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12-4-12

Science Bowl Lightning Round Questions

Astronomy and Earth Science

1. Multiple Choice

What is the term used to describe the balance point of a system containing two or more bodies?

w) center of mass

x) center

y) middle point

z) gravity point

Answer: W

2. Multiple Choice

What is the name of the diagram used to illustrate relationships between luminosity, surface temperature, and radius of stars?

w) H- W diagram

x) R-H diagram

y) H-R diagram

z) Star diagram

Answer: Y

3. Short answer

Which of Neptune’s moons was the first one discovered?

Answer: Triton

4. Multiple Choice

What equation estimates the probability of alien life in outer space?

w) Drake equation

x) Henry Equation

y) Life equation

z) Francis Equation

Answer: W

5. Short Answer

What is the term used to describe the water spewed out of under water hydrothermal vents?

Answer: Black Smokers

Chemistry

6. Short Answer

What transition metal was used in ancient pipelines in the Roman empire but then discarded due to its toxicity?

Answer: Lead

7. Multiple Choice

What is the only element melts in your hand?

w) Gallium

x) Carbon

y) Phosphorous

z) Sodium

Answer: W

8. Lightning strikes create what compound?

w) Ozone

x) Salt

y) Hydronium

z) Methane

Answer: W

9. Short Answer

What is the name of the bond shared by two nonmetals with different electronegative charges?

Answer: Polar Covalent Bond

10. Short Answer

What is the most abundant element in the human body?

Answer: Oxygen

Physics

11. Short Answer

In Einstein’s 4- dimensional universe, what is the fourth dimension?

Answer: Time

12.Multiple Choice

Radio waves are a type of

w) Sound

x) Light

y) Particle

z) X-ray

Answer: X

13. Short Answer

What is the SI unit of pressure?

Answer: Pascal

14. Multiple choice

A Newton is what proportion of a pound?

w) 1/8

x) 1/5

y) 1/4

z) ½

Answer: Y

15. Short Answer

What is the first law of thermodynamics?

Answer: Law of Conservation of Energy

Biology

16. Short Answer

On humans, what is the name of the auditory portion of the inner ear?

Answer: Cochlea

17. Multiple Choice

Which part of a cell creates most of the energy?

w) Ribosomes

x) Endoplasmic Reticulum

y) Vesicle

z) Mitochondria

Answer: Z

18. Short Answer

Bacteria and Archaea are what types of cells?

Answer: Prokaryote Cells

19. Short Answer

Human cells on average have how many pairs of chromosomes?

Answer: 23

20. Short Answer

What type of square is used to predicts genetic outcomes?

Answer: Punnett Squares

Mathematics

21. Short Answer

What is 468! divided by 467!

Answer: 468

22. Short Answer

In a 30-60-90 degree triangle, if the short leg is 3 what is the length of the hypotenuse?

Answer: 6

23. Short Answer

What is 16 base ten in hexadecimal?

Answer: 10

24. Short Answer

What number system is base 60

Answer: Babylonian

25. Multiple Choice

What Greek letter represents 2 times pi?

w) kappa

x) phi

y) omicron

z) Tau

Answer: Z