

3. a. What are the two electrodes found in a pH electrode?

.....
.....

(3 marks)

b. Define following terms with respect to the pH electrode.

i. Junction potential (E_j)

.....
.....
.....

(3.5 marks)

ii. Boundary Potential (E_b)

.....
.....
.....

(3.5 marks)

4. a. Draw the diagram of a liquid membrane electrode specific to measure Ca^{2+} ions.

(3.5 marks)

b. Write the ion exchange reaction across the liquid membrane for this electrode.

.....

(3 mark)

c. List three ions which might interfere the measurement of the above electrode.

.....

(1.5 marks)

