

Science Bowl 2021 Practice Questions

1. In a water molecule, how is the charge distributed
 - a. Negative on the hydrogen side, positive on the oxygen side
 - b. Positive on the hydrogen side, negative on the oxygen side
 - c. There is no charge distribution in the water molecule
 - d. No correct answer
2. What percentage of the world's population doesn't have access to clean water?
 - a. 2%
 - b. 10%
 - c. 17%
 - d. 38%
3. The human body is approximately what percentage water?
 - a. 20%
 - b. 40%
 - c. 60%
 - d. 85%
4. What property of water allows it to bead up on waxy surfaces like car hoods and wax paper?
 - a. Capillary action
 - b. Universal solvency
 - c. Surface tension
 - d. Absorbency
5. Which is NOT a use of water in the human body?
 - a. Transport
 - b. Temperature regulation
 - c. Energy source
 - d. Participate in chemical reactions
6. What percent of the earth's water is in the oceans?
 - a. 10%
 - b. 20%
 - c. 70%
 - d. 97%
7. What percent of freshwater on the earth is used for irrigation?
 - a. 5%
 - b. 25%
 - c. 50%
 - d. 70%

8. How many people lack access to healthy, clean water?
- 100 million
 - 750 million
 - 1.5 billion
 - 7 billion
9. When we compare the amount of wetlands on the Earth in 1900 to what exists now, what percentage still exist as wetlands?
- 20%
 - 50%
 - 65%
 - 80%
10. What is the density of water?
- 0.5 g/mL
 - 1.0 g/mL
 - 1.5 g/mL
 - No correct answer
11. What does adhesive mean?
- Attractive
 - Repellent
 - Loose
 - Sticky
12. In an aqueous solution, water is
- The solute
 - The solvent
 - The substance found in the least amount
 - The best coagulant
13. In a solution, the substance present in the greater amount is considered the
- Solute
 - Most dense
 - Concentrate
 - Solvent
14. Which of the following substances is soluble in water?
- Gasoline
 - Rubbing alcohol
 - Cooking oil
 - Any fat, like bacon fat or lard

15. Which of the following substances is NOT soluble in water?
- Sugar
 - Salt
 - Rubbing alcohol
 - Sand
16. Why is water called the universal solvent?
- More substances dissolve in water than any other solvent
 - It is found in every living thing
 - It comprises 75% of the earth's surface
 - Every substance dissolves in water
17. If Virginia prepares a solution with 40.0 grams of sugar in 100 grams of water, how much sugar will she get back if she filters it?
- None
 - 15 grams
 - A little less than 40 grams
 - Exactly 40 grams
18. If Jerry prepares a solution with 40.0 grams of sugar in 160 grams of water, and he evaporates all the water, how much sugar will he get back?
- None
 - 15 grams
 - A little less than 40 grams
 - Exactly 40 grams
19. What is the percentage of hydrogen in a water molecule?
- 0.67%
 - 11%
 - 67%
 - 89%
20. How many grams of oxygen would be present in a 100 gram sample of water?
- 0.67g
 - 11.0g
 - 67 g
 - 89 g

21. Which of the following is an example of a chemical reaction of water?
- Melting ice
 - Freezing water
 - Boiling water
 - None of the above
22. Which of the following changes does not require energy?
- Boiling water
 - Melting ice
 - Condensing steam
 - All of the above require energy
23. A puddle of water and a glass of water both at the same temperature and volume are left to evaporate. Which evaporates sooner and why?
- The puddle because of increased surface area
 - The puddle because of increased molecular motion
 - The glass because of decreased surface area
 - The glass because of increased molecular motion
24. Marilyn saves 30% of the money she earns each month. If she earns \$250 each month, how much does she save?
- \$75
 - \$12
 - \$120
 - \$8.33
25. There are 250 chairs in the gym. If 150 chairs are full, what percentage are full?
- 17%
 - 56%
 - 60%
 - 166%
26. Last year the cost of a football ticket was \$25. This year the cost is \$28. What is the percentage increase in price from last year to this year?
- 1.1%
 - 10.7%
 - 12%
 - 89%

27. Last year the football team won 15 games. This year the team won 20% fewer games. How many games did the team win this year?

- a. 3
- b. 10
- c. 12
- d. No correct answer

28. What percentage of the images are sleds?



- a. 25%
- b. 30%
- c. 70%
- d. 75%

29. Twenty-seven percent of the tomatoes in a garden are red. What fraction shows this percent?

- a. $\frac{27}{1}$
- b. $\frac{27}{10}$
- c. $\frac{27}{100}$
- d. $\frac{27}{1000}$

30. If the decimal 0.047 is written as a percent it would be

- a. 0.0047%
- b. 0.47%
- c. 4.7%
- d. 47%

Answers on next page...

1. B
2. C
3. C
4. C
5. C
6. D
7. D
8. C
9. B
10. B
11. A
12. B
13. D
14. B
15. D
16. A
17. A
18. D
19. B
20. D
21. D
22. C
23. A
24. A
25. C
26. C
27. C
28. B
29. C
30. C