

Test: 2021 National Science Bee (C)

Question 1 of 50

Which of these belong to the phylum Nematoda?

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- A) C. Elegans
 - B) Platyhelminthes
 - C) earthworms
 - D) worm-eating warbler

Question 2 of 50

Which of these materials is an alloy of copper and zinc?

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- A) bronze
 - B) brass
 - C) pewter
 - D) stainless steel

Question 3 of 50

The D'' (D double prime) is a portion of which of the following layers of the earth?

-
- A) Inner Core
 - B) Moho
 - C) Crust
 - D) Mantle

Question 4 of 50

Which of these is farthest from the earth?

-
- A) Pluto
 - B) Kuiper Belt
 - C) Oort Cloud
 - D) Makemake

Question 5 of 50

Which of these American bird species went extinct in the early 20th century?

- A) California condor
- B) Great auk
- C) Passenger pigeon
- D) Osprey

Question 6 of 50

Which of the following is an organic compound?

- A) H₂O
- B) C₆H₁₂O₆
- C) NH₃
- D) NaCl

Question 7 of 50

Which of the following plants is an example of an angiosperm?

- A) white oak
- B) gingko
- C) Norway spruce
- D) Boston fern

Question 8 of 50

Which of these treatment methods can be classified as a selective serotonin reuptake inhibitor (SSRI)?

- A) AZT
- B) Zyrtec
- C) Prozac
- D) Warfarin

Question 9 of 50

Which of the following elements is radioactive in its naturally occurring form?

- A) thorium
- B) calcium
- C) sulfur
- D) yttrium

Question 10 of 50

Which of the following does the buoyant force not depend on?

- A) density of the liquid
- B) volume of the submerged object
- C) acceleration due to gravity
- D) composition of the submerged object's container

Question 11 of 50

Which British scientist discovered the way that blood circulates through the body?

- A) Joseph Lister
- B) William Harvey
- C) Humphrey Davy
- D) Joseph Priestley

Question 12 of 50

Which of the following is not considered an irrational number?

- A) π
- B) e
- C) $\sqrt{2}$
- D) i

Question 13 of 50

In computer science, the notation $O(n)$ is used to classify the run-time of loops. What does n refer to?

- A) computer processing speed
- B) available memory
- C) length of code
- D) input size

Question 14 of 50

Which volcano's 1991 eruption led to a temporary global cooling on the order of .5 degrees Celsius for the next two years?

- A) Mount Vesuvius
- B) Eyjafjallajökull
- C) Mount Pinatubo
- D) Kilauea

Question 15 of 50

The integumentary system primarily consists of what organ?

- A) skin
- B) spleen
- C) kidneys
- D) heart

Question 16 of 50

Which of these is a component of DNA but not RNA?

- A) thymine
- B) uracil
- C) guanine
- D) cytosine

Question 17 of 50

Which of the following is the derived SI unit for pressure?

- A) torr
- B) atmosphere
- C) pascal
- D) newton

Question 18 of 50

Which of these would be an appropriate subject for a dendrochronologist to study?

- A) tree rings
- B) echinodermata species
- C) ocean currents
- D) nuclear fission

Question 19 of 50

Which of the following is a concave-down parabola?

- A) $y=x^2+2$
- B) $y=-3x^2-4x$
- C) $y=3x^3-2$
- D) $y=-x+5$

Question 20 of 50

Which of these species has the longest potential lifespan of any known animal?

- A) African gray parrot
- B) Greenland shark
- C) okapi
- D) human being

Question 21 of 50

Which of the following is one of the stages of mitosis?

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- A) gametic phase
 - B) anaphase
 - C) instantaneous phase
 - D) waxing

Question 22 of 50

The element that has the highest electronegativity is a member of what class of elements?

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- A) elements that are liquid at room temperature
 - B) transition metals
 - C) halogens
 - D) noble gases

Question 23 of 50

Which of these physicists was not involved with the Manhattan Project?

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- A) Robert Oppenheimer
 - B) Enrico Fermi
 - C) Werner Heisenberg
 - D) Niels Bohr

Question 24 of 50

The limit of $(1 + 1/n)^n$ as n approaches infinity is equivalent to what constant?

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- A) Faraday number
 - B) Euler's number
 - C) Avogadro's number
 - D) Mach number

Question 25 of 50

What is the term for when a substance changes directly from its solid phase to gas phase?

- A) condensation
- B) vaporization
- C) sublimation
- D) deposition

Question 26 of 50

In what programming paradigm, most commonly used in Java, Python, and C++, are namesake structures “constructed” as instances of specific classes?

- A) functional
- B) object-oriented
- C) array-oriented
- D) variable

Question 27 of 50

Which of the following equations represents a linear function?

- A) $y=3x$
- B) $x^2-3x=5$
- C) $|x|=y$
- D) $x^2+y^2=1$

Question 28 of 50

Which of the following describes virga?

- A) rain that evaporates before it hits the ground
- B) small objects from space that burn up while entering the atmosphere
- C) winds on the leeward side of mountains
- D) light and fresh snow

Question 29 of 50

Which of the following was developed by Anton van Leeuwenhoek during the Dutch Golden Age?

- A) steam engine
- B) microscope
- C) catalytic converter
- D) daguerreotype

Question 30 of 50

If a triangle has two sides of lengths 3 and 4, which of the following cannot be the length of its third side?

- A) 1
- B) 2
- C) 3
- D) 6

Question 31 of 50

Which of the following forces is experienced by a falling object?

- A) electric force
- B) magnetic force
- C) drag force
- D) spring force

Question 32 of 50

In geologic time, the epoch we are currently in is known as what?

- A) Cenozoic
- B) Phanerozoic
- C) Holocene
- D) Quaternary

Question 33 of 50

Event horizons and Hawking radiation are terms used in the study of which phenomenon?

- A) aurora borealis
- B) neutrinos
- C) ozone depletion
- D) black holes

Question 34 of 50

Firn is a thing that can be found where?

- A) at the bottom of the ocean
- B) in the exosphere
- C) on a mountain with a snowcap
- D) inside a proton

Question 35 of 50

The speed of which of these animals is thought to be due to coevolution with the extinct American cheetah?

- A) wombat
- B) pronghorn
- C) Thomson's gazelle
- D) timber rattlesnake

Question 36 of 50

Which of these elements is a gas at standard temperature and pressure?

- A) antimony
- B) bismuth
- C) einsteinium
- D) krypton

Question 37 of 50

Which of these is a biome that can be found in Florida?

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- A) alpine tundra
 - B) taiga
 - C) chaparral
 - D) mangroves

Question 38 of 50

Jaundice and cirrhosis are conditions that affect which organ directly?

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- A) brain
 - B) liver
 - C) uterus
 - D) thyroid

Question 39 of 50

Which of the following is the force that causes the Earth to stay in orbit around the sun?

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- A) electric force
 - B) gravitational force
 - C) solar force
 - D) force of retention

Question 40 of 50

What term refers to an angle greater than 180° but less than 360° ?

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- A) isosceles
 - B) straight
 - C) obtuse
 - D) reflexive

Question 41 of 50

The chemical compound with the formula C_6H_6 is used for which of the following purposes?

- A) as a gasoline additive
- B) studying the solar winds
- C) as a nutritional supplement
- D) cloud seeding

Question 42 of 50

Which field biologist and artist created a book of prints called Birds of America and became the namesake of many nature societies?

- A) John James Audubon
- B) Spencer Baird
- C) John Muir
- D) Aldo Leopold

Question 43 of 50

The study of the energy of subatomic particles is considered part of which branch of physics?

- A) optics
- B) condensed matter physics
- C) astrophysics
- D) quantum physics

Question 44 of 50

Which of the following is not a method for solving quadratic equations?

- A) factoring
- B) graphing
- C) completing the square
- D) integrating

Question 45 of 50

Which of the following is not a simple machine?

- A) pulley
- B) wedge
- C) drill
- D) screw

Question 46 of 50

Which of the following is an insect species?

- A) *Escherichia coli*
- B) *Drosophila melanogaster*
- C) *Falco peregrinus*
- D) *Canis lupus*

Question 47 of 50

No known storm has ever struck which of these four states while designated as a hurricane?

- A) Maine
- B) Hawaii
- C) Alabama
- D) Washington

Question 48 of 50

Which of the following metamorphic rocks may be formed from shale?

- A) quartzite
- B) marble
- C) gneiss
- D) slate

Question 49 of 50

What is the medical term for a heart attack?

- A) osteoporosis
- B) eczema
- C) conjunctivitis
- D) myocardial infarction

Question 50 of 50

The force that prevents an object from falling through the surface on which it rests is known by what term?

- A) buoyant force
- B) normal force
- C) gravitational force
- D) electromagnetic force