

Global Perspectives in Genetics

Genetics · Practice Test · 15 Questions

1. Which specific haplogroup is considered the most common paternal lineage among indigenous populations of the Americas?

- A) Haplogroup Q
- B) Haplogroup R1b
- C) Haplogroup J2
- D) Haplogroup E1b1b

2. The 'Out of Africa' theory of human migration is supported by the highest level of genetic diversity being found in populations from which region?

- A) East Asia
- B) Sub-Saharan Africa
- C) Northern Europe
- D) The Andean Highlands

3. Genetic studies of the Malagasy people of Madagascar reveal a unique admixture between which two distinct geographical populations?

- A) Australian Aboriginal and Polynesian
- B) Austronesian and Bantu
- C) Scandinavian and Inuit
- D) Han Chinese and Berber

4. The CCR5-delta 32 mutation, which provides resistance to HIV, reaches its highest frequency in populations from which geographical area?

- A) Central Africa
- B) Northern Europe
- C) Southeast Asia
- D) The Amazon Basin

5. Genetic evidence confirms that the ancestors of modern Polynesians originated from which specific region via the 'Lapita' migration?

- A) South America
- B) Taiwan
- C) Madagascar
- D) The Arabian Peninsula

6. Which population group is known for the highest prevalence of the lactase persistence allele, a trait that evolved in response to a dairy-based diet?

- A) Indigenous Australians
- B) Northern Europeans
- C) Amazonian tribes
- D) Papuan Highlanders

7. The genetic profile of the modern Icelandic population shows a significant admixture of which two ancestral groups?

- A) Celtic and Norse
- B) Slavic and Turkic
- C) Sami and Basque
- D) Han and Mongol

8. Studies of the 'Bajau' people, known as the 'Sea Nomads' of Southeast Asia, show genetic adaptations related to which physiological trait?

- A) High-altitude oxygen efficiency
- B) Increased spleen size for diving
- C) Digestive enzyme optimization for raw fish
- D) UV radiation resistance

9. The 'Sickle Cell Trait' (HbS) exhibits a high geographical correlation with historical patterns of which disease?

- A) Bubonic Plague
- B) Malaria
- C) Tuberculosis
- D) Smallpox

10. Ancient DNA analysis of the 'Kennewick Man' skeleton suggests the closest modern genetic affinity to which indigenous population?

- A) Inuit
- B) Colville people of Washington State
- C) Ainu of Japan
- D) Navajo

11. The high frequency of the 'Thrifty Gene' hypothesis is most commonly studied in the context of the genetic susceptibility to Type 2 diabetes in which Pacific island nation?

- A) Nauru
- B) Fiji
- C) Vanuatu
- D) Samoa

12. Genetic analysis of the Basque people of Spain and France reveals that they have the highest frequency of which blood type in Europe?

- A) A+
- B) O-
- C) B-
- D) AB+

13. The 'Denisovan' hominin genome was first sequenced from a fossil found in which geographical region?

- A) Altai Mountains of Siberia
- B) Rift Valley of Kenya
- C) Java, Indonesia
- D) Patagonia, Argentina

14. Which group of people maintains a high frequency of the 'J2' haplogroup, tracing their ancestry to the ancient Mesopotamia region?

- A) The Saami
- B) The Kurds
- C) The Quechua
- D) The Maori

15. Genetic studies on the Sherpa people of the Himalayas have identified the EPAS1 gene, which is associated with adaptation to which condition?

- A) Extreme cold
- B) High-altitude hypoxia
- C) High UV exposure
- D) Low-iodine diet