण प्रस्तुत करें (अर्थात नाम, अनुक्रमांक, तिथि)।</p> <p>2. There are Seven questions in the question paper. All Questions are Compulsory. प्रश्न पत्र में सात प्रश्न हैं। सभी प्रश्न अनिवार्य हैं।</p> <p>3. The number of marks carried by a question/part is indicated against it. किसी प्रश्न/भाग द्वारा किए गए अंको की संख्या उसके सामने दर्शाई गई है।</p> <p>4. Answers must be written in the medium authorized in the admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. उत्तर प्रवेश प्रमाण पत्र में अधिकृत माध्यम में लिखे जाने चाहिए, जो इस प्रश्न-सह उत्तर (QCA) पुस्तिका के कवर पर दिए गए स्थान में स्पष्ट रूप से बताए जाने चाहिए।</p> <p>5. Word limit in questions, if specified, should be adhered to. प्रश्नों में शब्द सीमा, यदि निर्दिष्ट हो, का पालन किया जाना चाहिए।</p> <p>6. Content is more important than content length. विषय-सामग्री लंबाई की तुलना में विषय-सामग्री अधिक महत्वपूर्ण है।</p> <p>7. Any page or portion of the page left blank in the Question-Cum Answer Booklet must be clearly Struck off. प्रश्न-सह-उत्तर पुस्तिका में खाली छोड़ा गया कोई भी पृष्ठ या पृष्ठ का भाग स्पष्ट रूप से काट दिया जाना चाहिए।</p>	
Total/कुल अंक	100		For Student Only / केवल परीक्षार्थी प्रयोग हेतु	
Examiner's Discretion/मूल्यांकन कर्ता का विवेक :			Start Time/प्रारंभ करने का समय :	End Time/समाप्त करने का समय :
			2:00 pm	3:30 pm
Total Marks/कुल अंक :			Mode Of Examination/ परीक्षा की विधि :	Online/ऑनलाइन <input checked="" type="checkbox"/> Offline/ऑफलाइन <input type="checkbox"/>
*Examiner's Discretion is the marks awarded at the discretion of the examiner based on your overall impression, on the basis of (but not limited to) your handwriting, presentation, use of diagrams, flowcharts, facts and figures or absolutely anything that he/she liked in your copy. मूल्यांकन कर्ता का विवेक अंक, आपकी लिखावट, प्रस्तुति, आरेखों के उपयोग, फ्लोचार्ट, तथ्यों और आंकड़ों या समग्र रूप किसी अन्य विषय वस्तु, जो मूल्यांकन कर्ता को आपकी कॉपी में पसंद आती के आधार पर (लेकिन इन्हीं तक सीमित नहीं) पर दिए गए अंक हैं।			For Office Use Only / केवल कार्यालय प्रयोग हेतु	
			ECN CODE/ ईसीएन कोड :	Evaluation Date/ मूल्यांकन तिथि :
			① ② ③ ④ ⑤	

Note: Students are expected to incorporate suggestions from the solution provided in the answers. Discussion classes for the tests are also available online in your portal to aid in your preparation. Further, students are requested to see the good copies of the tests and learn from them. You can also discuss your copy with a Mentor and discover ways and means to improve your answers, or if you have any issues with this test / copy. Asks specific questions, to get specific answers.

EXAMINER'S REMARKS

CRITERIA FOR THE FEEDBACK SECTION AT THE END OF EACH QUESTION

1. **AWIS = Answered What is Asked.** This means whether you have addressed the core demand of the question or not. Addressing the core demand of the question gets you an objectively fair score. It is examiner's perception if you have understood the question and if you know the answer in the first place. Creative answer writing, sometimes missing the core demand, may fetch very high or very low scores, and exposes your answer to the subjectivity of the examiner.
2. **CD & VA = Content Density & Value Addition.** Examiner will evaluate the quality and quantity of your content in the answer. In the same word limit and space limit have you (a) written what is asked (b) gone beyond what is asked (c) enriched answers through combination of (but not all!) suggestions, ideas, quotes, flow charts, diagrams, facts and figures, data etc. This affects objective components of assessment.
3. **S & F = Structure & Flow =** Whether you have structured your answer properly or not. Whether the answer has been broken into parts and sub-parts and each part has been addressed appropriately or not. Whether the flow of the answer is maintained. Affects both subjective and objective components of assessment.
4. **P & R =** How your answer performs on the criteria of **presentation, ease of read, clarity and apparent effort** in writing the answer. This affects the subjective components of assessment.

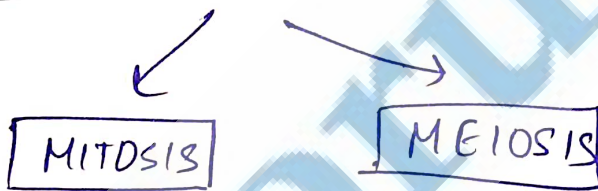
Ques- Short note: Cell cycle.

Ans- INTRO:

Cell cycle refers to a series of events that take place in a cell as it grows and divides.

It can replicate chromosomes and prepares for cell division.

CELL DIVISION:



MITOSIS

* Single cell divides into 2 genetically identical daughter cells.

* Creates somatic cells only.

MEIOSIS

* Single cell divides into 4 genetically different daughter cells.

* Creates germ cells only.

MITOSIS

- * occurs in all cells except viruses
- * Major purpose is growth & removal of worn out cells

MEIOSIS

- * occurs in plants, animals and fungi
- * Major purpose is for reproduction.

Protein synthesis → It is a biological process by which individual cells build their specific proteins.

TYPES:

Transcription

Takes place only in cell nucleus

Translation

Takes place in the cytoplasm

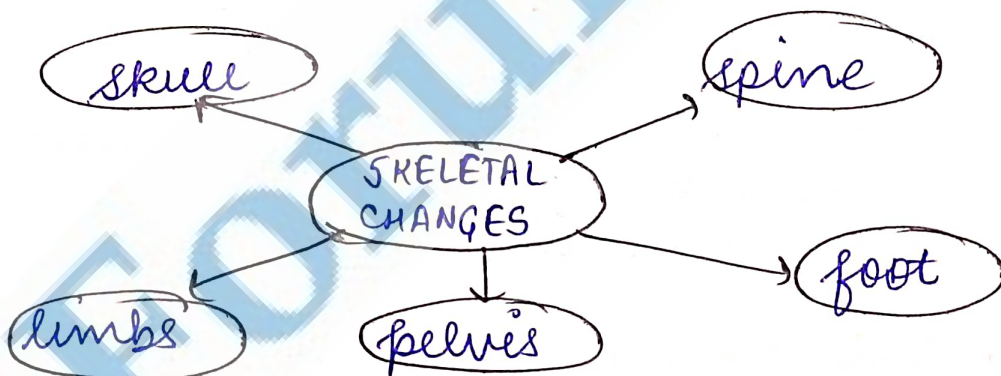
Ques- short note: skeletal changes in humans due to erect posture.

Ans- INTRO:

Erect posture and bipedal locomotion was a development in human evolution which took place about 6 million years ago.

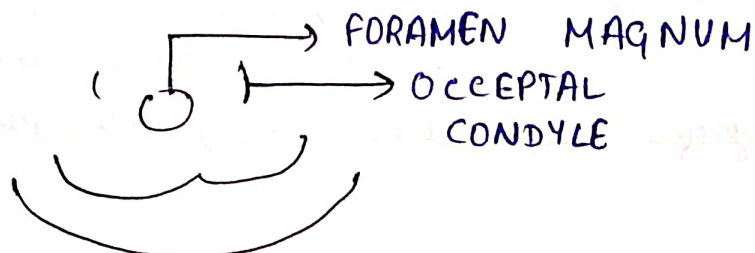
SKELETAL CHANGES:

The skeletal changes occurred in:



1. Skull:

The need of less robust neck muscles to hold the head upright.



2. Spine → Spine has 2 distinctive curves



They help the body as center of gravity comes directly above feet.

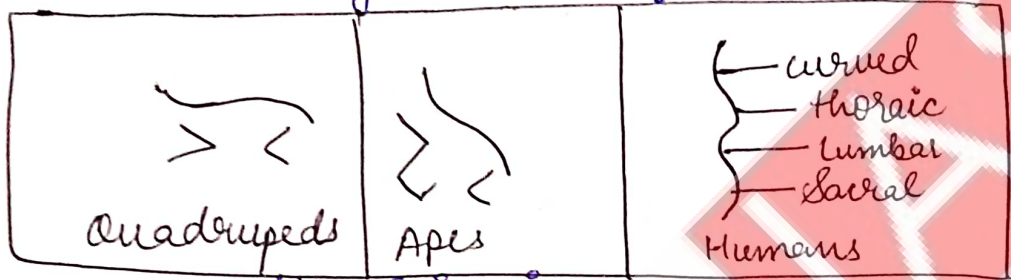


Fig.: Spine in

3. Pelvis → Pelvis supports the internal organs



Fig: Pelvis in Primates

4. Limbs → Legs are longer in comparison to body and arms

5. Foot → Humans have plantigrade foot with double-arch. (stability & weight bearing ability.)

CONCLUSION: Positive implications (such as efficient walking, greater heat dissipatⁿ, freeing of hands for tool making) outweigh negative implications (difficult & painful birth process)

Ques3- Short note: Dollo's Rule & Cope's rule in evolutionary biology.

Ans3- INTRO:

The synthetic theory of evolution describes the evolution in terms of genetic variations in a population that leads to the formation of a new species.

DOLLO'S RULE:

This rule was put forward by Louis Dollo and its principle is:

* PRINCIPLE: Evolution is irreversible

* It states that major steps in evolution are a result of many smaller steps which are preserved by

natural selection.

* According to it, sequence occurring by chance if reversed is most extraordinary thing.

Hence, it is most improbable for all of the organisms.

* Ancestral habits have been followed by advanced beings but that doesn't imply evolution is reversible.

eg: Reptiles and mammals reverted to aquatic mode.

COPE'S RULE: Acc. to this rule, during organic evolution, organisms tend to increase their size. eg:

vertebrates, invertebrates, plants

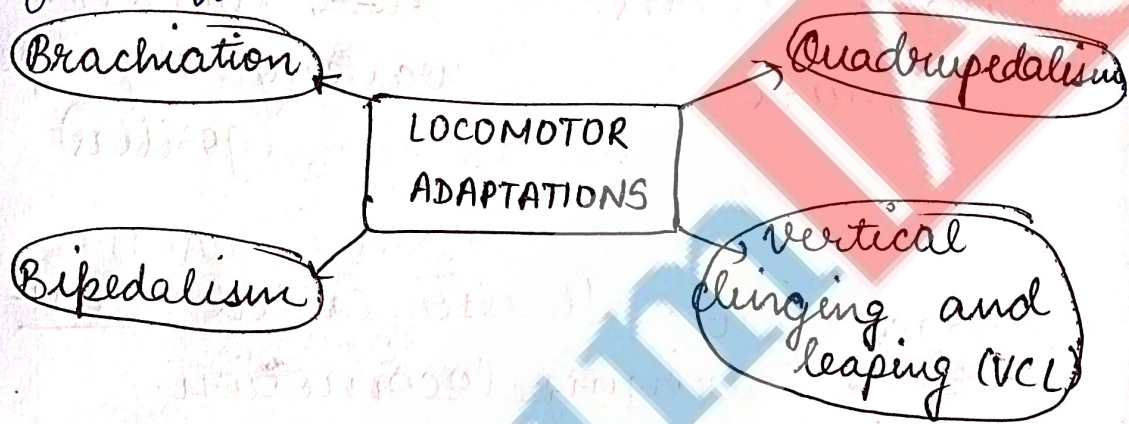
* Hooyer pointed progressive decrease in size of many vertebrate.

* Lamarck put forward the fact that organisms have a tendency to increase size.

Ques- Short note: Primate adaptations.

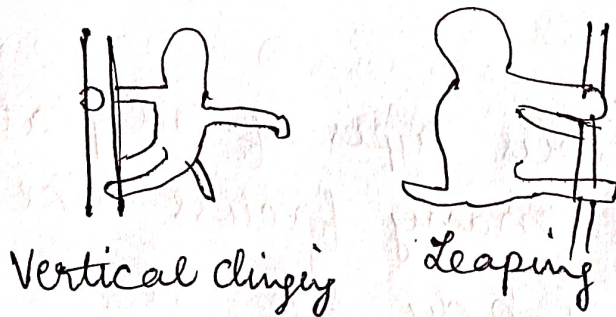
Ans- INTRO:

There are various types of locomotor adaptations in primates which mean anatomical changes in an animal's body for efficient movement.

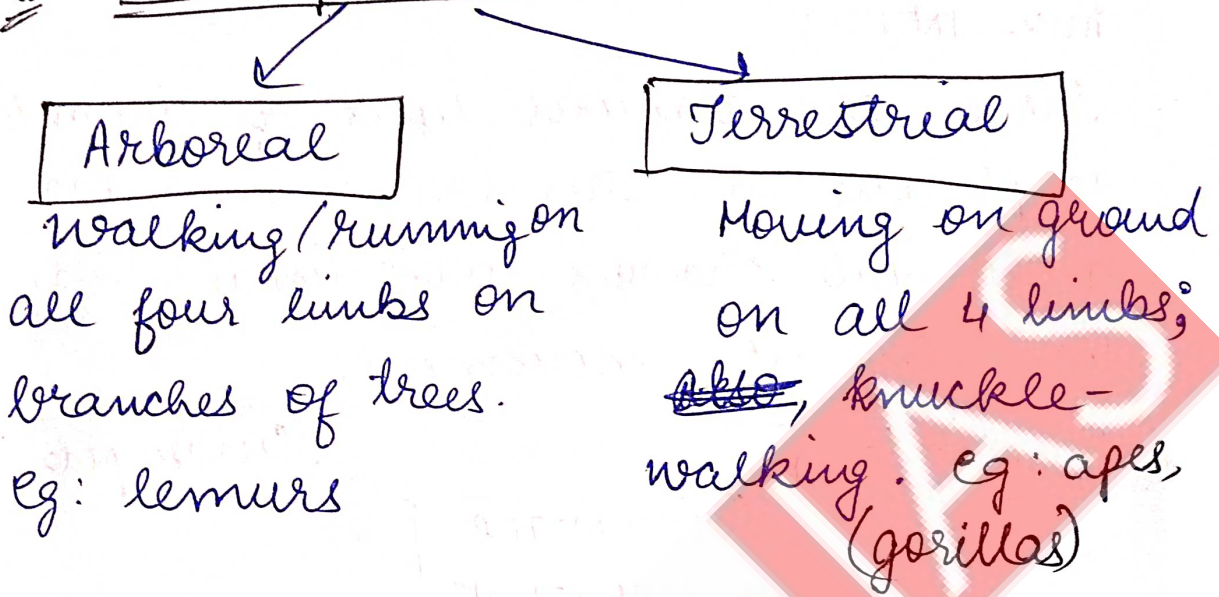


1. VCL: It is present among tarsiers and lemurs.

At rest, the body is vertical and pressed against tree. The rapid extension of handlimbs causes movement.

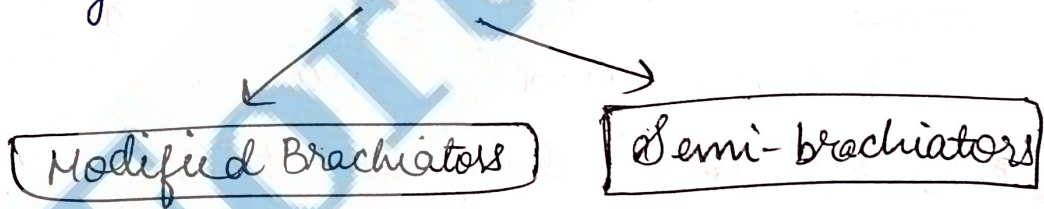


2. Quadrupedalism



3. Brachiation → It also called arm-swinging locomotion.

eg: gibbon



4. Bipedalism → walking and running on hindlimbs

eg: humans

CONCLUSION:

These various types of adaptations are a result of many factors like environment, body size etc.

Ques- Pre-Darwinian theories of evolution and drawbacks.

Ans- INTRO:

Pre-Darwinian theory of evolution (also called Lamarck's theory) states that to perfectly adapt to environment, evolution occurs in living beings.

CONCEPTS OF LAMARCK'S THEORY

1. Every organism has a tendency to continually increase their size.
2. Due to action of internal life forces, growth is there.
3. Principle of inheritance → It states that all changes happened in an individual's lifetime (by chance, by accident, heredity)

are passed on to next generation.

4. New organs' growth or changes is based on requirement.
5. Use of organ leads to its growth otherwise its degeneration.

This theory given by J.B. Lamarck (in the book "Philosophie Zoologique") had both its pros and cons.

CRITICISM:

The following are the criticisms of this theory.



Example: As a result of stretching of giraffe's neck which feeds on leaves of trees, giraffe's front limbs and neck gradually grew longer.

CONCLUSION:

Even though Lamarck gave this

theory in dark age of science, when
there was more influence of

Church, still it is appreciated
as it is ~~is~~ useful in research



Ques - What are primates? Discuss primate taxonomy and brief description of living major primates.

Ans -

PRIMATES & CHARACTERISTICS

Primates are defined as unguiculate, clavicate, placental mammals with:

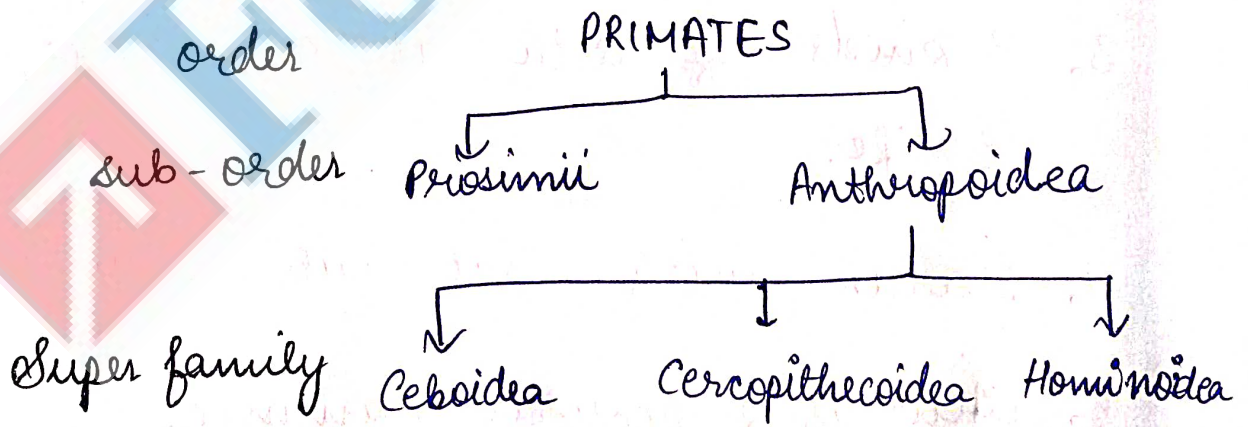
1. Brain with posterior lobe and calcarine fissure.
2. Orbits encircled by bone.
3. 3 kinds of teeth at one stage of life.
4. Hallux with flat nail or none.
5. Always 2 pectoral mammae.
6. Well developed caecum.

- 7. Testes scrotal
- 8. Penis pendulus

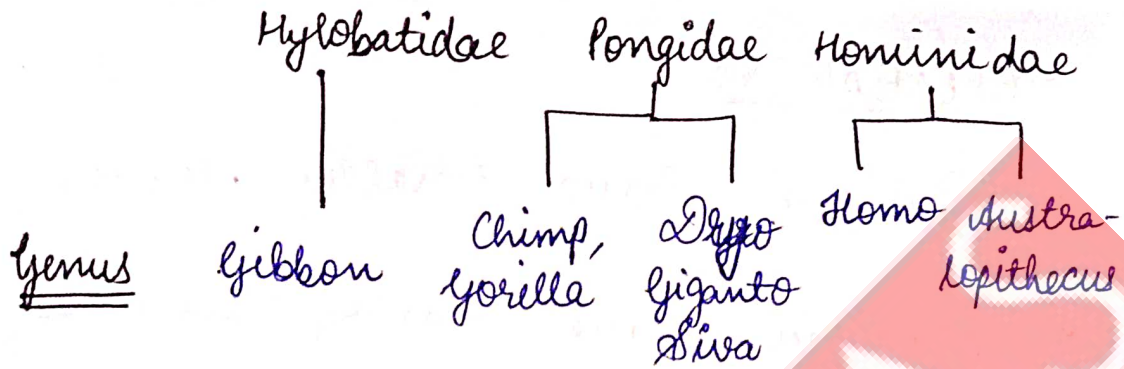
Some of the specialised characteristics are more evolved in humans & thus humans are anthropoids.

PRIMATE TAXONOMY: Science of classification

Primates are one of the 16 orders of class Mammalia:



Family Hylobatidae; Pongidae; Hominidae



The order Primate is further divided into:



SIMILARITIES:

- * 3 kinds of teeth - incisors, canines, molars
- * Well-developed clavicles.
- * Pendulous penis and testes in sac.
- * Prehensile limbs.
- * Calcaneine fissure

DIFFERENCES:

1. Prosimii have smaller brain.
2. Prosimii have lesser cranial capacity.
3. They are relatively backward placed foramen magnum.
4. They have lesser bipedalism.

Que 7 - Broad features of australopithecines.

Ans 7 - INTRO:

Australopithecus is a genus of family Hominidae. It belongs to the order Primates

FEATURES OF AUSTRALOPITHECINES:

According to Mivart, primates are defined as unguiculate, clavicate, placental mammals.

* Physical features

1. Cranial capacity \rightarrow 375-775cc
(brain more developed than apes).

2. Post Cranial anatomy \rightarrow

Appearance of mastoid process and linea aspera are direct evidences of bipedalism.

3. As per Lovejoy, in earlier stages, they had shuffling gait.



Hunting

Marriage

1. Hunting → In Olduvai Gorge, many small bones of animals (chopper-chopping) have been found.

2. Marriage → It was started in primitive form in australopithecines.