



# NATIONAL Science Bee

## QUESTIONS FOR 2018-2019 ONLINE REGIONAL QUALIFYING EXAM (ORQE)

**2 points are awarded for a correct response, 0 for a response left blank, and -1 points are given for an incorrect response.**

- \_\_\_\_\_ 1) Which of the following animals belongs to the class *Mammalia*?  
A) Iguana                      B) Great White Shark                      C) Peregrine Falcon    **D) Aardvark**
- \_\_\_\_\_ 2) Which part of an atom has a positive charge?  
A) Orbital                      **B) Proton**                      C) Electron                      D) Neutron
- \_\_\_\_\_ 3) Which current flows along the Southeast US Coast and helps to keep Europe's climate mild?  
A) El Niño                      B) Alaska Current                      C) Electric Current    **D) Gulf Stream**
- \_\_\_\_\_ 4) Which organ of the human body contains 4 chambers, including the right atrium & left ventricle?  
A) Spleen                      B) Brain                      **C) Heart**                      D) Small Intestine
- \_\_\_\_\_ 5) Which type of clouds are also known as thunderheads, and are where thunderstorms are found?  
A) Cumulus                      B) Stratus                      **C) Cumulonimbus**    D) Cirrus
- \_\_\_\_\_ 6) Which of the following is a carnivorous plant?  
A) Coast redwood                      **B) Venus flytrap**                      C) Rhododendron    D) Weeping willow
- \_\_\_\_\_ 7) Respiration occurs in which organ of the human body?  
**A) Lungs**                      B) Uterus                      C) Ears                      D) Gall bladder
- \_\_\_\_\_ 8) Which element has atomic number 2 and is thus the second lightest element by atomic mass?  
A) Iron                      **B) Helium**                      C) Uranium                      D) Gold
- \_\_\_\_\_ 9) Which of these elements is a liquid at room temperature?  
**A) Mercury**                      B) Silver                      C) Nitrogen                      D) Carbon
- \_\_\_\_\_ 10) Which term is used to describe all of the organisms and their surrounding physical environment in a given location?  
A) Recycling                      B) Kingdom                      C) Cell                      D) Ecosystem

- \_\_\_\_\_ 11) Which of these species can be considered an apex predator?  
A) **Siberian Tiger**    B) Blue Jay    C) Monarch Butterfly    D) White Oak
- \_\_\_\_\_ 12) Different forms of the same element which differ in their number of neutrons are called what?  
A) Ions    B) **Isotopes**    C) Protons    D) Quarks
- \_\_\_\_\_ 13) Which of these US cities can be said to have primarily a hot desert climate?  
A) **Phoenix**    B) Chicago    C) Miami    D) San Diego
- \_\_\_\_\_ 14) Which of the following species practices hibernation?  
A) **Black Bear**    B) Giraffe    C) Bald Eagle    D) Blue Whale
- \_\_\_\_\_ 15) All of the interior angles of a triangle sum to how many degrees?  
A) 60    B) 90    C) **180**    D) 360
- \_\_\_\_\_ 16) Which term is defined in computer science as “a process or set of rules to be followed in calculations or other problem-solving operations.”  
A) ENIAC    B) Computer language    C) Application    D) Algorithm
- \_\_\_\_\_ 17) What is an example of a triatomic molecule?  
A) Ethanol    B) Butane    C) Glucose    D) **Water**
- \_\_\_\_\_ 18) In physics, which simple machine consists of a beam or rod that pivots at a fulcrum?  
A) Pulley    B) **Lever**    C) Steam engine    D) Wedge
- \_\_\_\_\_ 19) Any natural number greater than 1 that is not divisible by any number than itself and 1 is what type of number?  
A) Perfect    B) Irrational    C) **Prime**    D) Imaginary
- \_\_\_\_\_ 20) Alan Turing was a pioneering scientist in which field?  
A) Chemistry    B) **Computer Science**    C) Physics    D) Astronomy
- \_\_\_\_\_ 21) Which element can be split in nuclear fission, and thus has applications in weapons and power generation?  
A) Aluminum    B) Bromine    C) Lithium    D) **Uranium**
- \_\_\_\_\_ 22) The branch of physics that studies light and its properties is known as what?  
A) Mechanics    B) Electromagnetism    C) **Optics**    D) Nuclear physics
- \_\_\_\_\_ 23) Amino acid residues form chains to create what biomolecules?  
A) **Proteins**    B) Carbohydrates    C) Lipids    D) Solvents
- \_\_\_\_\_ 24) Which genus of bacteria is often implicated in food poisoning?  
A) Canis    B) **Salmonella**    C) Australopithecus    D) Amoeba

- \_\_\_\_\_ 25) Which of the following is a type of mental illness?  
A) Emphysema      **B) Schizophrenia**      C) Osteoporosis      D) Aneurysm
- \_\_\_\_\_ 26) Which of the following is not a major classification of rock?  
A) Igneous      B) Sedimentary      C) Metamorphic      **D) Mineral**
- \_\_\_\_\_ 27) Which component of blood is responsible for forming clots, and thus stopping bleeding?  
A) Blood plasma      B) White Blood Cells      C) Red Blood Cells      **D) Platelets**
- \_\_\_\_\_ 28) Which of these planets does not have any moons?  
**A) Mercury**      B) Mars      C) Jupiter      D) Saturn
- \_\_\_\_\_ 29) By which process do plants convert light into energy?  
A) Tropism      B) Endoplasmic Reticulum      **C) Photosynthesis**      D) Krebs Cycle
- \_\_\_\_\_ 30) Which vitamin is found in high amounts in citrus fruits, and a lack of it can lead to scurvy?  
**A) Vitamin C**      B) Vitamin D      C) Vitamin E      D) Vitamin K
- \_\_\_\_\_ 31) Which organelle is found at the edge of an animal cell?  
A) Nucleus      B) Lysosome      **C) Cell membrane**      D) Vacuole
- \_\_\_\_\_ 32) Which of the following elements is one of the noble gases?  
**A) Xenon**      B) Oxygen      C) Plutonium      D) Hydrogen
- \_\_\_\_\_ 33) Which process refers to a type of biological interaction that is beneficial for both organisms involved?  
A) Parasitism      B) Predation      C) Amensalism      **D) Mutualism**
- \_\_\_\_\_ 34) Humans share the greatest share of their DNA with which of these four animals?  
A) Lion      **B) Chimpanzee**      C) Gray Wolf      D) Domestic Cat
- \_\_\_\_\_ 35) Hippocrates and Galen were ancient scientists best known for studying what?  
**A) Medicine**      B) Electricity      C) Microbiology      D) Astronomy
- \_\_\_\_\_ 36) Retreating glaciers can leave behind deposits of rock and sediment known as what?  
A) Seamounts      B) Tarns      **C) Moraines**      D) Exoskeletons
- \_\_\_\_\_ 37) Which of the following is an example of an arachnid?  
A) Dragonfly      **B) Scorpion**      C) Oyster      D) Lobster
- \_\_\_\_\_ 38) Which division in taxonomy comes between a kingdom and a class?  
**A) Phylum**      B) Order      C) Genus      D) Species
- \_\_\_\_\_ 39) Which layer of the atmosphere lies farthest from the surface of the earth?  
**A) Exosphere**      B) Mesosphere      C) Stratosphere      D) Troposphere

- \_\_\_\_\_ 40) Which is the longest bone in the human body?  
A) Patella                    **B) Femur**                    C) Ulna                    D) Radius
- \_\_\_\_\_ 41) Which disease is common in certain tropical regions of Africa, but not in the USA?  
**A) Malaria**                    B) Lung Cancer                    C) Diabetes                    D) Multiple Sclerosis
- \_\_\_\_\_ 42) Where would you commonly find stalagmites and stalactites?  
A) In the sun                    B) On mountain tops **C) In caves**                    D) In atomic nuclei
- \_\_\_\_\_ 43) Which of these planets is closest to the Kuiper Belt?  
A) Venus                    B) Earth                    C) Jupiter                    **D) Neptune**
- \_\_\_\_\_ 44) The diffusion of water across a semipermeable membrane is known as what?  
**A) Osmosis**                    B) Respiration                    C) Excretion                    D) Hydrolysis
- \_\_\_\_\_ 45) In which of these locations is the force of gravity the strongest?  
A) The Moon                    **B) On Earth's Surface**  
C) The International Space Station                    D) Interstellar Space
- \_\_\_\_\_ 46) The earth's tectonic plates were once united in a supercontinent that is given which name?  
A) Eurasia                    B) Neanderthal                    **C) Pangaea**                    D) Zealandia
- \_\_\_\_\_ 47) Which of the following is a form of precipitation?  
**A) Sleet**                    B) Solar wind                    C) Tornado                    D) Tsunami
- \_\_\_\_\_ 48) Which of these tree species is most widespread throughout Northern New England?  
**A) Sugar Maple**                    B) Date Palm                    C) Sequoia                    D) Baobab
- \_\_\_\_\_ 49) How many bones are there in the human body?  
A) 2                    B) 23                    **C) 206**                    D) 650
- \_\_\_\_\_ 50) Which of the following is a greenhouse gas that has been implicated in climate change?  
A) Oxygen                    B) Argon                    C) Nitrogen                    **D) Methane**