

1. Which protozoan causes malaria?
  - a. *Borrelia burgdorferi*
  - b. *Plasmodium falciparum*
  - c. *Neisseria meningitidis*
  - d. *Streptococcus pneumoniae*
  - e. *Yersinia pestis*
2. Where was the FIRST water treatment plant constructed?
  - a. Japan
  - b. France
  - c. Italy
  - d. Britain
  - e. Scotland
3. What PRIMARY effect did malaria have on early sub-Saharan populations?
  - a. It hindered livestock cultivation.
  - b. It prompted humans to adopt agriculture.
  - c. It discouraged river water use.
  - d. It caused humans to become nomadic.
  - e. It kept population densities low.
4. How is the worm that causes schistosomiasis spread?
  - a. cockroaches
  - b. human feces
  - c. rats
  - d. dogs
  - e. snails
5. Scientists believe the common cold came from
  - a. domesticated animals
  - b. algae blooms
  - c. edible crustaceans
  - d. insects
  - e. food-borne parasites
6. Which disease results from water contaminated with feces?
  - a. measles
  - b. tuberculosis
  - c. malaria
  - d. pneumonia
  - e. typhoid
7. Why did London cesspools overflow in the nineteenth century?
  - a. Farmers used cesspools for agricultural waste.
  - b. Hospitals installed sewage lines.
  - c. Households adopted the flush toilet.
  - d. Ironworks deposited chemicals in cesspools.
  - e. Textile mills were required to implement sanitation systems.
8. The "Great Stink" prompted the city of London to
  - a. build a sewage system
  - b. ban public sewage disposal
  - c. institute pollution permits
  - d. shut down external aqueducts
  - e. develop water purity requirements
9. Dr. John Snow's work identified a
  - a. malaria treatment
  - b. water conservation solution
  - c. typhoid outbreak
  - d. contaminated water pump
  - e. new microbe
10. Which characteristic is true of the American water supply?
  - a. Most water is recycled from industrial use.
  - b. Water rights are owned by the federal government.
  - c. Americans primarily access water from desal plants.
  - d. Almost all water is provided by water purification plants.
  - e. Americans have access to subsidized public water supplies.
11. Flocculated water may contain particles such as
  - a. aluminum sulfate
  - b. sodium chloride
  - c. phenylene diamene
  - d. sulfur dioxide
  - e. trimesoyl chloride
12. Fluoride is added to the water purification process to
  - a. increase the pH
  - b. add amino acids
  - c. prevent tooth decay
  - d. remove sodium particles
  - e. kill microorganisms
13. Why are plastic bottles PRIMARILY harmful to the environment?
  - a. They prevent plants from performing photosynthesis.
  - b. They choke wildlife.
  - c. They cause algal blooms.
  - d. They introduce mercury into the food chain.
  - e. They seep chemicals into the groundwater.

14. From which substance are MOST current water pipes made?
- sodium hydroxide
  - polyaluminum chloride
  - phenylene diamene
  - polyvinyl chloride
  - terracotta clay
15. How does the activated sludge process affect the treatment of wastewater?
- forces the sludge through an aluminum filter
  - seals it in airtight containers
  - places the sludge into a bio slurry
  - adds bacteria to it
  - creates nutrient-rich water
16. Why is the bottled water manufacturing process especially inefficient?
- Many bottling plants use water originally found in aquifers.
  - Many bottling plants are located in areas with chronic water scarcity.
  - Water bottles are made of materials requiring high energy consumption.
  - Water bottling requires an element of human labor.
  - Many bottling plants rely on fossil fuel energy sources.
17. Early sewage systems pumped out sludge for use as
- livestock food
  - pipe linings
  - hunting lures
  - composting material
  - fertilizer
18. Why do many Chinese wastewater plants operate below capacity?
- They are not connected to urban households.
  - They are owned by foreign entities.
  - They lack access to a stable power supply.
  - They sell water at an exorbitant cost.
  - They are expensive to run.
19. What was the approximate percentage of rural Chinese households connected to wastewater plants in 2010?
- 16%
  - 20%
  - 4%
  - 22%
  - 6%
20. Which of the following infrastructural investments is mentioned in the “Water Ten Plan”?
- biogas power plants
  - nuclear fusion plants
  - electric windmills
  - desal plants
  - hydroelectric dams
21. Why must farmers buy improved high-yield seeds each year?
- High-yield seeds are infertile.
  - Farmers require new seeds to tolerate deteriorating climate conditions.
  - Farmers need new varieties to account for new fertilizers.
  - High-yield seeds are susceptible to pesticides.
  - Farmers rely on new seeds to reduce water consumption.
22. The Green Revolution played an important role in
- preserving key aquifers around the world
  - ending rural water disease outbreaks in the Global South
  - establishing global enforcement mechanisms for water rights
  - increasing crop yields in the Global South
  - conserving water supplies in the Global North
23. Which crop had the HIGHEST growth rate in developing countries from 1990 to 1992?
- rice
  - maize
  - wheat
  - millet
  - barley
24. On which assumption is the Green Revolution PRIMARILY based?
- Industrial activity causes water scarcity.
  - Water is cheap.
  - The state plays the primary role in environmental change.
  - Human societies are governed by the “tragedy of the commons.”
  - Labor is readily available.
25. Which condition did the Aguas del Tunari water lease guarantee?
- water export rights
  - tax-free operations
  - state-provided security
  - free water purification supplies
  - annual rate of return

26. Biogas plants operate on
- manure
  - plastics
  - saltwater
  - oil
  - freshwater
27. The FIRST Chinese wastewater plant using activated sludge was built in
- Qingdao
  - Shenzhen
  - Beijing
  - Tianjin
  - Shanghai
28. How does the Global South PRIMARILY contribute to the global economy?
- It provides large amounts of cheap labor.
  - It develops intellectual property.
  - It has the entire global supply of iron.
  - It supplies most of the world's food.
  - It provides most of the world's water.
29. How did the Aguas del Tunari agreement impact water access in Cochabamba?
- Many desal plants shut down.
  - Farmers gained access to subsidized water.
  - Water prices increased.
  - Residential water quality diminished.
  - Households had access to treated water.
30. Which agency prompted Bolivia to privatize its water system?
- International Monetary Fund
  - United States Agency for International Development
  - European Central Bank
  - Bank for International Settlements
  - World Bank
31. The Bolivian government hesitated to cancel the Aguas del Tunari contract because they feared
- internal economic instability
  - weakening the country's international treaties
  - a military coup
  - the cancellation of other business deals
  - a foreign invasion
32. As part of their contract with the Bolivian government, Aguas del Tunari was allowed to
- install residential water meters
  - import water from foreign sources
  - decommission wastewater plants
  - build irrigation canals
  - access water from the Guarani Aquifer
33. How did the Bolivian government attempt to maintain order during the 2000 protests?
- Water was declared a public good.
  - Citizens were offered a monetary bonus.
  - Police officers were offered a raise.
  - The rule of law was suspended.
  - Soldiers were offered free food supplies.
34. How many times greater was water usage in 1990 than in 1700?
- 10 times
  - 50 times
  - 20 times
  - 30 times
  - 40 times
35. Through which state does the Ogallala Aquifer flow?
- Maine
  - California
  - Ohio
  - Illinois
  - South Dakota
36. Which innovation permitted farmers to access the water of the Ogallala Aquifer?
- electric windmills
  - underground steel pipes
  - fossil-fuel powered pumps
  - biogas plants
  - desal plants
37. The problems regarding the Ogallala Aquifer stem PRIMARILY from
- acid rainfall
  - agricultural pollution
  - oil drilling
  - chemical runoff
  - water consumption
38. Why did American government investments in dams NOT make economic sense?
- Agricultural projects used water from underground aquifers.
  - Dam construction budgets regularly went over the limit.
  - Dams increased the price of water for households.
  - Dam-produced energy could not be sold overseas.
  - Food surpluses prevented farms from returning a profit.

39. How many acres could couples claim under the Reclamation Act of 1902?
- 320 acres
  - 280 acres
  - 300 acres
  - 340 acres
  - 260 acres
40. "Cash register dams" generated revenue from
- cap-and-trade systems
  - municipal water provisioning
  - agricultural water rights
  - commercial energy sales
  - greywater provisioning
41. Which aquifer is known as the world's MOST stressed?
- Nubian Sandstone Aquifer
  - Northwestern Saharan Aquifer
  - Guarani Aquifer
  - Arabian Aquifer System
  - Indus Basin Aquifer
42. Why are nitrogen levels increasing in freshwater?
- nuclear waste
  - agricultural run-off
  - rising temperatures
  - plastic decomposition
  - algal blooms
43. Which of the following instances BEST demonstrates eutrophication?
- algal blooms in a freshwater lake
  - decomposing plastic in the ocean
  - mosquito infestation in a swamp
  - acid rain falling in a forest
  - wastewater treatment in a biogas plant
44. Which factor limits the proliferation of water-based organisms in normal circumstances?
- sunlight access
  - ice quantity
  - oxygen availability
  - water current speed
  - hydrogen saturation
45. Which animal has mercury bioconcentration made dangerous to eat?
- sea urchin
  - eel
  - tuna
  - whale
  - cod
46. How did the Japanese government respond to the pollution from the Minamata chemical factory?
- limiting commercial fishing off the entire eastern coast
  - installing nets in the impacted area
  - increasing the nitrogen levels of the impacted area
  - banning the use of nuclear power nationwide
  - spreading brine in the impacted area
47. What is the greatest environmental threat to the oceans?
- plastics pollution
  - petroleum transport
  - mercury biconcentration
  - whale species death
  - rising temperatures
48. In humans, Minamata Disease results in
- diabetes
  - brain damage
  - sepsis
  - heart inflammation
  - osteoporosis
49. How does the Great Pacific Garbage Patch endanger the ocean ecosystem?
- Its plastic netting entangles many animals.
  - The plastic blocks sunlight to the ocean's lower levels.
  - Invasive species are eliminating key parts of the food chain.
  - Decomposing plastic raises the level of mercury.
  - Algal blooms surround the patch.
50. Why has little effort been made to address the Great Pacific Garbage Patch?
- The oceans do not have a sovereign owner.
  - Non-profit organizations have made substantial progress in removing it.
  - The patch poses a small risk to trading routes.
  - States believe corporations should pay for its removal.
  - The patch causes minimal disruption to naval operations.