

NAME_(PRINT)_____

1. The oceans cover about
 - a. 1/3 the earth's surface
 - b. About 1/2 the earth's surface
 - c. About 71%**
 - d. About 99%
2. What famous scientist first theorized that atolls developed from a combination of a sinking islands and coral build-up
 - a. Wegener
 - b. Ekman
 - c. Darwin**
 - d. Cousteau
3. Imaginary lines running from the north to the south pole are known as
 - a. Longitude lines**
 - b. Latitude lines
 - c. The equator
 - d. The Arctic and Antarctic Circles
4. An explanation for an increase in shark attacks in Cape Cod Bay is
 - a. Cruise ships are dumping more garbage
 - b. There has been a moratorium on seal hunting**
 - c. People overfished haddock
 - d. None of these
5. When the glaciers retreat (move north), the ocean levels
 - a. rise**
 - b. fall
 - c. remain the same
 - d. become more acidic
6. The Richter scale is used to measure
 - a. Wave speed
 - b. Earthquakes**
 - c. Speed of winds
 - d. Quantity of minerals dissolved in water

7. El Niño has a parallel in
 - a. The Indian Ocean monsoons**
 - b. The hurricane season in the United States
 - c. The tornado season on the Great Plains
 - d. The typhoon season in East Asia
8. Most marine organisms are found
 - a. In the intertidal zone
 - b. In the area over the continental shelf**
 - c. Below the sea bottom
 - d. In the deepest parts of the ocean
9. Which of the characteristics of water changes in the most irregular way as one measures it in the water depth?
 - a. sunlight
 - b. temperature
 - c. pressure
 - d. oxygen**
10. An animal which helps control excessive grazing on kelp is
 - a. The sea otter**
 - b. Sea urchins
 - c. Star fish
 - d. Clams
11. Which can be found in the Peoples of the Pacific Hall?
 - a. Weapons with sharks' teeth
 - b. Shells that can be played as a musical instrument
 - c. Shell and wood objects used for navigation
 - d. All of these**
12. The loss of an organism in the middle of the food chain (i.e. a secondary predator) can have an effect
 - a. On organisms higher up in the food chain
 - b. On organisms further down the food chain
 - c. Both of these**
 - d. Neither (a) nor (b)
13. Which is not an animal?
 - a. sponge
 - b. jellyfish
 - c. mushroom**
 - d. sea cucumber

14. Which of the following are mammals
- a. Sharks
 - b. porpoises**
 - c. Rays
 - d. Moray eels
15. Which of the following is a filter feeder?
- a. Killer whales
 - b. Tiger sharks
 - c. Giant squid
 - d. None of these**
16. All autotrophs
- a. Are very large
 - b. Are all microscopic
 - c. Are all marine
 - d. None of the above**
17. In the Hall of Ocean Life, bioluminescence is shown in the case dealing with
- a. Deep ocean environments**
 - b. estuaries
 - c. mangrove swamps
 - d. polar oceans
18. Increasing amounts of carbon dioxide in the ocean
- a. Is beneficial to shell fish
 - b. Can be detrimental to shell fish**
 - c. Has no effect on shell fish
 - d. Causes the ocean to become less acidic
19. Sudden growths of dangerous largely one celled photosynthetic organisms are known as
- a. HABs**
 - b. Bait ball formations
 - c. Jellyfish
 - d. eutrophication
20. An organism without a membrane surrounding a nucleus is called
- a. A eukaryote
 - b. A prokaryote**
 - c. An animal
 - d. A plant

21. Which of the following can have a negative impact on marine organisms?
- a. Salinity
 - b. Temperature
 - c. Large scale weather phenomenon
 - d. All of these**
22. Nutrients being brought up from the ocean depths is known as
- a. A limiting factor
 - b. An upwelling**
 - c. A cline
 - d. A meridian
23. The Coriolis Effect causes winds and currents to
- a. Move to the right everywhere
 - b. Move to the left in the southern hemisphere**
 - c. Move to the left in the northern hemisphere
 - d. Becomes more intense at the equator
24. Residence time refers to
- a. how long an element stays in a given sphere**
 - b. how long and organism stays in its ecological niche
 - c. how long a sperm whale can stay underwater
 - d. none of there
25. Oxygen is removed from the surroundings when
- a. During photosynthesis
 - b. Organic material decays**
 - c. CO₂ is absorbed by the ocean
 - d. None of these
26. When respiration takes place, O₂ moves from
- a. The hydrosphere to the lithosphere
 - b. The biosphere to the atmosphere**
 - c. The lithosphere to the hydrosphere
 - d. The atmosphere to the biosphere
27. Which function does a wetland serve?
- a. Filtering materials out of water
 - b. Keeping erosion from happening
 - c. Serving as a breeding grounds for many organisms
 - d. All of these**

28. In the two-layered ocean discussed in class, the upper layer contains
a. Sunlight
b. Infauna
c. Most nutrients
d. Benthic animals
29. The highest of the low tides are called
a. Spring tides
b. Ebb tides
c. Neap tides
d. None of these
30. Which of the following has the greatest effect on the tides
a. The Sun
b. The Moon
c. Mars
d. The Gulf Stream
31. Which of the following is a measure of wind speed?
a. Beaufort scale
b. Richter scale
c. Fujita scale
d. Safir Simpson scale
32. In all cases where a species has gone extinct or nearly extinct, it has resulted
a. in a major impact on the food chain in the area
b. no impact on the food chain in the area
c. sometimes in a major impact and other times not
d. Uncertain since in recent times no species has gone extinct
33. Which act is set up to protect specific animals?
a. Clean Water Act
b. Marine Mammals Protection Act
c. MARPOL
d. None of these
34. Small boat commercial fishermen often ignore catch regulation because:
a. They are greedy
b. They have no other way to make money
c. They are sure the government is lying to them
d. They don't know they shouldn't take too many fish

35. The recovery of a species from over exploitation is dependent on
- a. Gestation periods (length of pregnancy)
 - b. How many fish are in the population
 - c. The age at which the species becomes sexually mature
 - d. All of these**
36. The governmental agency involved in marine safety, environmental protection, law enforcement and military operations is
- a. The US Coast Guard**
 - b. The US Marines
 - c. The US Navy
 - d. The Environmental Protection Agency
37. "Ghost fishing" has to do with
- a. A tale about a supernatural trying to catch ghostly fish
 - b. Marine life which is caught in fishing line and other gear left in the ocean which will not be retrieved by anyone**
 - c. A ghost ship which trawls and catches fish and brings them on board
 - d. A person who sneaks away from their job to go fishing
38. At the North Pole, how many of the visible stars are circumpolar?
- a. None
 - b. All**
 - c. 90 %
 - d. 50%
39. Recruitment overfishing means
- a. Taking only large adult fish**
 - b. Taking only smaller fish
 - c. Taking fish of all sizes indiscriminately
 - d. Always taking more fish than previously
40. What is the number of this course?
- a. EESC 101
 - b. Music 101
 - c. EESC 1050**
 - d. All of the above.

41. The major U.S. governmental organization involved with environmental protection
- a. The Environmental Protection Agency (EPA)**
 - b. NYC Department of Environmental Protection
 - c. Greenpeace
 - d. Sea Shepherd
42. The International Whaling Commission in its regulations distinguishes
- a. Commercial whaling
 - b. Scientific whaling
 - c. Aboriginal whaling
 - d. All of these**
43. The ship associated with a major oil spill is
- a. Costa Concordia
 - b. Piper alpha
 - c. Exxon Valdez**
 - d. Deep Water Horizon
44. The largest oil spill was involved with
- a. Piper Alpha
 - b. Ranger
 - c. Deepwater Horizon**
 - d. Exxon Valdez
45. Some oil has been removed from the ocean water after spills by
- a. Bacteria
 - b. Absorbtion
 - c. Controlled fires
 - d. All of these**
46. The disaster which was in part responsible for the beginnings of the science of seismology occurred in
- a. Fukushima
 - b. Galveston
 - c. Santorini
 - d. Lisbon**

47. One of the worries in salvaging the Costa Concordia Cruise ship was that
- a. They wouldn't make enough money to cover the expenses
 - b. That it would take away a tourist attraction
 - c. That it would drift out to sea
 - d. That the hull might rupture and produce an oil spill**
48. The process by which oil is removed by having it cling to some object is called
- a. Adsorption**
 - b. Absorption
 - c. Liquifucation
 - d. None of these
49. Micro beads are very small plastic beads that are commonly found in
- a. Shampoos
 - b. Tooth paste
 - c. Soap
 - d. All of these**
-
50. If something is said to be degradation by light is called
- a. Biodegradable
 - b. Chemodegradable
 - c. Photodegradable**
 - d. Oxydegradable

YOU HAVE REACHED THE HALF WAY POINT. YOU CAN STOP HERE AND HAVE EACH QUESTION COUNTED AS 2 POINTS OR CONTINUE TO THE END AD HAVE EACH QUESTION COUNT AS 1 POINT

51. Banana and orange peels are said to biodegrade in a few weeks, but some have been found in garbage dumps after 25 years! What would explain that?
- a. There is no light
 - b. There are no organisms there to break them down**
 - c. There is a problem dating how long they were actually there
 - d. They aren't really biodegradable

52. Which of the following has the longest “life”?
- a. Organic material
 - b. Paper
 - c. plastic**
 - d. Wool socks
53. Oil can be consumed by some bacteria so it is biodegradable. So why worry about oil spills from tankers?
- a. There aren’t enough bacteria that can degrade a spill of that size
 - b. Even in a short time a spill can do considerable damage to many kinds of organisms
 - c. The cost of cleaning it is passed on to consumers of oil who have to pay a higher price for fuel
 - d. All of these**
54. The difference in terms of current “climate change” with previous changes in the last 1,000,000 years is
- a. The slower speed with which it is happening
 - b. The earth has never been this warm
 - c. There has never been this much input from humans before**
 - d. That previous climate changes, unlike this one have never been accompanied by extinctions.
55. An important fishing industry impacted by El Niño and overfishing is one dealing with
- a. Tuna
 - b. Seals
 - c. Anchovies**
 - d. Tilapia
56. In years with a strong La Niña conditions winds blow from which direction?
- a. North
 - b. South
 - c. East
 - d. West**
57. During which period does upwelling stop?
- a. The warm phase**
 - b. The cold phase
 - c. When high pressure is over the eastern part of the Pacific

- d. When the thermocline reached the surface near Peru
- 58. New seas and gulfs can be created by
 - a. Movement of tectonic plates
 - b. Rising sea levels
 - c. Both of there**
 - d. Neither of these
- 59. Water in the open ocean is called
 - a. Littoral
 - b. Neritic
 - c. Pelagic**
 - d. Hadalpelagic
- 60. Eutrophication involves
 - a. The increased availability of an otherwise limiting factor
 - b. Often produces large algae blooms
 - c. Can lead to deoxygenation of water
 - d. All of these**
- 61. Primary producers are
 - a. Autotrophs**
 - b. Heterotrophs
 - c. Predators
 - d. None of these
- 62. Which is the highest level taxon in this list?
 - a. Genus
 - b. Family
 - c. Class**
 - d. Order
- 63. Clades and cladistics are involved with
 - a. classifying organisms**
 - b. classify types of ships
 - c. specifying types of environments
 - d. measuring certain aspects of sea water
- 64. Wetlands are often endangered because
 - a. They occur where rivers meet the ocean and these are places people tend to build cities for ports
 - b. The rising sea levels can inundate them
 - c. Rivers are diverted

- d. All of these**
65. Fish that are caught unintentionally and then thrown back dead into the sea are known as
- a. By catch**
 - b. Anadromous fish
 - c. Catadromous fish
 - d. Surplus fish
66. The greatest catch of a species that will ensure the long term viability of the species is the definition of.
- a. Growth overfishing
 - b. Maximum sustainable yield**
 - c. Recruitment overfishing
 - d. By catch
67. Early anthropologists thought there was an early evolutionary sequence that went
- a. From magic to religion to science**
 - b. From magic to science to religion
 - c. From religion to magic to science
 - d. None of these
68. Diving for a crucifix is a ritual found
- a. Among Greeks in Greece
 - b. Among Greeks in many parts of the world**
 - c. Only among Greek sponge divers
 - d. Is not found among Greeks at all
69. Pollywogs and Sons of Neptune are associated with
- a. Frogs**
 - b. Crossing the line ceremonies**
 - c. Environmentalist groups
 - d. None of these
70. A disease caused by diving with air pumped down to the diver is
- a. Decompression sickness
 - b. Caisson disease
 - c. The bends
 - d. All of these are the same**

71. Symbols differ from signs in that
- a. Signs are arbitrary
 - b. Signs and symbols are the same thing
 - c. Symbols are arbitrary**
 - d. Symbols are metal musical instruments you strike together
72. The term "anthropomorphism" means
- a. Attributing human characteristics to non-humans**
 - b. Giving things the shape of human
 - c. Applies only to mammals
 - d. Applies only to plants
73. About how long ago did the recent ice age start to end?
- a. 300 years ago
 - b. 15,000 years ago**
 - c. 500,000 years ago
 - d. 1,000,000 years ago
74. "Culture" has been defined anthropologically as
- a. Doing sophisticated things like going to the art museums and the opera
 - b. Being very upper class
 - c. Shared learned behavior**
 - d. All of these
75. The approximate depth at which there are radical changes in salinity, temperature, light and so on is
- a. 10 meters
 - b. 33 feet
 - c. 50 meters**
 - d. 1000 feet
76. Navigation charts for currents and stars are made of wood and shells by what people?
- a. Australian aborigines
 - b. The Makah Indians
 - c. The Phoenicians the model.
 - d. Polynesians**

77. Which part of Darwin's theory had to be modified?
- a. Natural variation**
 - b. Struggle for existence
 - c. Natural selection
 - d. Survival of those more adapted
78. Typically, how many high tides occur each day?
- a. 2**
 - b. 4
 - c. 1
 - d. None of these
79. Most waves are caused by
- a. Tides
 - b. Winds**
 - c. Ships
 - d. Pressure
80. In what part of the world have rising sea levels caused problems with burials?
- a. China
 - b. Japan
 - c. The Pacific Islands**
 - d. Peru
81. Which is a form of primary production?
- a. Grazing
 - b. Chemosynthesis**
 - c. Fish farming
 - d. None are forms of primary production
82. Which term is no longer in use?
- a. Tidal wave
 - b. Rogue wave
 - c. Underwater wave
 - d. All are in use**
83. Organisms have always been appearing and disappearing. This commonly occur rate of extinction is known as
- a. Mass extinctions
 - b. Background extinctions**

- c. Both of these
 - d. None of these
84. The deepest part of the ocean is known as
- a. Bathypelagic
 - b. Littoral
 - c. Hadalpelagic**
 - d. Epipelagic
85. As water chills at the poles
- a. It becomes denser
 - b. It loses its minerals
 - c. It sinks to the bottom and begins to move toward the equator
 - d. All of these**
86. Sargassum refers to
- a. A seaweed**
 - b. An echinoderm
 - c. A fungus
 - d. One of the Archea
87. Who is seen as the father of oceanography?
- a. Capt. James Cook
 - b. Charles Darwin
 - c. Charles Wyville Thomson**
 - d. Jacques Cousteau
88. Magic often appears when
- a. The rest of the supernatural structure lacks gods
 - b. When there is no science
 - c. When there is high risk**
 - d. None of these
89. When CO₂ moves to the lithosphere it is moving into
- a. Something alive
 - b. Water
 - c. Rocks**
 - d. The air
90. Waves are impacted by
- a. The speed of the wind
 - b. The duration of the wind

- c. The distance over which wind travels unbroken
 - d. All of these**
91. The term tidal wave is the same things as
- a. A tsunami
 - b. A rogue wave
 - c. A wind driven wave
 - d. None of these**
92. One of the problems had by the Mary Celeste was
- a. A defective chronometer**
 - b. A defective rudder
 - c. An uncooperative crew
 - d. None of these
93. Which of the following have rather different technical meanings than usage meanings?
- a. Tale
 - b. Theory**
 - c. Guess
 - d. None. All have the same technical and usage definitions
94. The Sapir Whorf hypothesis deals with
- a. Plate tectonics
 - b. Language and culture and perception**
 - c. Evolution
 - d. Ocean currents
95. According to Malinowski, the most important way that science differs from religion in that
- a. Science is in the profane, magic in the sacred**
 - b. Science knows how things really work, whereas magic doesn't
 - c. Magic is more like science than religion
 - d. Science appears when religion fails.
96. Which is not an animal?
- a. sponges
 - b. protists**
 - c. echinoderms
 - d. arthropods

97. The greatest water disaster in terms of loss of life occurred in the United States in
- a. **Galveston, Texas**
 - b. Johnstown
 - c. New Orleans, Louisiana
 - d. Lituya Bay, Alaska
98. Sharks
- a. **Are cartilaginous**
 - b. Are all capable of eating people
 - c. Are aquatic mammals
 - d. Kill more people than people kill them
99. Nomura jellyfish are found largely
- a. In the South Pacific
 - b. **In the area around East Asia**
 - c. In the area around North Africa
 - d. On the West coast of the United States
100. What do chemosynthesis and photosynthesis have in common?
- a. They both produce oxygen
 - b. **They allow the organisms to be autotrophs**
 - c. They allow the organisms to become motile (move around)
 - d. They both require sun light.

NAME _____

EXTRA CREDIT

QUESTION 101

What do chemosynthesis and photosynthesis have in common?

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QUESTION 102. What is your longitude if you have been sailing from California toward Asia and you crossed the Great Circle which is the Prime meridian a few minutes ago. What would be your approximate longitude?

- (a) 179 degrees East
- (b) 179 degrees West
- (c) 181 degrees East
- (d) 181 degrees West