**Worksheet) Measuring Abiotic Factors**

1.

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| --- | --- | --- | --- | --- |
| Location | Distance from low water mark  (m) | Salinity  (g/L) | Temp  (oC) | Oxygen Concentration  (% saturation) |
| A | 15.4 | 41 | 26 | 19 |
| B | 12.5 | 38 | 26 | 28 |
| C | 9.5 | 37.5 | 24 | 41 |
| D | 5.4 | 36 | 20 | 56 |
| E | 1.9 | 35 | 17 | 72 |
| F | 0 | 34 | 15 | 99 |

2.a)

3a) Salinity increases as distance from low water mark increases

b) Temperature increases as distance from low water mark increases and then plateaus between 12.5 – 15.4 m

c) Oxygen concentration decreases as distance from low water mark increases

4.

* As it is a warm sunny day, the evaporation of water would be large
* The water is the pool that is furthest from the low water mark would experience the longest period of time without replenishing of the water from the sea
* Hence its temperature would increase
* Hence evaporation will increase
* Hence concentration of salt would increase

5. Many of the animals living in location F would not survive for an extended period of time in location A as location A experiences the greatest change in all three factors – salinity, temperature and oxygen concentration as compared to Location F.

Extension response using correct biological terms. The abiotic factors are outside the tolerance range of organisms living in location F and hence the organisms cannot survive for an extended period of time in location A