**Name:**

# Draw a diagram of the Cell Membrane and label its key parts

**Name the main organic compounds found in the cell membrane.**

**Choose one and name the atoms that would be found in its structure**

The structure of the cell membrane can be described in terms of the fluid mosaic model. Explain what is meant by the fluid mosaic model.

**A student carried out an experiment where 3 eggs were placed in the solutions below. The initial weight of each egg is found in the table. After 30 minutes the eggs were re-examined.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **DISTILLED WATER** | **1% SUCROSE** | **10% SUCROSE** |
| **INITIAL** | **65g** | **67g** | **66g** |
| **AFTER 30 MINS** |  |  |  |

**Question 1 In the space above, describe the appearance of the egg after 30 minutes**

**Question 2 Name and briefly describe these changes**

Substances can cross the cell membrane by 5 different methods. Name and briefly describe each. Include a labelled diagram for three of these methods.

Question 1

In which organelle of the beetroot cell is the pigment found? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Question 2

Of the nine solutions, which had the most immediate effect on damaging the cell membranes of beetroot cells?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Question 3

From the results given above, state two conclusions that can be drawn about the chemical composition of cell membranes. In each case, justify your answer by referring to the results table.

Conclusion 1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Conclusion 2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A biologist carried out an experiment on beetroot cell membranes by immersing them in nine different solutions. After three days, he recorded the colour changes that had occurred in the solutions. His results are shown in the table below. The colour scale used to record the results is also shown.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Distilled Water | pH 2 | pH 4 | pH 6 | Alcohol  1% | Alcohol  25% | Alcohol  50% | Detergent  1% | Detergent  5% |
| Colour at start of experiment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Colour after one hour | 0 | 2 | 1 | 0 | 1 | 3 | 4 | 1 | 1 |
| Colour after 24 hours | 0 | 4 | 3 | 1 | 2 | 4 | 4 | 2 | 3 |

1. Clear
2. Pale Red
3. Medium Red
4. Dark Red
5. Very Dark Red