

NOSB Practice Questions

Team Gastineau (Juneau-Douglas High School)

Sarah Bixby, Jessica Page, Jolene Reilly, Adriana Rodriguez

Question 1: Which seafloor sediment is derived from land?

- W. Hydrogenous sediment
- X. Lithogenous sediment**
- Y. Biogenous sediment
- Z. All of the above

Correct answer: X

Question 2: Which type of sediment is easy to transport but hard to erode?

- W. Clay**
- X. Pebbles
- Y. Sand
- Z. Silt

Correct answer: W

Question 3. Where are the deepest places in the ocean?

- W. Abyssal plains
- X. Continental slope
- Y. Trenches**
- Z. Mid-ocean ridge

Correct answer: Y

Question 4. Where does ocean salinity tend to be the highest?

- W. Near river mouths
- X. Near equator
- Y. At desert latitudes**
- Z. In deeper waters

Correct answer: Y

Question 5. During what time does the bottom dwelling vegetation reproduce?

- W. During tide change**
- X. During mating season
- Y. During the lunar time table
- Z. Every 2-3 weeks

Correct answer: W

Question 6. What is the bottom of the ocean called?

- W. Pelagic habitat
- X. Benthic habitat**
- Y. Marine habitat
- Z. Oceanic habitat

Correct answer: X

Question 7. What is the scientific name for a sea slug?

- W. Sea anemones
- X. Coral polyps
- Y. Nudibranchs**
- Z. Sea urchins

Correct answer: Y

Question 8. What type of defense does a flounder have against its predators?

- W. Camouflage**
- X. Poison
- Y. Stingers
- Z. Speed

Correct answer: W

Question 9. When a bottlenose dolphin sleeps, how does its body react?

- W. Its heart slows
- X. Its organs shut down
- Y. One side of its brain shuts down, along with the opposite eye
- Z. The heart slows and the dolphin's eyes remain open in order to stay alert**

Correct answer: Z

Question 10. In which direction do the tidal bulges move?

- W. East to west**
- X. West to east
- Y. North to south
- Z. South to north

Correct answer: W

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Question 1. National Marine Fisheries Service has recently placed restrictions on the pollock trawl fishery in the Aleutians because of _____.

- W. A dramatic reduction in the population of pollock
- X. The high salmon by-catch resulting from this fishery
- Y. Concern for protecting the population of endangered Steller sea lions**
- Z. The reduction of alien activity

Correct answer: Y

Question 2. Based on recorded shark attacks, 31% occurred in which distance from shore?

- W. 15-30 m (51-100 ft)
- X. 45-60 m (150-200 ft)
- Y. 0-15 m (0-50 ft)**
- Z. 30-45 m (100-150 ft)

Correct answer: Y

Question 3. In 1930, which oceanographer was the first to view bioluminescent organisms alive in their habitat?

- W. William Beebe**
- X. Jacques Cousteau
- Y. Wyville Thomson
- Z. Prince Albert I of Monaco

Correct answer: W

Question 4. What are trilobites?

- W. An instrument used to calculate electrons presented in 1 ml of H₂O
- X. A viviparous
- Y. Group of arthropods that became extinct about 230 million years ago**
- Z. A superorder within the class Osteichthys to which modern bony fish belong

Correct answer: Y

Question 5. The Earth's crust is made up of two distinct parts, the continental rocks and the basaltic rock. What is another term used when describing basaltic rock?

- W. Sial
- X. Moho
- Y. Nacre
- Z. Sima**

Correct answer: Z

Question 6. What type of wave has no vertical movement?

- W. Seismic wave
- X. Standing wave**
- Y. Internal wave
- Z. Capillary wave

Correct answer: X

Question 7. What type of wave has an ellipsal orbit?

- W. Shallow-water wave**
- X. Deepwater wave
- Y. Transitional wave
- Z. None of the above

Correct answer: W

Question 8. Half a wave's height is also referred to as its what?

- W. Period
- X. Wavelength
- Y. Crest
- Z. Amplitude**

Correct answer: Z

Question 9. What type of sedimentation has an extraterrestrial origin?

- W. Cosmogenous**
- X. Terrigenous
- Y. Biogenous
- Z. None of the above

Correct answer: W

Question 10. What type of boundary would most likely create a volcano?

- W. Convergent**
- X. Divergent
- Y. Transform
- Z. None of the above

Correct answer: W

Team Tsunami (Juneau-Douglas High School)

Wesley Brooks, Cal Craig, Jeff Fanning, Breanne Rohm

Question 1. Which factor indicates the presence of an ocean current?

- W. More extreme tides
- X. Temperature change**
- Y. Frequent earthquakes
- Z. Meteor showers

Correct answer: X. Temperature change

Question 2. The spinning of the Earth from west to east causing deflection of movement to the right in Northern Hemisphere, and left in the Southern Hemisphere, is known as:

- W. Surface winds
- X. Surface tension
- Y. The Coriolis Effect**
- Z. Ocean currents

Correct answer: Y. The Coriolis Effect

Question 3. 30% of seawater's inorganic salt content is

- W. Carbonic acid
- X. Chloride
- Y. Sulfate
- Z. Sodium**

Correct answer: Z. Sodium

- Question 4. What influences wind waves?
- W. Wind speed, ocean depth, and period
 - X. Wind speed, fetch, and time**
 - Y. Underwater geological movement
 - Z. Wind speed, ocean currents, and length

Correct answer: X. Wind speed, fetch, and time

- Question 5. The polarity and hydrogen bonding of water molecules account for which of these physical properties in the ocean?

- W. Water is able to dissolve more substances than any other liquid
- X. Water absorbs light rays quickly
- Y. Water absorbs light waves quickly
- Z. All of the above**

Correct answer: Z. All of the above

- Question 6. Solar insolation creates

- W. Vertical air currents**
- X. Global warming
- Y. Higher than normal tides
- Z. Decrease in waves and wave size

Correct answer: W. Vertical air currents

- Question 7. The supralittoral zone is

- W. Marked by the beginning of a barnacle zone
- X. The area above the high tide mark**
- Y. Occupied mainly by brown algae
- Z. Below the tidal zone

Correct answer: X. The area above the high tide mark

- Question 8. Characteristics of a bivalve include

- W. One shell covering its entire body
- X. Fur/ hair
- Y. An endoskeleton
- Z. Two shells**

Correct answer: Z. Two shells

- Question 9. Common green algae is also known as

- W. Ulva**
- X. Nereocystis
- Y. Sporophyte
- Z. Gametophyte

Correct answer: W. Ulva

- Question 10. The fish class of agnatha is considered the most primitive class of fish because it lacks
- W. Pectoral fins
 - X. A jaw and bony skeleton**
 - Y. Eyes on both sides of its head
 - Z. Sexual appendages

Correct answer: X. A jaw and bony skeleton

Team Typhoon (Juneau-Douglas High School)

John Bryant, Erin Hanson, Robbie Bishop, Alana Hein

- Question 1. What is the highest ocean temperature in the Pacific?
- W. 80 degrees F
 - X. 90 degrees F**
 - Y. 70 degrees F
 - Z. 100 degrees F

Correct answer: X

- Question 2. How many cells is the model of atmospheric circulation?
- W. 6
 - X. 7
 - Y. 8
 - Z. 9**

Correct answer: Z

- Question 3. Which western boundary current is found on the North Pacific?
- W. The Japan Current**
 - X. The Gulf Stream
 - Y. The Brazil Current
 - Z. The Agulhas Current

Correct answer: W

- Question 4. Which current is the warmest?
- W. The Western Boundary Current**
 - X. The Northern Boundary Current
 - Y. The Eastern Boundary Current
 - Z. The Southern Boundary Current

Correct answer: W

Question 5. Where does the greatest amount of heat get transferred from the surface currents?

- W. The northern latitudes
- X. The southern latitudes
- Y. The mid-latitudes**
- Z. The western latitudes

Correct answer: Y

Question 6. What is the deepest depth that is still considered surface water?

- W. 530 feet
- X. 600 feet
- Y. 660 feet**
- Z. 710 feet

Correct answer: Y

Question 7. What is a wave trough?

- W. The valley between wave crests**
- X. The highest part of the wave above the average water level
- Y. The horizontal distance between two wave crests
- Z. The vertical distance between two crests

Correct answer: W

Question 8. What is wave diffraction?

- W. The propagation of a wave around an obstacle**
- X. The additive formation of large crests or deep troughs
- Y. The cancellation effect of large crests
- Z. The movement of a wave away from an obstruction

Correct answer: W

Question 9. What chemical is used in proteins?

- W. Sodium
- X. Sulfur**
- Y. Silicon
- Z. Zinc

Correct answer: X

Question 10. What chemical is used in chlorophyll?

- W. Iodine
- X. Chlorine
- Y. Magnesium**
- Z. Potassium

Correct answer: Y

Team Sculpin (Juneau-Douglas High School)

Evan Forsmo, David Sulser, Dannielle Grunow, Kelly Whistler

Category—Geography

Question 1. The Island Nation of the Maldives is located in what ocean?

- W. Pacific
- X. Indian**
- Y. Atlantic
- Z. Arctic

Correct answer: X

Category—Geology

Question 2. What type of rock is formed from solidified lava?

- W. Igneous**
- X. Sedimentary
- Y. Metamorphic
- Z. Glacial

Correct answer: W

Category—Physics

Question 3. The valley between wave crests below average water level is?

- W. Wave trough**
- X. Wave height
- Y. Wave length
- Z. Wave period

Correct answer: W

Category—Physics

Question 4. The most abundant element in the ocean is?

- W. Hydrogen
- X. Oxygen**
- Y. Nitrogen
- Z. Sodium

Correct answer: X

Category—Physics

Question 5. The sunlit layer of water at the ocean's surface is called what zone?

- W. Photic zone**
- X. Euphotic zone**
- Y. Dysphotic zone
- Z. Aphotic zone

Correct answer: W or X

Category—Geology

Question 6. The outermost layer of the earth is called the?

- W. Lower mantle
- X. Lithosphere
- Y. Asthenosphere
- Z. Crust**

Correct answer: Z

Category—physics

Question 7. Abyssal plains are?

- W. Rolling hills on the ocean floor
- X. Flat, featureless ocean floor**
- Y. Only found in the Pacific
- Z. Only found in the Atlantic

Correct answer: X

Category—Physics

Question 8. Osmosis is?

- W. When H₂O of higher concentrations all leave the cell
- X. When H₂O of higher concentrations all enter the cell
- Y. When there is an equal amount of salt and H₂O inside the cell and outside the cell**
- Z. When 100 percent of H₂O is distilled in a cell.

Correct answer: Y

Category—Biology

Question 9. Red tide affects which shellfish the most?

- W. Lobster
- X. Shrimp
- Y. Clams**
- Z. Snails

Correct answer: Y

Category—Physics

Question 10. The average temperature of all oceans is?

- W. 0 Degrees F.
- X. 32 Degrees F.
- Y. 39 Degrees F.**
- Z. 42.6 Degrees F.

Correct answer: Y