

Physical Geography and Human Physiology

Physical Geography · Practice Test · 25 Questions

1. Which physiological adaptation is most commonly observed in human populations living permanently at high altitudes?

- A) Increased lung capacity
- B) Increased red blood cell count
- C) Decreased heart rate
- D) Slower metabolic rate

2. What is the primary cause of 'altitude sickness' (acute mountain sickness) during rapid ascent to high elevations?

- A) Increased oxygen partial pressure
- B) Hypoxia due to lower atmospheric pressure
- C) Excessive UV radiation
- D) Dehydration from dry air

3. Which geographical feature is historically most associated with the transmission of malaria due to stagnant water breeding grounds?

- A) High plateaus
- B) Tropical wetlands
- C) Arid deserts
- D) Tundra regions

4. What condition is most likely to affect individuals living in regions with high soil selenium deficiency?

- A) Goiter
- B) Keshan disease
- C) Scurvy
- D) Rickets

5. Exposure to high levels of ultraviolet (UV) radiation in equatorial regions has historically driven the evolution of which human trait?

- A) Thinner skin
- B) Increased skin melanin pigmentation
- C) Decreased bone density
- D) Higher blood pressure

6. Which geographical factor is a primary determinant of Vitamin D synthesis in the human skin?

- A) Altitude of the terrain
- B) Angle of incident sunlight (latitude)
- C) Soil mineral content
- D) Humidity levels

7. What is the primary health risk associated with residing in regions with high natural levels of arsenic in groundwater?

- A) Skin lesions and cancer
- B) Vitamin A deficiency
- C) Respiratory distress
- D) Osteoporosis

8. Cold-climate populations have historically developed higher basal metabolic rates as an adaptation to what geographical pressure?

- A) Excessive physical labor
- B) Constant thermal stress
- C) High oxygen levels
- D) Lack of sunlight

9. The 'Goiter Belt' is a geographical term referring to areas where the soil lacks which essential micronutrient?

- A) Iron
- B) Iodine
- C) Magnesium
- D) Zinc

10. Which geographical factor most directly influences the prevalence of tick-borne diseases like Lyme disease in temperate zones?

- A) Ocean current temperature
- B) Forest cover and humidity
- C) Soil pH levels
- D) Volcanic activity

11. Living at extreme latitudes with prolonged seasonal darkness is most commonly linked to which health condition?

- A) Seasonal Affective Disorder (SAD)
- B) Type 2 Diabetes
- C) Hyperthyroidism
- D) Anemia

12. Which mineral is commonly found in the drinking water of limestone-rich geographical regions, affecting bone and dental health?

- A) Fluoride
- B) Potassium
- C) Sodium
- D) Nitrogen

13. The 'San Francisco Fog' or urban heat islands are geographical phenomena that can exacerbate which health condition?

- A) Asthma
- B) Color blindness
- C) Scurvy
- D) Gout

14. In desert geography, the physiological process of 'acclimatization' to heat primarily involves what?

- A) Increasing sweat rate and volume
- B) Decreasing heart rate
- C) Slowing down respiratory rate
- D) Increasing body fat

15. Which geographical factor contributes to the prevalence of iodine deficiency in inland mountainous regions?

- A) Glacial leaching of minerals
- B) High atmospheric pressure
- C) High volcanic ash content
- D) Absence of wind

16. Coastal regions often have lower incidences of which deficiency due to the dietary intake of marine life?

- A) Iodine
- B) Vitamin C
- C) Iron
- D) Calcium

17. What geographical condition typically leads to the highest rates of heat-related illnesses in urban populations?

- A) Urban heat island effect
- B) High altitude
- C) High soil salinity
- D) Low humidity

18. Which physiological system is most immediately impacted by exposure to extreme geothermal sulfur emissions?

- A) Respiratory system
- B) Digestive system
- C) Skeletal system
- D) Integumentary system

19. Populations living in regions with heavy metals in the soil from mining are at risk for what physiological accumulation?

- A) Lead poisoning
- B) Vitamin K toxicity
- C) Enhanced iron absorption
- D) Increased bone density

20. What is the primary reason that human populations in the Arctic historically consumed high-fat diets?

- A) Caloric density for thermal regulation
- B) Availability of fruits
- C) Cultural preference only
- D) High levels of local vegetation

21. Which geographical factor is a major influence on the transmission of water-borne pathogens like cholera?

- A) Contamination of local drainage basins
- B) High wind speeds
- C) Soil alkalinity
- D) Lack of seismic activity

22. The 'Mediterranean climate' is associated with which health-related lifestyle benefit due to geographical agricultural output?

- A) High intake of monounsaturated fats
- B) High consumption of processed meats
- C) Lower access to sunlight
- D) Higher salt intake

23. What does the 'Biogeography of disease' study?

- A) The spatial distribution of diseases
- B) The chemical structure of pathogens
- C) The surgical techniques of doctors
- D) The history of hospital architecture

24. High concentrations of radon gas, a geographical byproduct of uranium decay in rocks, primarily causes what?

- A) Lung cancer
- B) Skin rashes
- C) Hearing loss
- D) Muscle atrophy

25. The physiological response to sustained, high-intensity humidity in tropical regions involves what?

- A) Reduced efficiency of evaporative cooling
- B) Increased bone density
- C) Higher blood oxygen saturation
- D) Faster skin regeneration