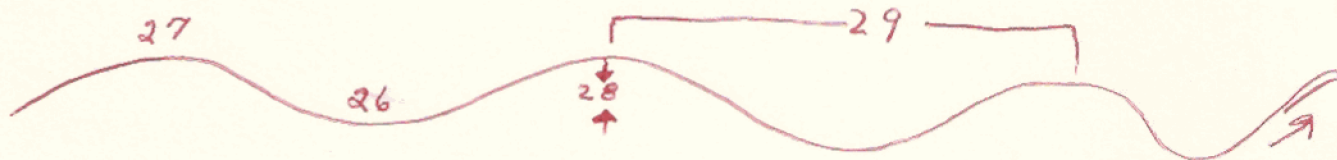


21. The strongest influence upon tides is:
- sun
 - moon
 - wind stars
 - none of these
22. You can expect the highest spring tide when sun, moon and earth is in.
- quadrature
 - conjunction
 - syzygy
 - both a and c
23. The estuary is best defined as:
- semi enclosed
 - coastal
 - fresh/salt water
 - directly connected to the sea
 - all of them
24. Common life of the estuary attached to rocks is _____
- marsh grass
 - ribbed mussel
 - fresh/salt water
 - directly connected to the sea
 - all of them
25. The end product of a photosynthetic reaction is:
- sugar
 - oxygen
 - sunlight
 - energy none of these

IDENTIFY ASPECTS OF WAVE NOMENCLATURE (26 – 29)



- trough
 - crest
 - length
 - height
 - amplitude
30. Waves break on a beach because:
- bottom drag
 - slow moving trough
 - shallow water
 - bent cusp
 - all of these

31. Breaker: Capillary and Translation: _____
- gravity
 - sea
 - swell
 - all of these
32. The type of wind driven wave found in large bays or semi enclosed areas is:
- bore
 - seiche
 - tsunami
 - long shore
 - edge wave
33. Tsunami: tidal as undertow: _____
- rip
 - rap
 - rip/rap
 - bore
 - none of these
34. Open ocean salinity is expressed as:
- 3.5%
 - 35 ppt
 - 35%
 - 350⁰⁰ppm
 - all but c
35. In measuring salinity the salts usual standard is the chlorine ion concentration of ____%
- 77%
 - 10%
 - 55%
 - 3%

MATCH THE FOLLOWING TRACE ELEMENTS ARE ARE IN LARGER MARINE CONCENTRATION

- | | |
|------------|-------------------------|
| 36. Iodine | a. crab/lobster blood |
| 37. Nickel | b. sea weed – kelp |
| 38. Lead | c. clams/mollusks |
| 39. Cobalt | d. variety of organisms |
| 40. Copper | |

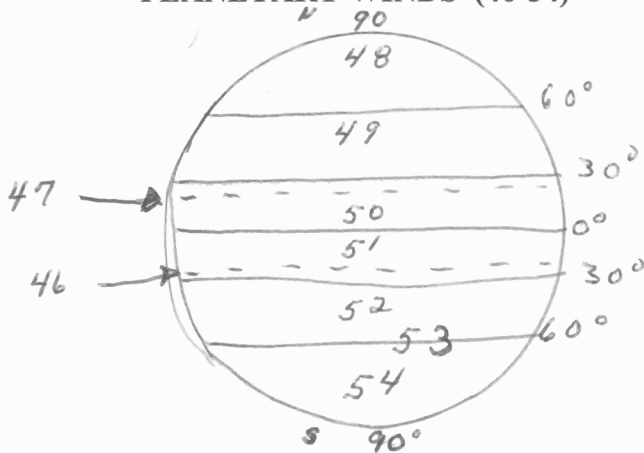
41. The major salt in the sea is _____
- sodium chloride
 - magnesium chloride
 - calcium carbonate
 - calcium chloride

42. Oxygen % varies with _____ in ocean surface water.
- temperature
 - pressure
 - salinity
 - a and b only
43. Temperature: increase as _____ : decrease.
- oxygen
 - pressure
 - salinity
 - a and b only
44. The rate of sinking is a function of both the density of the medium and the density of the body.

a. TRUE

b. FALSE

PLANETARY WINDS (46-54)



- calm
- easterly
- westerly
- Tropic of Capricorn
- Tropic of cancer

PRESSURES ARE REFERRED TO IN (55-60)

- 0 degrees latitude
 - 89 degrees north
 - 60 degrees south
 - 90 degrees south
 - 30 degrees north
 60. degrees north
- high
 - low
 - can't tell

WINDS ARE REFERRED TO IN (61-66)

- Polar Northeasterly
 - South Westerly
 - Northeasterly
 - Southeasterly
 - North Westerly
 - Polar Southwesterly
- relatively warm wind
 - relatively cold wind
 - can't tell

67. The types of tides in Boston Harbor are _____.
- daily
 - semi-daily
 - mixed
 - diurnal
 - both a and b
68. High: Low as _____ Neap.
- sprung
 - Spring
 - Syzygy
 - Quadrature
 - both a and b
69. The distance and direction that a wave travels is referred to as _____.
- fetch
 - tsunami
 - capillary
 - translation
 - both a and b
70. The temperature range of sea water is best described as being:
- 29 – 90 degrees F
 - 10 - 140 degrees F
 - 29 – 85 degrees F
 - both a and c
71. Almost 50% of the earth is covered by land.
- TRUE**
 - FALSE**
72. The Canaries Current, Kuroshiro, Gulf Stream, and North Atlantic Drift make the North Atlantic Gyre.
- TRUE**
 - FALSE**
73. Stenohaline marine organisms usually _____.
- live in open ocean
 - live in estuaries
 - have narrow toleration of salinity
 - both a and c
 - none of the above
74. Euryhaline marine organisms usually _____.
- live in open ocean
 - live in estuaries
 - have narrow toleration of salinity
 - both a and c
 - none of the above

75. Photic Zone: sunlight as Aphotic Zone: _____.
- a. fish
 - b. animals
 - c. algae
 - d. plants
 - e. darkness

76. The greatest range of temperature variation is found in the Neretic Province.

- a. TRUE
- b. FALSE

77. The greatest range of temperature variation is found in the Neretic Province.

- a. TRUE
- b. FALSE

78. The greatest variation in pressure are found in the Neretic Province.

- a. TRUE
- b. FALSE

MATCH (79-83)

- | | |
|-----------------|------------------|
| 79. Rock Weed | a. red |
| 80. Chlorophyte | b. green |
| 81. Kelp | c. brown |
| 82. Spartina | d. none of these |
| 83. Diatom | |

84. A basic food chain has

- a. producer
- b. consumer
- c. autotrophy
- d. heterotroph
- e. both a and c

MATCH (85-91)

- | | |
|--------------|--------------|
| 85. carbon | a. primary |
| 86. sulfur | b. secondary |
| 87. silicon | c. tertiary |
| 88. oxygen | |
| 89. chlorine | |
| 90. bromium | |
| 91. nitrogen | |

92. The type of animal most likely to live in a sandy beach is a (n) _____.

- a. burrower
- b. swimmer
- c. floater
- d. algae form

93. Mostly all muddy beaches have _____.
- strong wave action
 - lack of air and water movement
 - aerobic surface decomposition of bacteria
 - quiet water
 - all except a
94. A common toxic substance on all muddy beaches is _____.
- H₂S
 - Gyrodinium aureolum*
 - red tide
 - dinoflagellates
 - E. coli*

UTILIZE THE PROPER ABBREVIATION TO DESCRIBE THE FOLLOWING WATER TYPES.

- | | |
|---|-------|
| 95. North Atlantic water on top | a. SW |
| 96. Deepest glacial water/melt | b. UW |
| 97. Less dense than bottom water | c. IW |
| 98. Less dense/deep than intermediate water | d. DW |
| 99. Circumpolar water | e. BW |

100. Decomposition is the common source of _____.
- carbon
 - hydrogen
 - sulfur phosphate
 - both c and d
101. The simplest food web would link _____.
- algae
 - tuna
 - plankton
 - swordfish
 - none of these

MATCH (102-107)

- | | |
|------------------|---------------------|
| 102. phosphorous | a. bedrock |
| 103. carbon | b. bacteria |
| 104. sulfate | c. plant combustion |
| 105. water | d. photosynthesis |
| 106. nitrogen | e. saltation |
| 107. energy | |

108. Fjord estuaries are found in _____.
- Northeast U.S.
 - Chesapeake Bay
 - Delaware Bay
 - San Francisco
 - Back Bay

124. Responsibility for the destruction of many Penguin eggs rests with _____.
- DDT
 - PC
 - Eskimo
 - harp seals
 - both c and d
125. The highest quality of ocean water is classified as _____.
- Class A
 - Class B
 - Class C
 - none of these
126. Ice cap melt: Rise in sea level as glacial onset _____.
- more ocean water
 - lowered sea level
 - greater continental shelf
 - both b & c
 - none of these
127. All of the flowing gases dissolved in sea water a much higher concentration that those on land except _____.
- CO₂
 - O₂
 - N₂
128. If you were able to scuba dive to 2633 ft., how many atmospheres of pressure would be upon you approximately _____.
- ATM
 - 176.4 psi
 - 21 ATM
 - none of these
129. Breaker: Capillary as Translation: _____.
- CB
 - gravity
 - sea
 - swell
 - all of these
130. The type of wind driven waves found in large bays or semi enclosed areas is _____.
- bore
 - siche
 - tsunami
 - long shore

141. Non radioactive water pollution from nuclear power plants is most likely to be thermal.

a. TRUE

b. FALSE

142. White caps usually follow the wind.

a. TRUE

b. FALSE

143. White caps indicate quiet water.

a. TRUE

b. FALSE

144. The river/tidal flow lag is a (an) _____.

- a. seiche
- b. bore
- c. tsunami
- d. undertow
- e. rip

145. The description of an along shore/rip current is incorrectly stated as _____.

- a. undertow
- b. tsunamis
- c. bores
- d. seiches

MATCH (146-150)

- 146. Gulf Stream
- 147. Alaskan
- 148. Humboldt
- 149. Guinea
- 150. Falkland

- a. North Atlantic
- b. South Atlantic
- c. North Pacific
- d. South Pacific
- e. none of the above