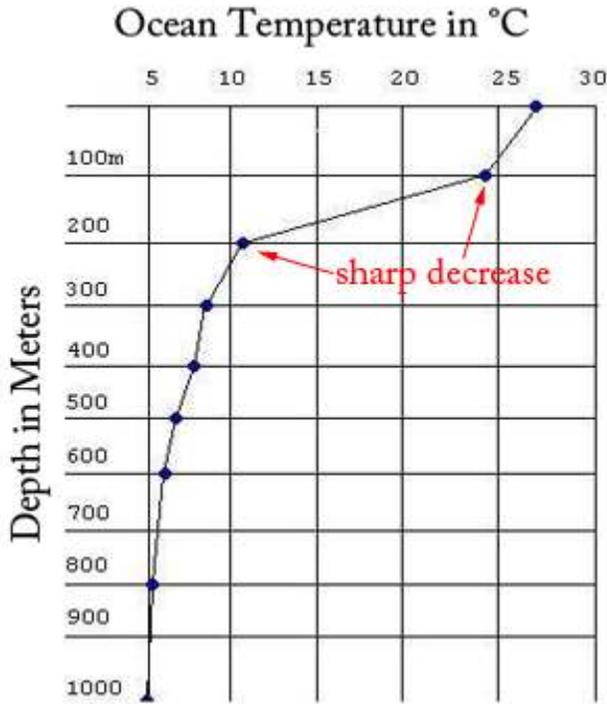


## 2014-15 MVHS Dynamic Planet Try-Out Test

**Be aware that actual tests in this event will likely be much different than this try-out test.**

**Point values are given in parentheses after each question. Tiebreak points added for especially in-depth answers, deducted for spelling errors, etc.**



The following problems are based on the graph to the left:

1. Which one of the following reasons best explains the trend in this graph? (2)
  - a. Deeper water is closer to the core.
  - b. Less sunlight reaches the deeper water.**
  - c. The weather changed and it takes longer for the deeper water to warm.
  - d. The data is not reliable.
2. Where could the data have been taken with highest probability? (3)
  - a. In the Humboldt Current
  - b. In the Baltic Sea
  - c. Near the Cape Verde Islands**
  - d. Near the Bering Strait
3. The “sharp decrease” shown on the graph to the left is known as the thermocline. (5)

**Matching** (1 point each, all answers only used once):

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>4. <u>  d  </u> Coriolis Effect</li> <li>5. <u>  l  </u> Pycnocline</li> <li>6. <u>  i  </u> Spring tide</li> <li>7. <u>  a  </u> Neap tide</li> <li>8. <u>  e  </u> Gulf Stream</li> <li>9. <u>  o  </u> Humboldt Current</li> <li>10. <u>  b  </u> Atoll</li> <li>11. <u>  f  </u> Abyssal plain</li> <li>12. <u>  k  </u> Aphotic zone</li> <li>13. <u>  h  </u> Halocline</li> <li>14. <u>  m  </u> Marianas Trench</li> <li>15. <u>  c  </u> Sediment</li> <li>16. <u>  j  </u> Guyot</li> <li>17. <u>  n  </u> Tombolo</li> <li>18. <u>  g  </u> Doldrums</li> </ol> | <ol style="list-style-type: none"> <li>a. Caused when sun and moon make right angle with earth</li> <li>b. Ring-shaped coral reef</li> <li>c. Three types: Terrigenous, Biogenous, Hydrogenous</li> <li>d. Deflection caused by rotation of earth</li> <li>e. A warm current responsible for cyclone formation</li> <li>f. Most level place on earth</li> <li>g. Where two Hadley cells converge</li> <li>h. Vertical salinity gradient</li> <li>i. Caused when the sun, moon, and earth align</li> <li>j. Flat-topped, submerged seamount</li> <li>k. Part of a body of water where no light reaches</li> <li>l. Layer where density gradient is greatest in a body of water</li> <li>m. Pressure here is over 1000 atmospheres</li> <li>n. A bridge of sediment that connects an island to the mainland</li> <li>o. Causes a different climate than would otherwise expected in Peru</li> </ol> |
|---|---|

Name: \_\_\_\_\_

Score/Tiebreak: \_\_\_\_\_ / \_\_\_\_\_

Place/Total: \_\_\_\_\_ / \_\_\_\_\_

**Multiple Choice (2 points each):**

19. The "SO" in ENSO stands for...
- Saline Oasis
  - Storm Ocean
  - Surface Oceanography
  - Southern Oscillation**
20. What does the El Niño cause?
- Warmer Pacific, fewer Atlantic hurricanes**
  - Warmer Pacific, more Atlantic hurricanes
  - Cooler Pacific, fewer Atlantic hurricanes
  - Cooler Pacific, more Atlantic hurricanes
21. As a wave approaches shore, its wavelength normally...
- Increases
  - Stays the same
  - Decreases**
  - Changes depending on the specific wave
22. What are turbidity currents named for?
- Their high turbulence
  - Their slow speed
  - The large randomness of their flow
  - Their high sediment content**
23. Diurnal tides include \_\_\_ every day.
- Two high tides and two low tides
  - One high tide and one low tide**
  - A varying number of tides
  - More high tides than low tides
24. The primary long term effect of wave refraction is...
- Straightening of the coastline**
  - Occurrences of freak waves
  - Bending of waves
  - Creation of new ocean currents
25. Surface currents create circular swirls called...
- Gyres**
  - Dynamos
  - Whirlpools
  - Maelstroms
26. Divergent plate boundaries are associated with...
- Trenches
  - Mid-ocean ridges**
  - Subduction zones
  - Old oceanic or continental crust
27. What are the smallest wind-generated waves called?
- Ripples
  - Hundred-year waves
  - Capillary waves**
  - Micro-waves
28. Water in small basins sloshing at resonant frequencies...
- Is a cusped spit
  - Is a sea arch
  - Is a seismic sea wave
  - Is a seiche**

**Short Response:**

29. What are the five Oceans? (1 point each, any order)
- Atlantic Ocean
  - Pacific Ocean
  - Indian Ocean
  - Arctic Ocean
  - Southern Ocean
30. (a) What rock makes up most of the crust formed at a mid-ocean ridge? (3) Basalt  
(b) What type of rock (i.e. sedimentary) is this? (2) Igneous
31. Identify the sections of the continental margin. (2 points each)
- Flooded extension of continent that slopes gently towards ocean basin: Continental Shelf
  - Seaward edge of previous part, steep gradient into deep water: Continental Slope
  - Accumulation of sediment at base of the previous part, occurs when there is no trench: Continental Rise
32. How does life on the ocean basin get nutrients and energy? (3 points per unique, correct answer)
- Thermal vents
  - Marine snow
33. The Galapagos are largely diverse due to what in the ocean nearby? (2) Currents which bring nutrients and influence climate
34. What is the topic of this year's Dynamic Planet test? (1) Oceanography