

## Science Bowl Practice Questions – General

1. Short Answer: What weather phenomenon causes more deaths in the U.S. annually than any other except lightning?

ANSWER: TORNADOES

2. Short Answer: What is given to wood whose normal cells have been replaced with mineral deposits?

ANSWER: PETRIFIED WOOD

3. Multiple Choice: Pollination by birds is called:

- w) autogamy
- x) ornithophily (pron: or-nith-o-philly)
- y) entomophily (pron: ent-eh-mof-illy)
- z) anemophily (pron: an-eh-mof-illy)

ANSWER: X -- ORNITHOPHILY

4. Short Answer: Unlike rodents, the rabbit has how many incisor teeth?

ANSWER: FOUR

5. Multiple Choice: What percent of fire-related deaths are due to smoke inhalation rather than burns?

- w) 10%
- x) 50%
- y) 80%
- z) 99%

ANSWER: Y -- 80%

6. Short Answer: To what familiar fruit is the plantain similar?

ANSWER: BANANA

7. Short Answer: What U.S. President was recognized as a world authority on American game animals?

ANSWER: THEODORE ROOSEVELT

8. Short Answer: How many men have walked on the moon?

ANSWER: TWELVE

9. Multiple Choice: The fastest-running terrestrial animal is:

- w) cheetah
- x) lion
- y) man
- z) jaguar

ANSWER: W -- CHEETAH

10. Short Answer: In what country do the greatest number of tornadoes occur?

ANSWER: UNITED STATES (Central and Southeastern portions)

11. Short Answer: What wonder drug was used for three years by the Army and Navy before becoming available to the general public in 1944?

ANSWER: PENICILLIN

12. Short Answer: Which sea is the saltiest natural lake and is also at the lowest elevation on the face of the earth?

ANSWER: THE DEAD SEA

13. Short Answer: The scarab, worshipped by the Egyptians, is what type of beetle?

ANSWER: DUNG BEETLE

14. Multiple Choice: As you go down into a well, your weight:

- w) increases slightly
- x) decreases slightly
- y) remains exactly the same

ANSWER: X -- DECREASES SLIGHTLY

15. Short ANSWER: W cloud at ground level is called what?

ANSWER: FOG

16. Short Answer: What invention in about 1450 A.D. revolutionized communication and the world?

ANSWER: THE PRINTING PRESS

17. Short Answer: What is the name for the new technology whereby a glass fiber carries as much information as hundreds of copper wires?

ANSWER: FIBER OPTICS (OPTO-ELECTRONICS)

18. Short Answer: What mammal lays eggs?

ANSWER: PLATYPUS

19. Short Answer: Linseed oil comes from what plant?

ANSWER: FLAX

20. Multiple Choice: Bees must collect nectar from approximately how many flowers to make 1 pound of honeycomb? Is it:

- w) 10 thousand

- x) 2 million
- y) 20 million
- z) 50 million

ANSWER: X -- 20 MILLION

21. Short Answer: What is the name of the largest North American terrestrial rodent, distinguished by its spiny covering?

ANSWER: PORCUPINE

22. Multiple Choice: Albacore is a type of:

- w) shell-fish
- x) tuna
- y) marble
- z) meteoroid

ANSWER: X – TUNA

23. Multiple Choice: The only species of cat that lives and hunts in groups is:

- w) lion
- x) leopard
- y) jaguar
- z) cougar

ANSWER: W -- LION

24. Short Answer: Linen is made from what plant?

ANSWER: FLAX

25. Short Answer: What is arachnology?

ANSWER: STUDY OF ARACHNIDS (accept: study of spiders or scorpions or relatives of spiders)

26. Short Answer: What is another name for the Paleolithic Age?

ANSWER: THE STONE AGE

27. Short Answer: What nocturnal animal group makes up one-fourth of all mammals species?

ANSWER: BATS or CHIROPTERA

28. Short Answer: What is the name of the whale that has a long protruding tusk?

ANSWER: NARWHAL

29. Short Answer: How many time zones are there on Earth?

ANSWER: TWENTY-FOUR

30. Short Answer: What land mammal holds the record for the greatest age?

ANSWER: MAN

31. Short Answer: What is the better known name for the deadly poison prussic acid?

ANSWER: CYANIDE or HYDROGEN CYANIDE

**Science Bowl Practice Questions**

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32. Short Answer: What colorless, pungent gas is often dissolved in water to yield a solution that is used as a biological preservative?

ANSWER: FORMALDEHYDE

33. Short Answer: What is the rest mass of a photon?

ANSWER: ZERO

34. Short Answer: What yellow metal is an alloy of copper and zinc?

ANSWER: BRASS

35. Short Answer: What is the name given to the process, discovered by Goodyear, of adding sulfur to heated rubber?

ANSWER: VULCANIZATION

36. Short Answer: Used primarily in fertilizers, which element is never found free in nature even though it makes up about 2.5% of the earth's crust?

ANSWER: POTASSIUM

37. Short Answer: What element, whose symbol derived from the Latin for "liquid silver", has been found in Egyptian tombs from 1500 B.C.?

ANSWER: MERCURY

38. Short Answer: What poisonous alkaloid is extracted from tobacco leaves and widely used as an insecticide?

ANSWER: NICOTINE

39. Short Answer: What is the name for steel alloyed with chromium?

ANSWER: STAINLESS STEEL

40. Short Answer: Table sugar, from sugar cane or beet, is what type of sugar?

ANSWER: SUCROSE or DISACCHARIDE or SACCHAROSE

41. Multiple Choice: Which prefix is often used with scientific terms to indicate that something is the same, equal or constant?

- w) iso (pron: eye-so)
- x) mega
- y) meta
- z) quasi

ANSWER: W -- ISO

42. Multiple Choice: The study of phenomena at very low temperatures is called:

- w) heat transfer
- x) morphology
- y) crystallography
- z) cryogenics (pron: cry-o-jen-iks)

ANSWER: Z -- CRYOGENICS

43. Multiple Choice: The branch of medical science which is concerned with the study of disease as it affects a community of people is called:

- w) epidemiology
- x) oncology
- y) paleontology
- z) pathology

ANSWER: W – EPIDEMIOLOGY

44. Multiple Choice: The study of how people use tools to perform work and how people physically relate to their working environment is called:

- w) engineering
- x) ergonomics
- y) agronomy
- z) physiology

ANSWER: X – ERGONOMICS

45. Short Answer: Name the first woman to travel in space.

ANSWER: (VALENTINW) TERESHKOVA

46. Multiple Choice: What famous scientist and inventor participated in the invention of the Aqua-Lung?

- w) Thomas Edison
- x) Isaac Newton
- y) Leonardo da Vinci
- z) Jacques Cousteau

ANSWER: Z -- JACQUES COUSTEAU

47. Multiple Choice: Superconductivity is a material property associated with:

- w) cooling a substance without a phase change
- x) frictionless liquid flow
- y) a loss of thermal resistance
- z) a loss of electrical resistance

ANSWER: Z -- A LOSS OF ELECTRICAL RESISTANCE

48. Multiple Choice: A type of plastic that is biodegradable has been in the news lately. The ingredient that makes it biodegradable is:

- w) vegetable oil
- x) petroleum
- y) cornstarch
- z) leather

ANSWER: Y – CORNSTARCH

49. Multiple Choice: Who was the marine biologist and author of Silent Spring who was one of the first people to warn of the dangers of pesticides like DDT?

- w) Jacques Cousteau
- x) Rachel Carson
- y) Charles Darwin
- z) Marlin Perkins

ANSWER: X -- RACHEL CARSON

50. Multiple Choice: If a metal can be drawn into wires relatively easily it is called:

- w) malleable
- x) ductile
- y) extractive
- z) tactile

ANSWER: X -- DUCTILE

51. Short Answer: Occasionally, a bad cold will cause a decrease in a person's hearing ability. What is the name of the tube that becomes blocked to cause this problem?

ANSWER: EUSTACHIAN TUBE (pron: yu-sta-shen)

52. Short Answer: Name the general type of mammal that gives birth to undeveloped young that are kept in pouches.

ANSWER: MARSUPIAL

53. Short Answer: In a musical instrument that produces a fundamental note, what would the wavelength of the second harmonic be relative to the fundamental?

ANSWER: WAVELENGTH WOULD BE ONE-HALF THE FUNDAMENTAL

54. Multiple Choice: In which country was a method for making rust-resistant iron discovered in the fifth century B.C.?

- w) Sumeria
- x) Egypt
- y) India
- z) Babylon

ANSWER: Y – INDIA

55. Multiple Choice: Cystitis is the infection of which of the following?

- w) liver
- x) urinary bladder
- y) pancreas
- z) lung

ANSWER: X -- URINARY BLADDER

56. Short Answer: What is the subdivision in the Plant Kingdom comprising over 20,000 species of Mosses and Liverworts?

ANSWER: BRYOPHYTES (pron: brI-eh-fites)

57. Short Answer: Name the medical term given to the inflammation of infection of the mucous membranes of the nose.

ANSWER: RHINITIS

58. Short Answer: Automobile catalytic converters cause the carbon monoxide and hydrocarbons which result from incomplete combustion to be converted into what two substances?

ANSWER: CARBON DIOXIDE (CO<sub>2</sub>) AND WATER (H<sub>2</sub>O)

59. Multiple Choice: At room temperature, most elements are in which phase of matter?

- w) solid
- x) liquid
- y) gas
- z) plasma

ANSWER: W -- SOLID

60. Multiple Choice: The per capita birth rate of a population is known as its:

- w) mortality
- x) natality (pron: nay-tal-eh-ty)
- y) population density
- z) carrying capacity

ANSWER: X – NATALITY

61. Multiple Choice: Who is called the Father of the Nuclear Navy?

- w) Edward Teller
- x) Robert Oppenheimer
- y) Hymen Rickover
- z) Chester Nimitz

ANSWER: Y -- HYMEN RICKOVER

62. Multiple Choice: The science of weights and measures is called:

- w) metrology
- x) meteorology
- y) mineralogy
- z) morphology

ANSWER: W -- METROLOGY

63. Short Answer: The following are the names of man-made structures in the United States. Identify the type of structure. Hungry Horse, Yellowtail, Dworshak, Don Pedro, Cougar, Glen Canyon, Grand Coulee and Hoover. Name the type of structure.

ANSWER: DAMS

64. Multiple Choice: Which of the following is primarily composed of calcium carbonate?

- w) Fish scales
- x) Shark teeth
- y) Oyster Shells
- z) Whale bones

ANSWER: Y -- OYSTER SHELLS

65. Short Answer: What compound is a common component of air pollution, but is essential in the upper atmosphere to protect life on earth?

ANSWER: OZONE

66. Multiple Choice: Water flows through a horizontal pipe at a constant volumetric rate. At a location where the cross sectional area decreases, the velocity of the fluid:

- w) increases
- x) decreases
- y) stays the same

ANSWER: W – INCREASES

67. Multiple Choice: What radioactive element is routinely used in treating hyperthyroidism, and in reducing thyroid activity?

- w) Iron-59
- x) Gold-198
- y) Cobalt-60
- z) Iodine-131

ANSWER: Z -- IODINE-131

68. Short Answer: What is osteoporosis?

ANSWER: IT IS LOSS OF CALCIUM FROM BONES

69. Multiple Choice: Yeast, used in making bread is a:

- w) plant
- x) fungus
- y) bacteria
- z) seed

ANSWER: X -- FUNGUS

70. Multiple Choice: The Statue of Liberty is green because of:

- w) green stone
- x) oxidized brass
- y) steel painted green
- z) oxidized copper

ANSWER: Z -- OXIDIZED COPPER

71. Short Answer: Name the phase of quartz consistently found in meteorite impact craters, but rarely found in non-meteorite-related geological formations.

ANSWER: STISHOVITE

72. Short ANSWER: At what point are the Celsius and Fahrenheit scales equal?

ANSWER: -40 DEGREES

73. Multiple Choice: Which of the following vacuum pumps operates by using a very cold surface to trap the gases on the cold surface? Is it a:

- w) sublimation pump
- x) turbo pump
- y) cryopump
- z) diffusion pump.

ANSWER: Y -- CRYOPUMP

74. Short Answer: Using the fewest names of the members of this family, identify the tree family which includes among its members the: Fink, myrtle, turkey, jacks, laurel, white, live and pin. Name the tree family.

ANSWER: OAK

75. Short Answer: Using the fewest names of the members of this family, identify the tree family which includes among its members the: Pignut, scarit, mockernut, bitternut, black and shagbark. Name the tree family.

ANSWER: HICKORY

76. Short Answer: Using the fewest names of the members of this family, identify the tree family which includes among its members the: Chinese, cut-leaved, manchurian, persian, english, black and american. Name the tree family.

ANSWER: WALNUT

77. Multiple Choice: The word atom is from a Greek word meaning:

- w) small
- x) indivisible
- y) unseen
- z) visible

ANSWER: X -- INDIVISIBLE

78. Short Answer: Name the famous mathematician/physicist who was born in the year Galileo died.

ANSWER: (ISAAY) NEWTON

79. Multiple Choice: In 1991, critical habitat was designated for this well-known species in the states of Washington, Oregon and California.

- w) brown bear
- x) northern spotted owl
- y) bald eagle
- z) snail darter

ANSWER: X -- NORTHERN SPOTTED OWL

80. Short Answer: What creatures travel in gaggles?

ANSWER: GEESE

81. Multiple Choice: Which of the following are NOT native to North America?

- w) Mountain Quail
- x) Ringneck Pheasant
- y) Sharptail Grouse
- z) Masked Bob-White

ANSWER: X -- RINGNECK PHEASANT

82. Short Answer: What is a shark's skeleton made of?

ANSWER: CARTILAGE

83. Short Answer: Identify the Earth's largest INVERTEBRATE animal.

ANSWER: GIANT SQUID

84. Short Answer: What creature do the Galapagos Islands take their name from?

ANSWER: TORTOISE

85. Short Answer: What is the only venomous British snake?

ANSWER: ADDER

86. Short Answer: What is shed when you desquamate?

ANSWER: SKIN or EPIDERMAL CELLS

87. Short Answer: What are the only places that dogs have sweat glands?

ANSWER: NOSE AND PAWS

88. Short Answer: What body function are rats unable to do which makes them extra vulnerable to poison?

ANSWER: VOMIT

89. Multiple Choice: A cyclone is an engineering device that is used to

- w) transport materials
- x) segregate particles
- y) control switching devices
- z) model fractals

ANSWER: X -- SEGREGATE PARTICLES

90. Multiple Choice: In the United States, low sulfur coal can be found primarily in the:

- w) northeast
- x) southeast
- y) midwest
- z) west

ANSWER: Z – WEST

91. Multiple Choice: Electric power is less expensive at night because:

- w) more hydroelectric generation is brought on line at night.
- x) there is less demand at night.
- y) pollution control is less stringent at night.
- z) power plants are more efficient at night.

ANSWER: X -- THERE IS LESS DEMAND AT NIGHT.

92. Short Answer: Name THREE TECHNIQUES for removing particulates from flue gas produced from the combustion of coal?

- ANSWER: (1) ELECTROSTATIC PRECIPITATION (ESP)  
(2) FABRIC FILTER OR BAGHOUSE  
(3) WET SCRUBBERS  
(4) MECHANICAL COLLECTORS OR CYCLONES

93. Short Answer: Name TWO sorbents which are used in conventional wet scrubbing processes to remove SO<sub>2</sub> produced by combusting coal.

- ANSWER: (1) LIME  
(2) LIMESTONE  
(3) SODIUM SULFITE OR NaCO<sub>3</sub> OR NaOH

94. Short Answer: Name THREE gaseous components produced when coal is combusted.

ANSWER: (1) CO<sub>2</sub>  
(2) SO<sub>2</sub>  
(3) NO<sub>x</sub>  
(4) H<sub>2</sub>O

95. Multiple Choice: Electricity generated by coal-fired power plants in the United States in 1990 was approximately what percentage of the entire electricity produced by all sources of power production?

w) 10 percent  
x) 25 percent  
y) 55 percent  
z) 90 percent

ANSWER: Y -- 55 PERCENT

96. Short Answer: The majority of the U.S. electricity generating plant use what thermodynamic cycle?

ANSWER: RANKINE

97. Short Answer: Which continent has the largest KNOWN deposits of coal?

ANSWER: NORTH AMERICA

98. Multiple Choice: In a typical power plant used to generate electricity in the U.S., the percentage of energy in the fuel that is converted to electricity is about:

w) 99 percent  
x) 50 percent  
y) 35 percent  
z) 10 percent

ANSWER: Y -- 35 PERCENT

99. GENR-92; Short Answer: In electronic circuits, what name is given to a frequency discriminating network designed to select or pass certain bands of frequencies with low attenuation and cause very high attenuation to other frequencies?

ANSWER: FILTER

100. Short Answer: This bistable electronic device assumes one of two stable output states, depending upon the state of the most recently applied input signal. In computer systems this device is used for storing information. Name this common electronic device.

ANSWER: FLIP-FLOP or TOGGLE