AQA, OCR, Edexcel

# GCSE Science

# GCSE Biology

## Active Transport Answers

Name:

M M E

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Total Marks: /21

Q1: Give a definition of active transport.

A= movement against a concentration gradient from a low concentration to a high concentration.

(1 mark)

Q2: What is the difference between active transport and osmosis?

A= 1 mark awarded for each point.

- Osmosis moves molecules with the concentration gradient
- Active transport moves molecules against the concentration gradient

(2 marks)

Q3: What proteins do cells use to move molecules across the concentration gradient in active transport?

A= Carrier Molecules (Carrier proteins)

(1 mark)

Q4: i) How do plants make use of active transport in ion uptake?

A= Take ions from low concentrations of soil

(1 mark)

ii) Why do plants require ions?

A= Healthy Growth/ chlorophyll production/ proteins/ cell division

(1 mark)

Q5: The human body also uses active transport to move sugar molecules. Where does the body get sugar molecules from and why are they needed?

A= 1 mark for Diet/ Gut/ Intestine/ Digestive System

1 mark for, Respiration/ Energy

(2 marks)

Q6: Explain the differences and similarities between osmosis, diffusion and active transport.

A= 1 mark awarded for each point (max 6)

- Osmosis –Water
    - High Concentration to low concentration
    - Passive / Doesn't use energy
- Diffusion – All Molecules apart from Water
    - High Concentration to low concentration
    - Passive / Doesn't use energy
- Active Transport – In cells
    - Low Concentration to high concentration
    - Molecules move across the cell membrane
    - Proteins/ carriers used.
    - Uses energy

(6 marks)

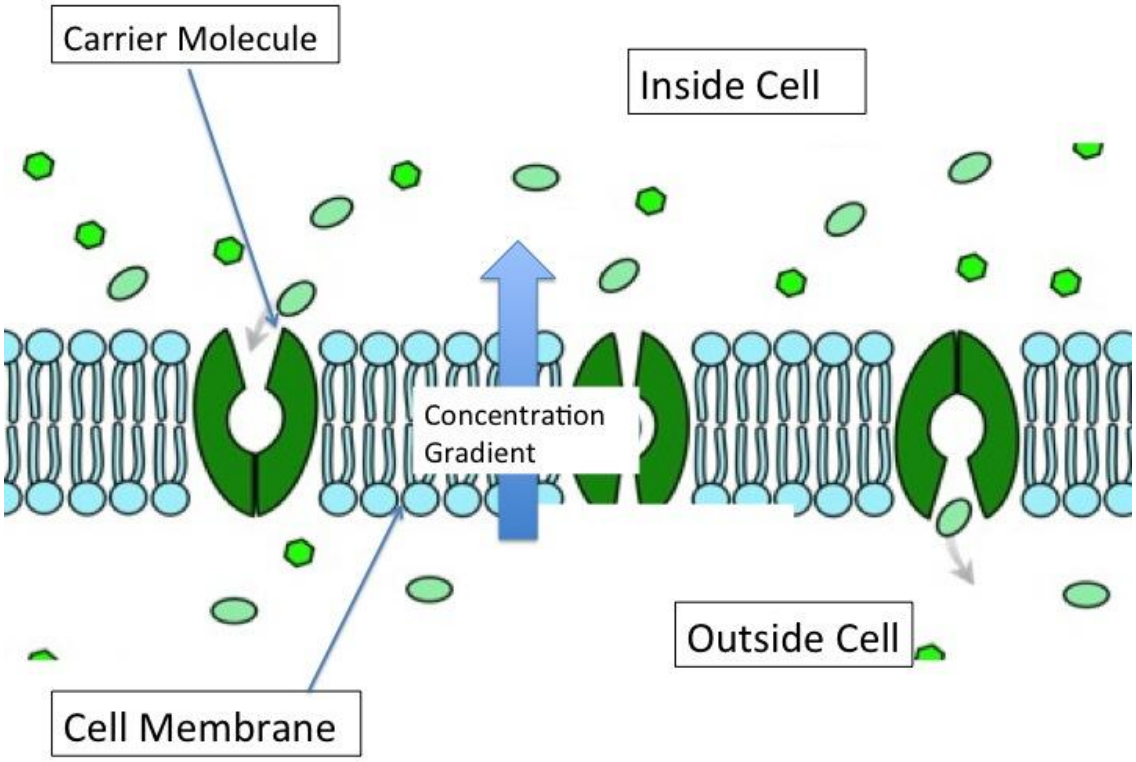
Q7: What method is used to carry glucose into the blood stream?

A= Active Transport

(1 mark)

Q8: Figure 1 shows the process of active transport. Fill in the following labels and show the correct movement of molecules. Include inside and outside of the cell as two of your answers.

Figure 1




A= 1 mark awarded for each correct label.

(4 marks)

Q9: What part of the plant takes up ions from water in the soil?

A= Root cell hairs

(1 mark)

Q10: Give an example of human cells that use active transport.

A= Accept one of the following

- Villi/ intestinal cell
- Epithelial Cells
- Red Blood Cell

(1 mark)