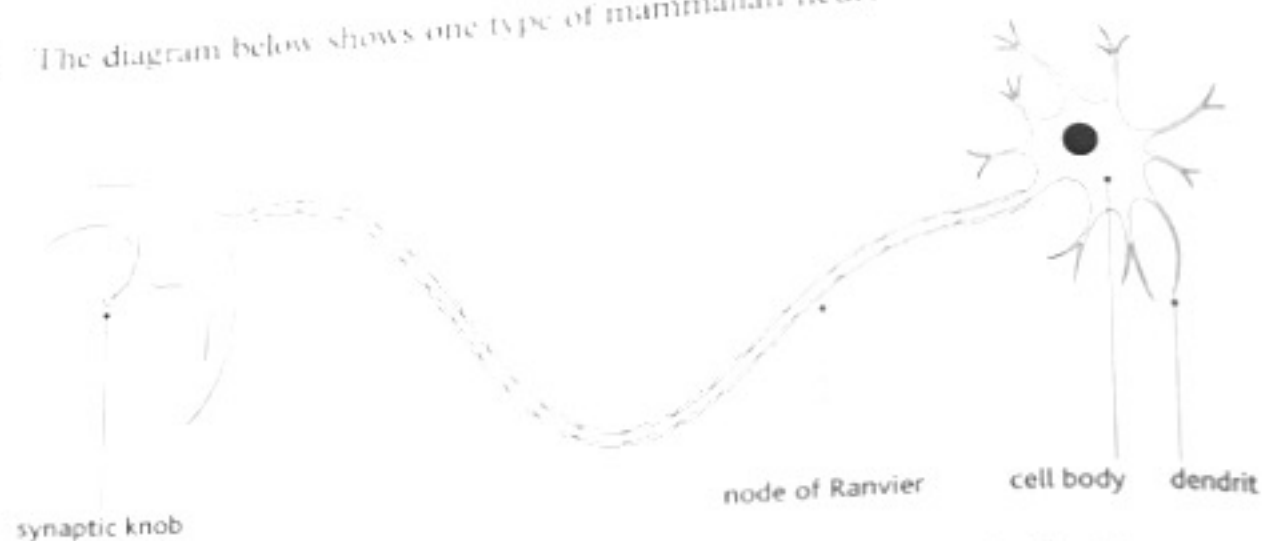


Examzone: Topic 8 practice questions

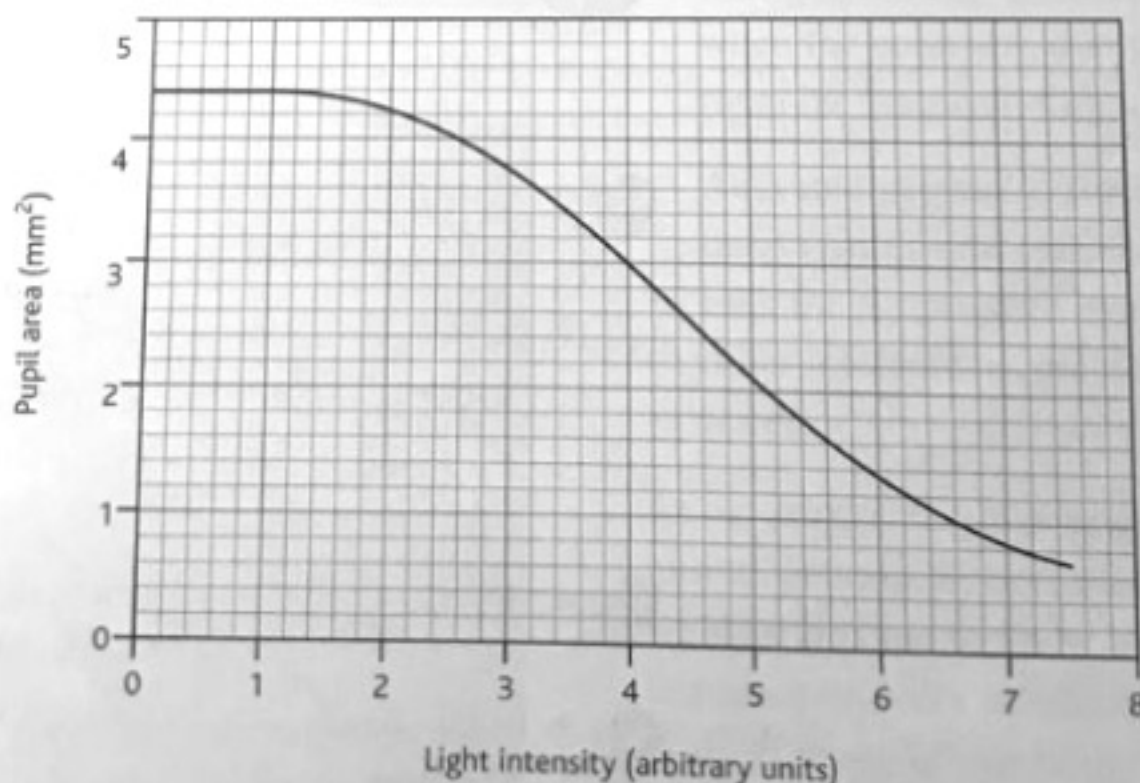
1 The diagram below shows one type of mammalian neurone.



- a i Name the type and state the role of the neurone shown in the diagram. (2)
- ii Describe the direction in which an impulse would travel. (1)
- b State precisely where in the central nervous system the cell body of this type of neurone is found and explain the importance of the dendrites. (2)
- c Describe the node of Ranvier and explain its importance in the neurone. (3)
- (Total 8 marks)

2 Give an account of the role of pigments in the detection of light by flowering plants and animals. (Total 10 marks)

3 The graph below shows the effect of light intensity on the area of the pupil in the human eye.



- a i Describe the effect of changing light intensity on the area of the pupil. (1)
- ii Explain how the muscles in the eye bring about this change. (2)

b Change in area of the pupil is controlled by a reflex action.

i In this pupil reflex, name the receptor and the effector. (1)

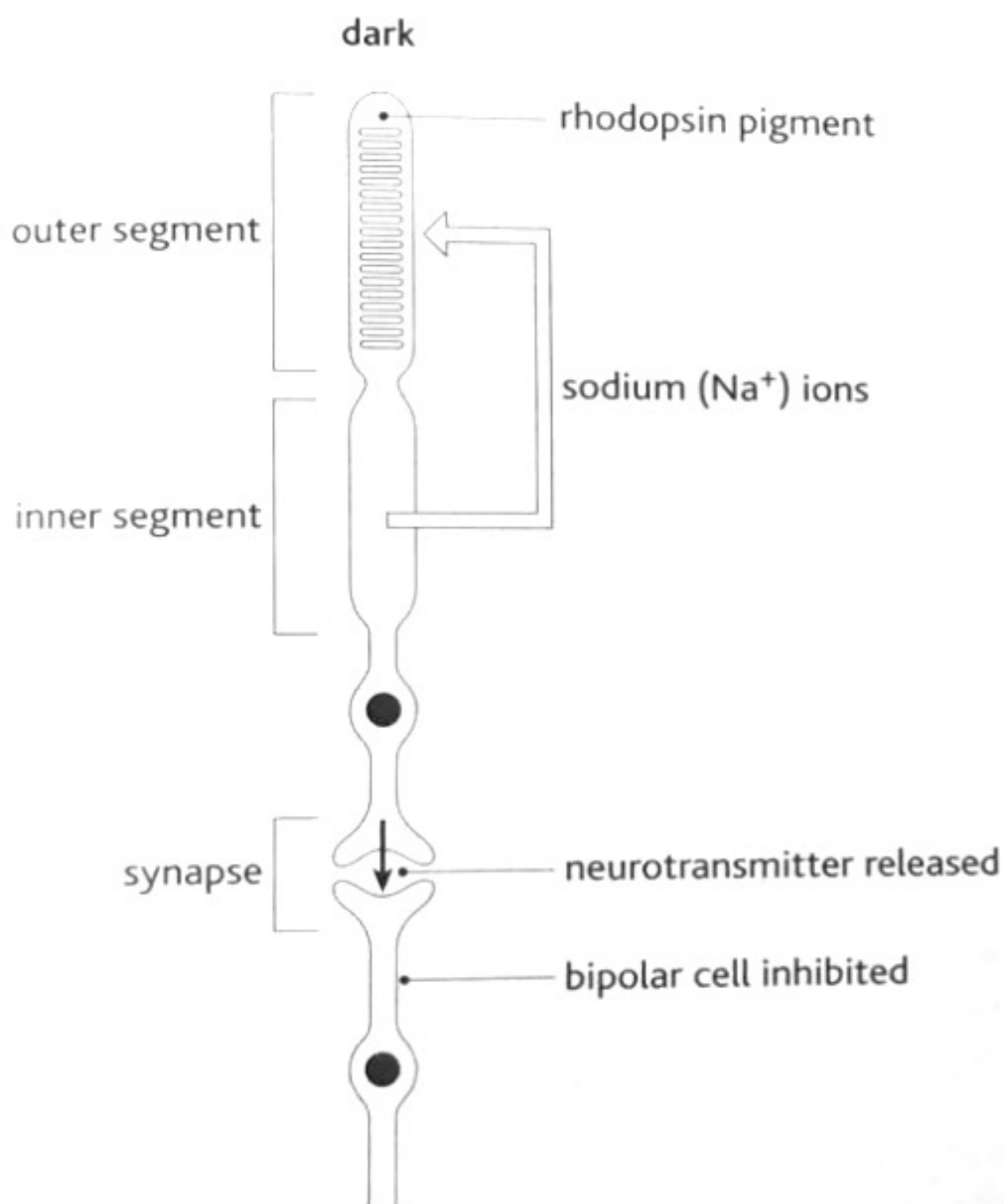
ii Explain why the pupil reflex still occurs in an unconscious person. (1)

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c Atropine is used to dilate the pupil to allow the eye to be examined more easily.

Atropine inhibits the activity of acetylcholine. Suggest how atropine causes this inhibition. (2)

d The diagram shows a light-sensitive cell from the eye. The activity of the cell in the **dark** is shown.



Using the diagram and your own knowledge, explain how light causes the depolarisation of the bipolar cell. (5)

(Total 12 marks)