1. What are the major causes of sea level rise? (there is more than one correct answer)
Melting sea ice

A. Melting glaciers and ice sheets
B. Rivers accelerating
C. Seawater expanding as it gets warmer
D. Rocks and soil washing into the sea

Answers: Melting glaciers and ice sheets and seawater expanding as it gets warmer (also known as thermal expansion).
"Sea level is rising for two main reasons: glaciers and ice sheets are melting and adding water to the ocean and the volume of the ocean is expanding as the water warms. A third, much smaller contributor to sea level rise is a decline in water storage on land—aquifers, lakes and reservoirs, rivers, soil moisture—mostly as a result of groundwater pumping, which has shifted water from aquifers to the ocean.

2.What causes ocean acidification?
CO_2 dissolved in ocean water
Sunscreen in the water
Ocean pollution
Warm water
Sediment stirred up by extreme storms

Answer: CO_2 dissolved in ocean water.
Ocean acidification is sometimes called "the other carbon dioxide problem." The oceans have absorbed 25 to 30 percent of the CO_2 released into the atmosphere.
The increase in dissolved CO_2 makes the ocean water more acidic (lowering the pH). This matters because many organisms in the ocean – from coral reefs to clam shells to plankton – build shells from calcium carbonate that is dissolved in ocean water. More acidic water makes it harder for these animals to build and maintain their shells.
Since the industrial revolution, the pH of seawater has fallen from 8.2 to 8.1 – a decrease of 0.1 pH units. While that may not sound like much, it's a 30% increase in acidity. It's also important to note that the oceans are not acidic overall. The pH of ocean water is above 7, which is means it's basic, not acidic. But ocean acidification is making the water less basic – - or more acidic. For many organisms, this is a dramatic change in the conditions they are adapted for. The current drop in pH is the fastest known change in ocean chemistry in the past 50 million years.

3. Of the following indications of the health of a water body, which is the most widely accepted means of measuring how polluting an effluent is?
A. COD (chemical oxygen demand)
B. BOD (biological oxygen demand)
C. Chloroform content

Answer B: Correct!The amount of organic material that can decompose in the sewage is measured by the biochemical oxygen demand or BOD. This is the amount of oxygen required by microorganisms to decompose the organic substances in sewage. It is among the most important parameters for design and operation of sewage-treatment plants. Industrial sewage may have BOD levels many times that of domestic sewage. Dissolved oxygen is an important water quality factor for lakes and rivers. The higher the concentration of dissolved oxygen, the better the water quality. When sewage enters a lake or stream, decomposition of the organic materials begins. Oxygen is consumed as microorganisms use it in their metabolism. This can quickly deplete the available oxygen in water and aquatic species soon perish.

4. What minerals are found in the run-off from agricultural land and treated and untreated sewage effluents, which are highly responsible for eutrophication of water bodies?
A. Phosphorous and carbon
B. Nitrogen and phosphorus
C. Potassium and arsenic
D. Iron and manganese

Answer B:
Correct! Eutrophication occurs when fresh water is artificially supplemented with nutrients, which causes an abnormal plant growth. The output of waste into the water bodies from industries, agriculture, and urban communities generally exceeds the biological capacities of aquatic systems. Runoff of chemical fertilizers from fields is a major cause. When organic matter exceeds the capacity of those microorganisms in water that break it down and recycle it, it encourages rapid growth, or blooms of algae. When they die, remains of the dead algae add further to the organic wastes already in water; eventually, water becomes deficient in oxygen.

5. Which of the following can be considered to be the primary source of pathogens in the water bodies?
A. Domestic Sewage
B. Industrial wastage
C. Petroleum
D. All of the above
Ans. A
Explanation: Domestic sewage is the primary source of pathogens and putrescible organic substances.

6. Which of the following diseases is caused by nitrate poisoning in water?
A. Minamata disease
B. Blue Baby syndrome
C. Methemoglobin
D. None of the above
Ans. B

Explanation: Nitrate levels above 10 mg/L (10 ppm) in groundwater can cause blue baby syndrome.

7. Which of the following diseases can be caused by drinking polluted water?
A. Polio
B. Diarrhea
C. Typhoid
D. All of the above

Ans. d
Explanation: Contaminated water can transmit diseases such diarrhoea, cholera, dysentery, typhoid, and polio.

8. Three percent of all the world's water is?

A. Salt water
B. Unreachable
C. Ice
D. Fresh water
Answer D
Only 3% of the world's water is fresh. Of this 3% of fresh water, less than one third of 1% of this water is available for human use. The remainder is frozen in polar ice caps, glaciers or is unreachable deep down in the earth. Another way of looking at it is if 100 litres of water were in front of you representing the world's water, only half of a tablespoon is available to you as fresh water.

9. Where is the driest normally populated continent on Earth?

A. Australia
B. Antarctica
C. Africa
D. South America
Answer A
Australia is the driest populated continent with average rainfall of 469mm per year, whereas the global average is 746mm per year. Antarctica is drier but is not populated in the same numbers as Australia (having no permanent residents).

Australia is also the highest consumer of water per person. On average, each person uses 100,000 litres of fresh water per year. This figure does not include the water used in the products we buy and use every day, which all need water to be created.

10. Which product requires the most water to create it?

A. 1 hamburger
B. 1 cup of coffee
C. 1 cotton t-shirt
D. 1 microchip
Answer A:
It takes 2400 litres of water to create a hamburger, 2000 litres to create a t-shirt, 140 litres to create a cup of coffee and 32 litres of water to create a microchip. The water used in creating the hamburger includes water to grow the food the cow eats, water that the cow drinks, water for processing the meat and also water for cleaning the cow.

When we think of water usage we usually think of only the water we use from our taps. All the things we use every day need water to create them including our clothing, furniture, building materials and just about everything else we use.

11. The bathroom is one of the main water consumption areas in the home. Which of the following would save the most water in it?

A. Repairing a leaking tap
B. A glass for rinsing after brushing teeth
C. A bucket for collecting excess water
D. A 3 star energy efficient showerhead
Answer D:
A 3 star energy efficient showerhead uses only 9 litres of water per minute where regular showerheads use between 15-20 litres per minute. If you shower for 6 minutes you would use 54 litres of water instead of 90-120 litres, a possible saving of between 13,000 and 24,000 litres per person per year.

A tap that drips ten times per minute will waste 3000 litres of water in a year. The excess water collected with a bucket can be used to wash your car or on the garden as long as soaps and detergents used are checked first to see if they will harm your plants. A glass for rinsing after brushing is much better than leaving the tap running as it wastes about 16 litres per minute.

12. The kitchen and laundry are high consumers of water using between 15-20% of total water consumption. What is the most effective way to save water in these rooms?

A. Only use appliances when full
B. Use energy efficient appliances
C. Re use rinse water from the washing machine
D. Plug the sink when washing dishes or peeling vegetables
Answer B:
Energy efficient appliances are the most effective way to save water in the kitchen and laundry. Some regular washing machines use 150 litres per wash and dishwashers can use 50 litres per wash. Energy efficient front loader washing machines use 50% less water

than a regular machine.

Only using your washing machine and dishwasher when full will also save water and energy costs as well. Putting the plug in the sink while you wash dishes or vegetables will save 16 litres of water going down the drain every minute.

13. What products and practices can assist pool owners to save water?

A. Using a pool cover
B. All of these
C. Using a rainwater diverter
D. Maintaining the chemical levels
Answer B:
Using a pool cover prevents 95% of evaporation from the pool and also helps to keep the pool free from debris resulting in less chemicals being used to keep it clean. A rainwater diverter uses the water collected from your roof via a hose, directing water into the pool which tops up the pool water level. Maintaining the chemical levels in the pool keeps the pool clean, which eliminates the need to empty and refill the pool with fresh water.

14. The garden is an area that can use between 25-40% of the home's total water consumption. What can you do to save water in the garden?

A. Use mulch on your garden
B. All of these
C. Use dripper irrigation instead of sprayers
D. Use soil wetting agents or water crystals
Answer B:
Mulch (pine-bark, stones, pea-straw, compost, cow and horse manure) acts as a blanket in the garden reducing water evaporation and keeping the soil cool, which means less water being used to maintain the plants. Dripper irrigation systems are more effective at getting the water to the roots of the plants than sprayers and less water is wasted through evaporation and wind. When soil dries out it repels water instead of retaining it and soil wetting agents or water crystals can help by making the water more available to the plants.

15. Greywater is used water from showers, baths, hand basins and washing machines that can be used to water the garden. Where should greywater never be used?

A. On flowering plants
B. On vegetable plants that will be eaten raw
C. On lawns
D. On seedlings
Answer B:
Great care must be taken when using greywater as it contains bacteria and contaminants

that may be harmful to humans. Water from the kitchen and dishwasher cannot be used for greywater as the water contains food scraps, chemicals and fats.

Greywater should not be used on vegetables that will be eaten raw and must be used within 24 hours of collecting, unless the water has been treated to purify it.

16. Leaks are responsible for great amounts of hidden water loss in the home.

A. True
B. False
Answer A:
Leaking taps, pipes and toilets lose great amounts of water every year without us even knowing about it. To find out if you have a leak, write down the reading of your water meter and then check it again two hours later. You would need to make sure that no one uses water in the house during this time. If the reading has changed, you have a leak that needs repairing.

To check if your toilet is leaking, put some food colouring into the top of the cistern. Leave it and don't flush for at least an hour. If the colouring has gone into the bowl after the hour has passed, you have a leak that could be wasting huge amounts of water. If your toilet has a continual hissing sound, you definitely have a leak that will need repairing.

17. How much water does a typical toilet use per flush?
A. 1.6 gallons (6.1 liters)
B. 3.4 gallons (13 liters)
C. 1.3 gallons (4.9 liters)
Answer A:
Most toilets produced since 1994 use less than 1.6 gallons (6.1 liters) per flush. Older toilets might use twice that amount, and new low-flow toilets may use less than 1.3 gallons (4.9 liters).

18. How much of the planet's water is fresh water available for us to use (that is, not locked in the ice caps)?
A. 2. percent
B. 0.4 percent
C. 1 percent
Answer C:
Although water covers two-thirds of Earth's surface, only about 1 percent of that water is fresh and available for human use. The rest is salt water, brackish water, frozen fresh water or the water content of plants and animals.

19. How much water does it take to irrigate one acre (4,047 square meters) of corn?
A. 9,000 gallons (34,000 liters) per month
B. 9,000 gallons (34,000 liters) per week

C. 9,000 gallons (34,000 liters) per day
Answer C:
Crops consume nearly one-third of Earth's fresh water used each year. Corn, a popular crop, can be water-hungry: Some varieties may need as much as 9,000 gallons (34,000 liters) per day.

20. How much water is locked in the polar ice caps?
A. 7 million cubic miles (29.2 cubic kilometers)
B. 1 million cubic feet (0.3 million cubic meters)
C. 4 billion gallons (16 billion liters)
Answer A:
A large portion of Earth's fresh water sits in cold storage in the polar ice caps. Some estimates calculate that there are 7 million cubic miles (29,2 million cubic kilometers) of water in these frozen regions.

21: Which is more efficient: drip or sprinkler irrigation?
A. sprinkler
B. drip irrigation hose
C. The two are equally efficient.
Answer B:
The common lawn sprinkler has a major drawback: As water sprays into the air and across the lawn, some of it evaporates. Drip hoses circumvent this problem by slowly releasing water near plants' roots.

23. How much water does a 1/8-acre (506-square meter) grassy lawn consume?
A. 3,500 gallons (13,248 liters) a day
B. 3,500 gallons (13,248 liters) a week
C. 3,500 gallons (13,248 liters) a month
Answer B:
A 1/8-acre (506-square meter) plot of grass may need 3,500 gallons (13,248 liters) of water per week to remain lush and healthy. Landscaping with drought-tolerant species, or native plants that need little extra water, can significantly reduce your lawn's water consumption.

24. What is a major drawback of rain barrels?
A. They look funny.
B. They collect water that would otherwise go into the sewer.
C. If not sealed, they can provide breeding grounds for mosquitoes.
Answer C:
Rain barrels come in a range of sizes and shapes to match most houses, but they all run the risk of hosting mosquitoes if not properly covered. Rain barrels should have some protection to prevent the blood-sucking insects from laying eggs in them.

25. Does a shower use more water than a bath?
A. yes

B. no
C. It depends on the length of the shower.
Answer C:
This one is tricky since the amount of water used during a shower depends on the length of the shower. A bath may use 30 to 50 gallons (113 to 189 liters) of water versus the 20 gallons (76 liters) used in a 4-minute shower. If the shower is longer, it could use more water than a bath.

26. What is grey water?
A. water on its way to the sewer
B. water that can be filtered and cooked with
C. water that's too dirty to drink, but clean enough to use for other tasks
Answer C:
Grey water is water that's too dirty to drink or bathe in, but not so dirty that it's unsafe to use for flushing toilets or other noncontact household tasks. Some innovative researchers are exploring ways to get more use out of grey water.

27. What appliance uses the most water in the house?
A. toilet
B. dishwasher
C. washing machine
Answer A: Homes with older toilets may be pulling as much as 3 gallons (6 liters) or more per flush -- far more than necessary to do the job. If you're looking to save water with an appliance upgrade, the toilet may be a good place to start.

28. Which uses the most water?
A. washing dishes in the dishwasher
B. washing dishes by hand
C. It all depends on how many people live in the house.
Answer B:
Although it might seem like the dishwasher's spraybar uses a lot of water, it actually works more efficiently than hand washing. In many cases, the dishwasher is the more water-conscious choice.

29. What country has the most expensive tap water?
A. Danmark
B. U.S.A.
C. Egypt
Answer A:
The cost of tap water includes a variety of factors, including the distance to the source and the number of people using it. Water in Denmark costs more than $6 (U.S.) per cubic meter -- far more than the $0.002 per cubic meter that water can cost in the United States.

30. The process remove some amount of salt and other minerals from saline water called?
A. Desalination
B. Eutrophication
C. Biomagnification
Answer A:
eutrophication, the gradual increase in the concentration of phosphorus, nitrogen, and other plant nutrients in an aging aquatic ecosystem such as a lake;
Biomagnification is the accumulation of a chemical by an organism from water and food exposure that results in a concentration that is greater than would have resulted from water exposure only and thus greater than expected from equilibrium.

31. What is electricity made from moving water called?
A. Hydroelectricity
B. Thermal Electricity
C. Tidal Power
Answer A

32. The journey water takes as it circulates from the land to the sky and back again.
A. Hydrologic cycle
B. Nitrogen Cycle
C. Condensation Cycle
Answer A

35. What percentage of the earth is water?
A. 50%
B. 60%
C. 71%
D. 80%
Answer C

36. what is the main cause of water pollution?
A. invasive species
B. animals
C. plants and insects
D. human impact and decision making
Answer D

38. Approximately 75 percent of the Earth's surface is covered in water. So why is water considered such a precious resource?
A. The greenhouse effect is causing most of the world's freshwater to be trapped in the atmosphere
B. Only a small fraction of the Earth's water is freshwater available for drinking and irrigation
C. Each year, more freshwater is being trapped in icecaps located at the North and South Poles
D. Global warming caused by greenhouse gas emissions will likely cause Earth's oceans to evaporate
Answer B

40. Precipitation is considered “acid precipitation” if its pH is
A. 7
B. less than 5.6
C. 5.6
D. greater than 7
Correct answer: B
Normal rain or snow is slightly acidic, with a pH between 7 and 5.6. If the pH is lower than 5.6, the precipitation is considered acidic.

41. The human body is approximately what percentage of water?
A. 98%
B. 30%
C. 70%
Correct answer: C

42. Where does most stormwater runoff from city streets go?
A. to water treatment facilities
B. to local rivers and streams
C. to puddles
Correct answer: B
Most stormwater runoff goes to streams and rivers or other local water bodies. Stormwater should not be directed to wastewater treatment facilities, because the excess water can cause combined sewer overflows.

43. Which of the following is an example of point source pollution?
A. oil from a parking lot
B. soil from an agricultural field
C. sewage from a pipe
D. fertilizer from a suburban yard

Answer: C
Oil runoff from parking lots and roads, sediment from agricultural fields, and fertilizer runoff from yards are all examples of nonpoint source pollution.

45. About how long can a human survive without water?
A. three days
B. one week
C. two weeks
D. one month
Answer B:
Without water, a human can survive only about one week

46. What is the longest river in the world?
A. Amazon River
B. Mississippi River
C. Ganges River
D. Nile River
Answer D:
The Nile River in Africa is the longest river in the world at approximately 6700 kilometers.

47: What lake holds more fresh water than any other?
A. Lake Superior
B. Lake Victoria
C. Lake Baikal
D. Lake Huron
Answer C
Lakes Superior, Victoria, and Huron have great surface area, but with a depth of over 1600 meters, Lake Baikal in Russia holds more fresh water than any other lake.

48. How Many Children Die Every Day Because of Drinking Unsafe Water?
A. 4500
B. 3000
C. 2500
Answer A:
4,500 children die every day from preventable diseases related to a lack of access to clean water, adequate sanitation and hygiene.